

cm FIRST
Rethink Modernization



Automated Testing with CA Plex, CA 2E and Worksoft Certify

DevOps for CA Plex



CM First Group

- Information Technologies Services and Product Company
- Focus on Application Modernization on IBM environments
- Headquartered in Switzerland, Operations in USA, Italy and France
- 35 employees / over 400 customers
- CA Technologies for CA Plex / CA 2E / CA Repository
 - Sales, Services, CA SMART Certified Products
- CM First Products add value to CA Technologies Products
- Worldwide Sales through partner network

Application Development Solutions

Enterprise Architecture – Metadata

CM Meta Analytics for
CA Repository

Application Development Tools

Requirements

Analysis

CM
M3

Modeling

IDE / Code

CM
WebClient

QA / Test

Release

CA Plex / 2E

Worksoft
Certify for
CA Plex

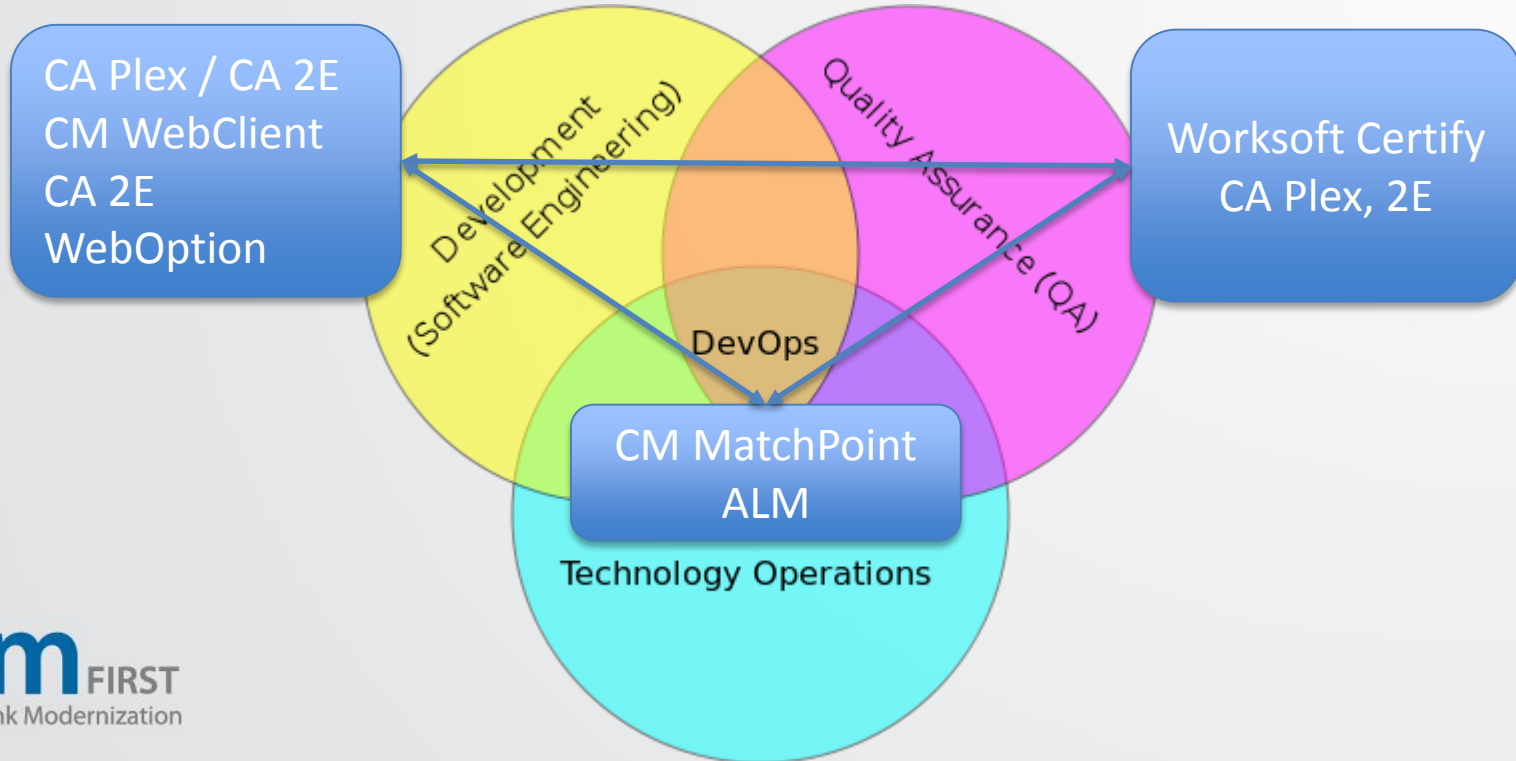
Application Lifecycle Management
CM
MatchPoint

PTC/MKS Integrity for i
(CA 2E CM)

Project and Portfolio Management

Application Performance
Availability
and Monitoring
CA
APM

DevOps Support



Overview

- Intro to Automated QA/Testing
- Using Worksoft Certify
 - CA Plex (and 2E) Apps
 - Case Study Department of Justice Zurich

Value Proposition

Automated testing **radically**
alters the economics of quality

Removes technical barriers for wider participation

Expands test coverage across applications & platforms

Reduces implementation overhead

Reduces lifetime cost of ownership

Business Case For Change

Business risk is increasing

- Market pressure drives schedules
- Functionality, complexity expanding
- Applications exposed to customers

Manual testing can't keep pace

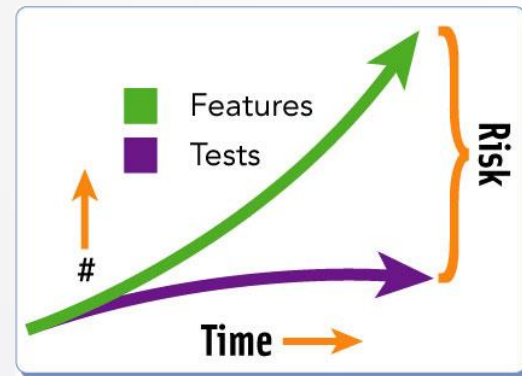
- Time, resources and skills are limited
- No reusability means decreasing coverage
- Time, turnover cause loss of knowledge

Production data must be obfuscated for testing

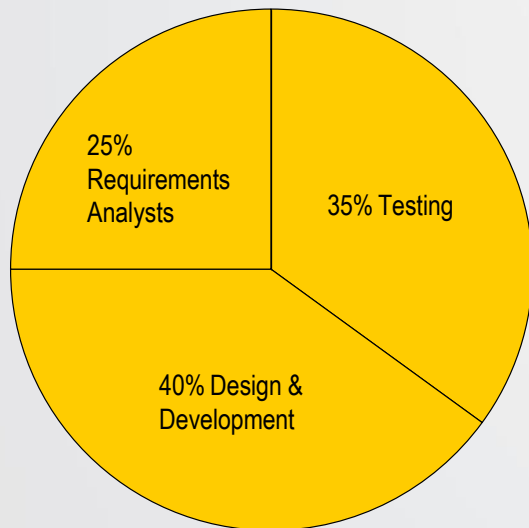
- Compliance
- Outsourcing/offshoring

Automation is only answer

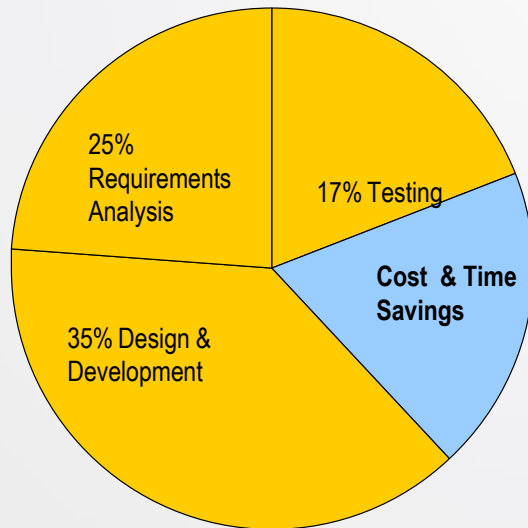
- Increase coverage
- Reduce time, resources



Return on Investment



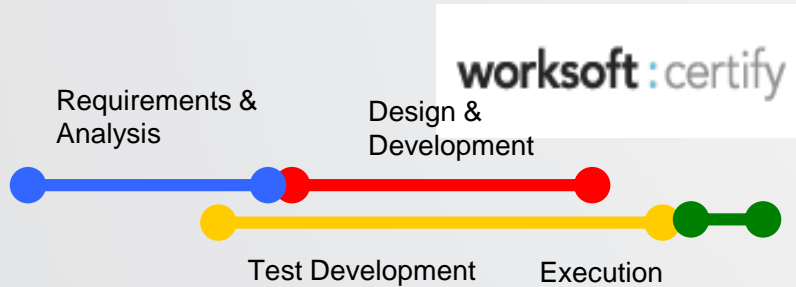
Scripting / Manual



worksoft:certify

Certify Reduces Time to Market

Scripting Tool



Customer Case Studies

Before: One application took four months to test with scripting

Today with Certify: 32 are tested in four months



Scripting tool after 2 years work:

Only 2 out of 12 Member QA team could use script tool

No business analysts could use scripting tool. "Q/A is a bottleneck."

Today with Certify:

12 out of 12 member QA team using Certify

50+ Business Analysts & users using Certify



Training

2 weeks training per user on script programming language

80% Time savings & productivity gain
2 days class training per user
No programming

Design

3 months to learn how to design a reusable testing system

1 week to design processes, cycles, schedules & recordsets
Reusability built into the repository

Development

2 weeks script coding time per screen to validate all fields

4 hours to import screens, validation built-in
No coding required

Maintenance

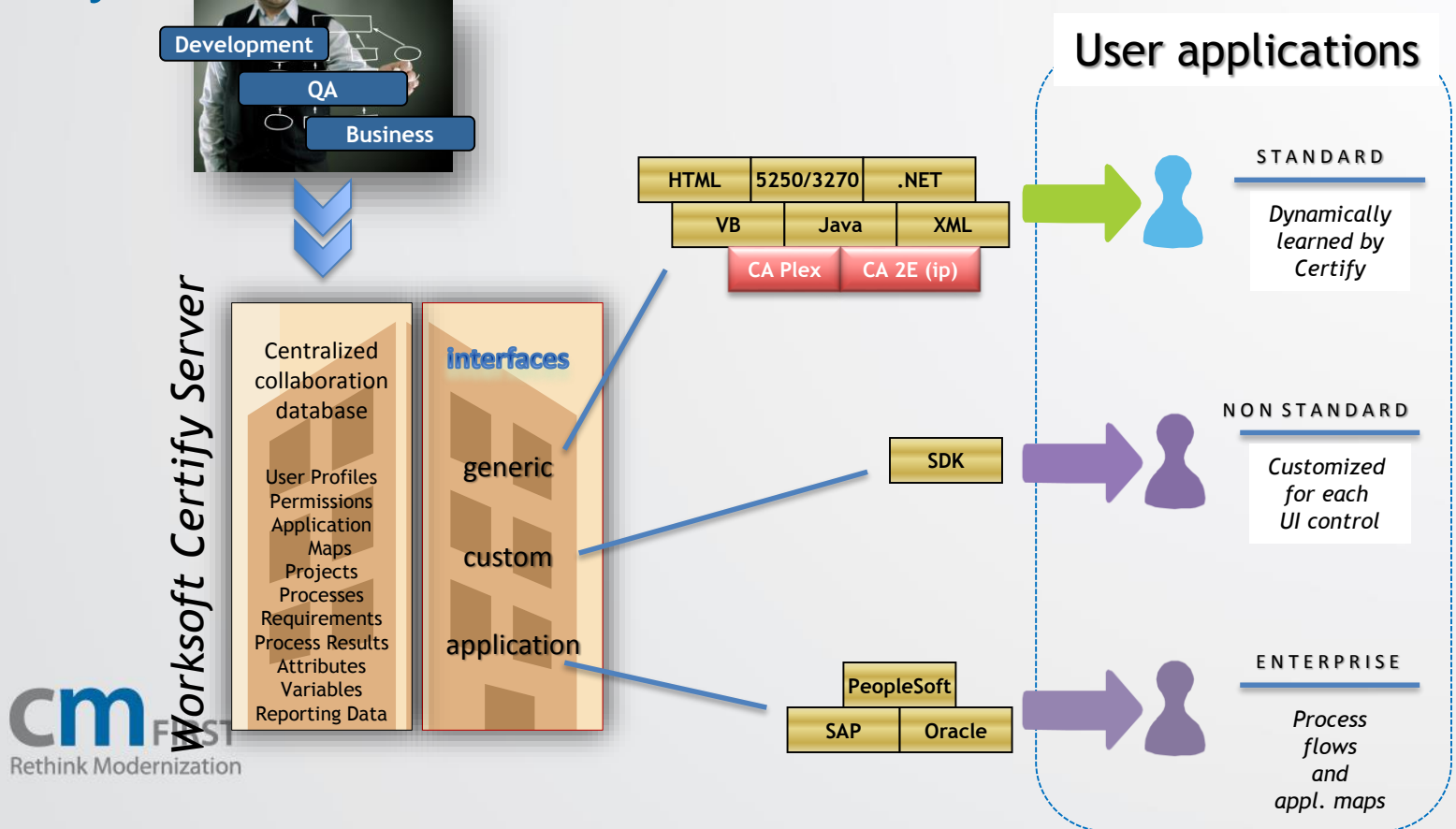
4 hours per screen change, for impact analysis & modifying screen code

20 minutes to import new screens
Impact analysis & script update is automatic

Customer Case Studies



Certify Architecture

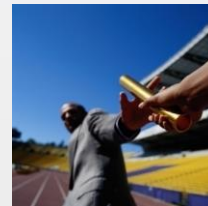


Key Differentiators

Worksoft Certify makes it easy to

- *Collaborate*
 - Manage your test process across the enterprise
 - Organize all your test assets in a single, shared repository
 - Document your tests and results in a standard format for compliance
- *Automate*
 - Automate your tests without coding
 - Update your tests instantly and automatically
 - Execute end to end, seamlessly across platforms
- *Accelerate*
 - Automate more tests and applications in less time
 - Enable shorter cycle times with greater coverage
 - Deliver better applications faster

No other solution can deliver these benefits

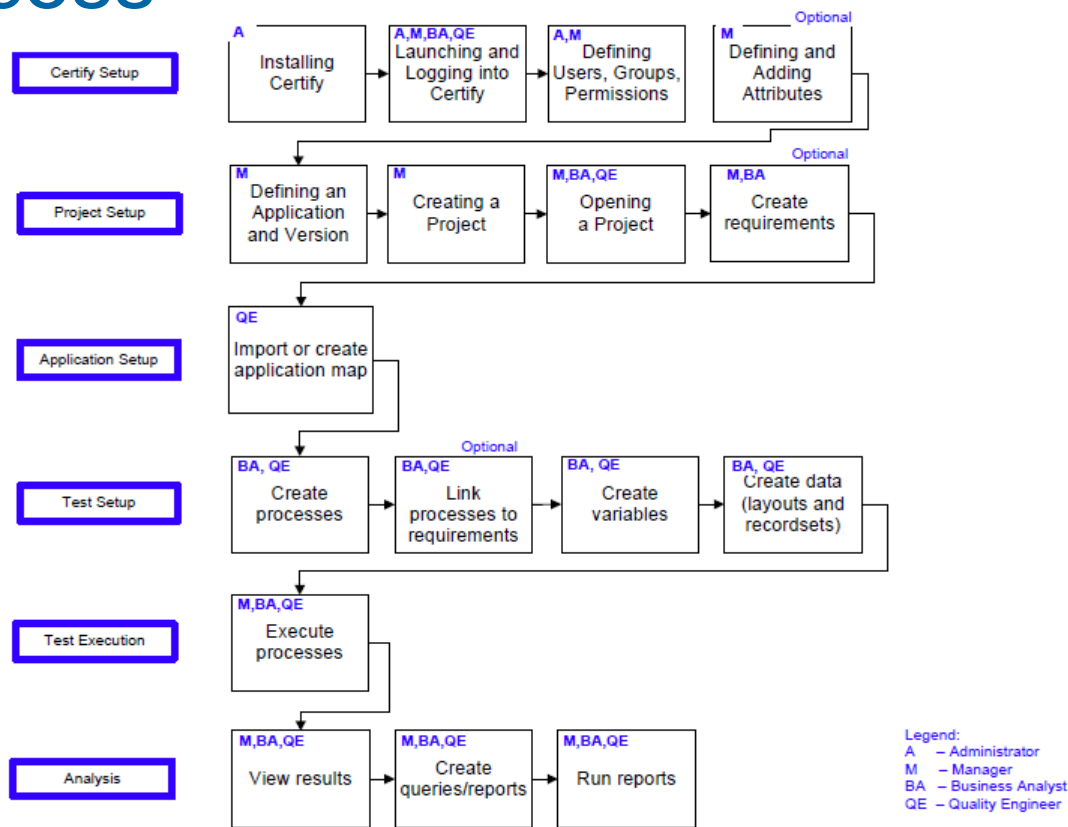


Worksoft Certify Overview

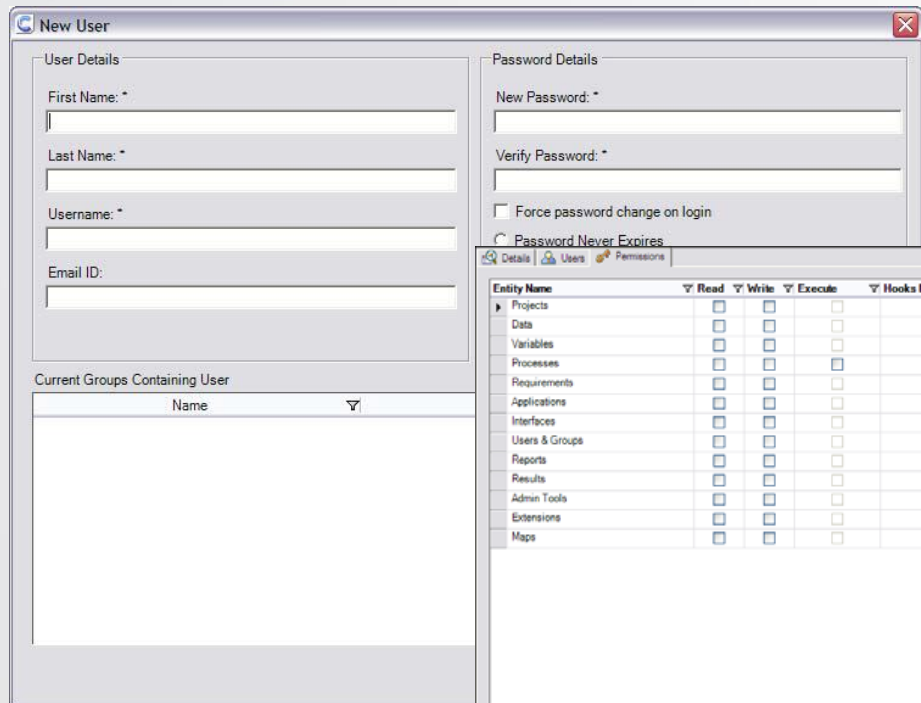
Screen shots



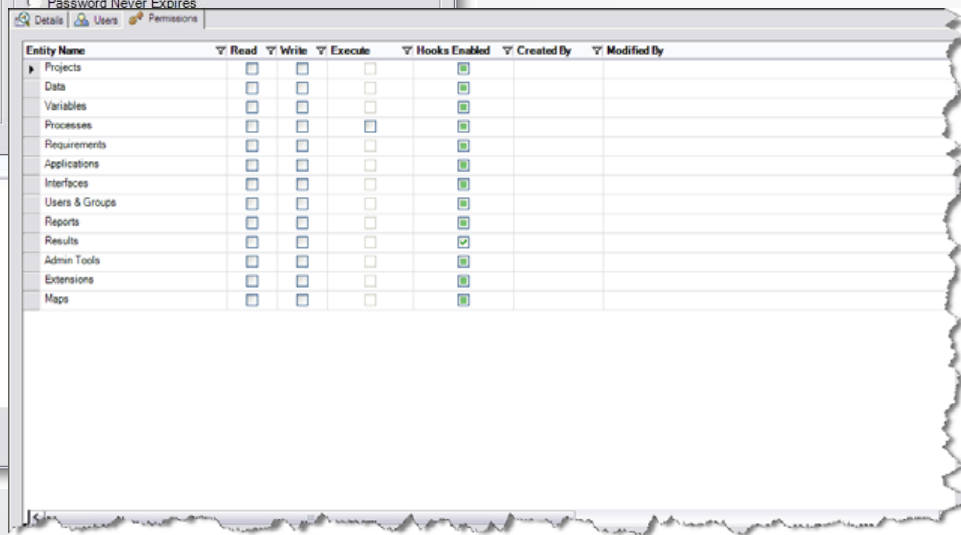
Certify Process



Users and Groups



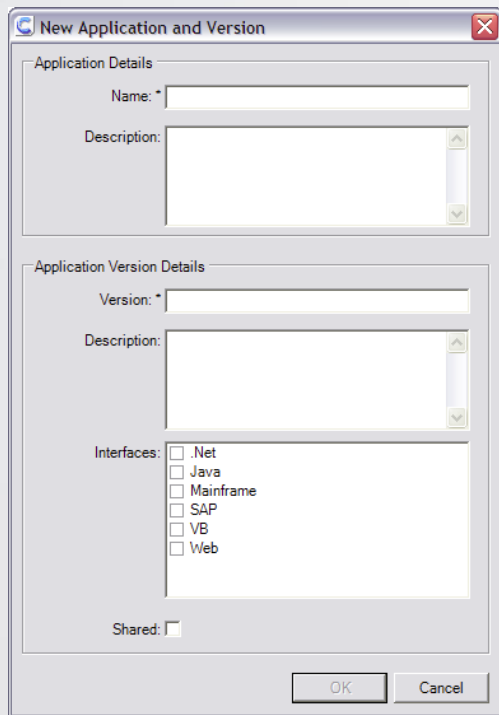
The 'New User' dialog box is divided into two main sections: 'User Details' and 'Password Details'. The 'User Details' section contains four text input fields: 'First Name: *', 'Last Name: *', 'Username: *', and 'Email ID:'. Below these is a section titled 'Current Groups Containing User' with a table header 'Name' and a downward arrow icon. The 'Password Details' section contains two text input fields: 'New Password: *' and 'Verify Password: *'. Below these is a checkbox labeled 'Force password change on login' and a radio button labeled 'Password Never Expires'.



The 'Permissions' tab shows a table with columns: Entity Name, Read, Write, Execute, Hooks Enabled, Created By, and Modified By. The table lists various entities and their permissions.

Entity Name	Read	Write	Execute	Hooks Enabled	Created By	Modified By
Projects	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>		
Data	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>		
Variables	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>		
Processes	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>		
Requirements	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>		
Applications	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>		
Interfaces	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>		
Users & Groups	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>		
Reports	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>		
Results	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>		
Admin Tools	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>		
Extensions	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>		
Maps	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>		

Applications and Projects



New Application and Version

Application Details

Name: *

Description:

Application Version Details

Version: *

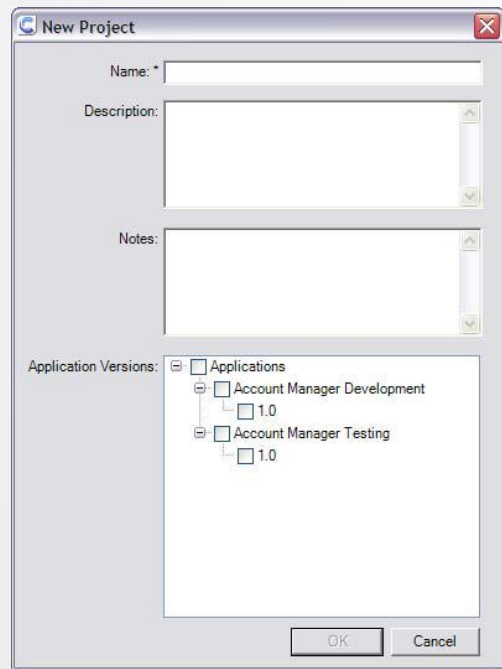
Description:

Interfaces:

- ☐ .Net
- ☐ Java
- ☐ Mainframe
- ☐ SAP
- ☐ VB
- ☐ Web

Shared: ☐

OK Cancel



New Project

Name: *

Description:

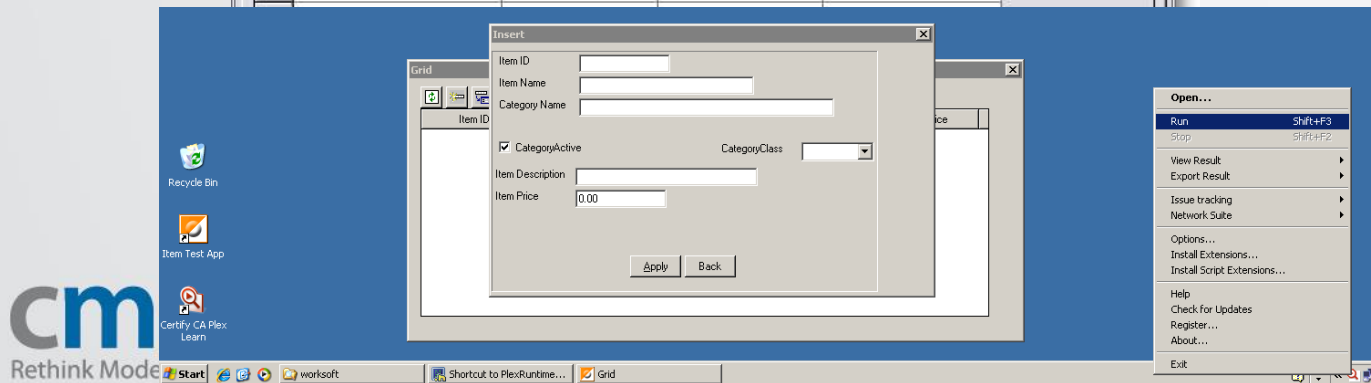
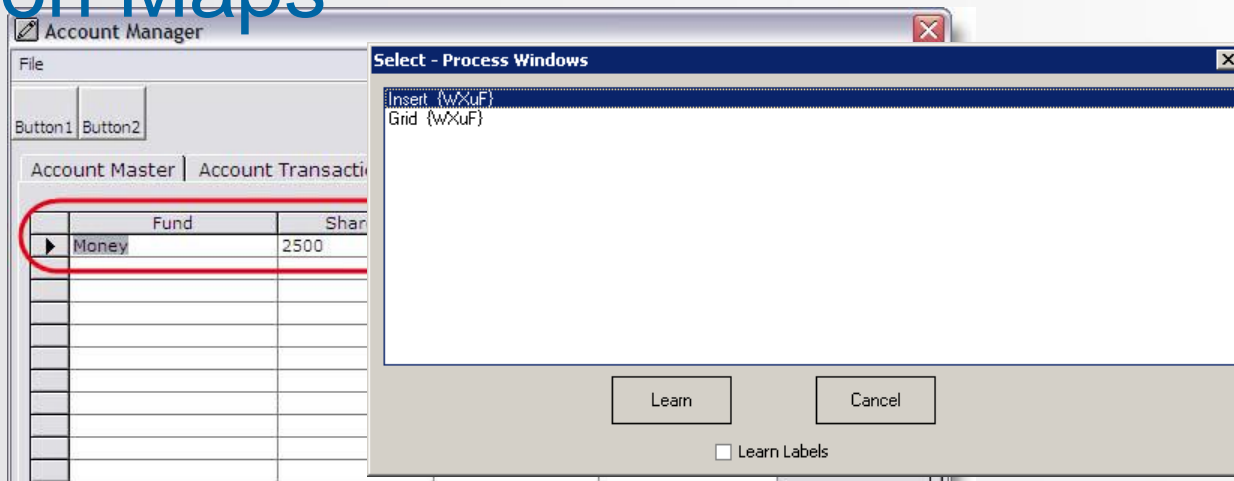
Notes:

Application Versions:

- ☐ Applications
 - ☐ Account Manager Development
 - ☐ 1.0
 - ☐ Account Manager Testing
 - ☐ 1.0

OK Cancel

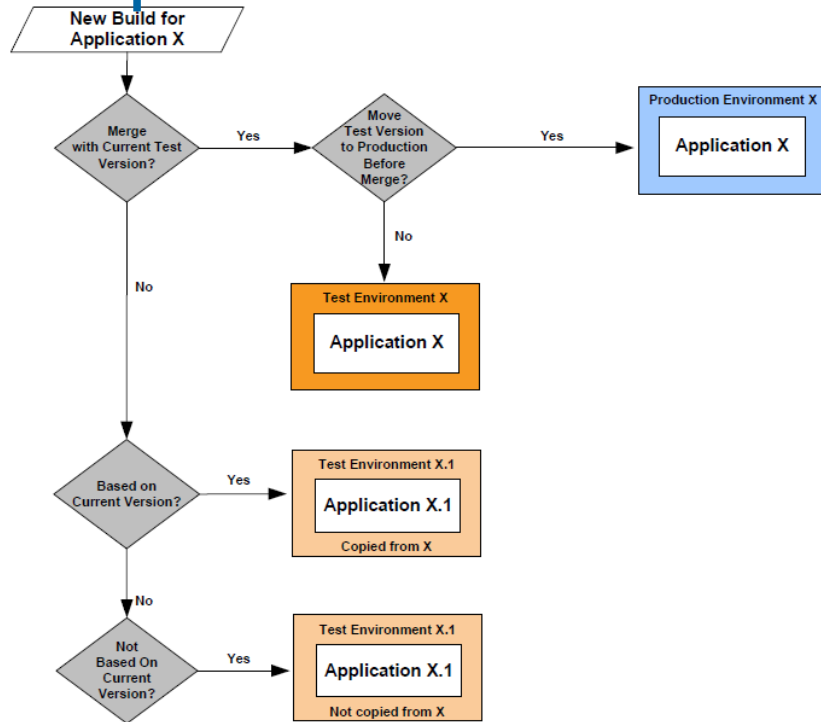
Application Maps



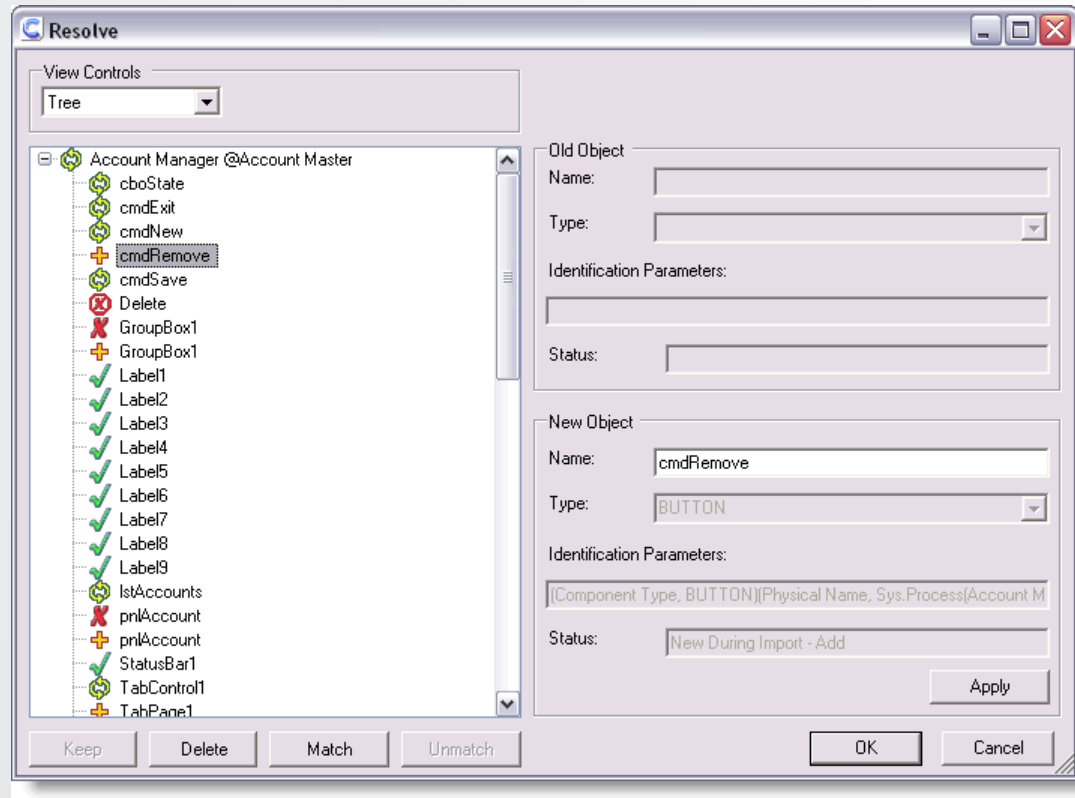
cm

Rethink Mode

Versioning Maps



Versioning Maps



Requirements

The main dialog box is titled "New Requirement" and has tabs for "Details" and "Attributes". It contains fields for "Name: *", "Description:", "Estimated Effort:", and "Actual Effort:". An inset window titled "Requirements" is overlaid on the main dialog, showing a table of requirements. The table has columns for Name, Description, Requirement Status, RiskType, PriorityType, and Created By. A red circle highlights the "Requirement Status" column, which shows "Satisfied" for all three listed requirements.

Name	Description	Requirement Status	RiskType	PriorityType	Created By
Account Master Input	Inputs account data	✓ Satisfied	Medium	High	admin
Account Master New Press	Selects the New button to create an account	✓ Satisfied	High	High	admin
Account Master Verify	Verifies that the account data is correct and complete	✓ Satisfied	Low	High	admin

Processes

The screenshot shows the 'Processes' application interface. On the left, a tree view under the 'Test' folder shows 'Account Manager Critical Business Processes' and 'Account Master Input*'. The 'Account Master Input*' window is open, displaying a table of steps for the 'Account Master Input' process.

Step#	Application Version	Window	Object	Action	Narrative	On True	On False
1	Account Manager Testing 1.0	Account Master	Name	Input	Input the value "Tom Jones" into the Name Edit	Continue	Continue
2	Account Manager Testing 1.0	Account Master	Contact	Input	Input the value "Mary Wilson" into the Contact Edit	Continue	Continue
3	Account Manager Testing 1.0	Account Master	Address	Input	Input the value "100 Fifth Street" into the Address Edit	Continue	Continue
4	Account Manager Testing 1.0	Account Master	City	Input	Input the value "Dallas" into the City Edit	Continue	Continue
5	Account Manager Testing 1.0	Account Master	State	Select	Select State ComboBox item - "Texas"	Continue	Continue
6	Account Manager Testing 1.0	Account Master	Zip	Input	Input the value "75055" into the Zip Edit	Continue	Continue

Below the table, the 'Parameters' section is visible, showing 'Parameters for Input' with a 'Value' field containing '75055' and a 'Key' field containing 'None'.

Variables and Datasets

The image shows two overlapping dialog boxes from a software application. The background dialog is the 'Recordset Editor', which has a 'Name' field containing 'Day One' and a 'Description' field containing 'Records for inputting account'. It features 'Import' and 'Export' buttons on the right. Below these is a 'Records' section containing a table with 7 columns: Name, Contact, Address, City, State, and Zip. The table has 3 rows of data. The foreground dialog is the 'New Variable' dialog, which has fields for 'Name', 'Description', 'Data Type' (set to 'Text'), 'Initial Value', and 'Variable Scope' (set to 'Project'). It also has a checkbox for 'Mask the value in Results' which is unchecked. Both dialogs have 'OK' and 'Cancel' buttons at the bottom.

Recordset Editor

Name: * Day One

Description: Records for inputting account

Import

Export

Records

	Name	Contact	Address	City	State	Zip
1	Kristy Smith	Tom Coble	120 First Street	Dallas	Texas	75240
2	Larry Young	Nancy Davis	239 West Sycamore Drive	Plano	Texas	75075
			Lane	Dallas	Texas	75207

New Variable

Name: *

Description:

Data Type: Text

Initial Value:

Mask the value in Results: ☐

Variable Scope: Project

OK Cancel

Executing Processes

Configuration

Process: Day One

Title: Day One - February 5, 2009 14:48:14

Settings | Attributes

Run Settings

☐ Stop On Failure

Run Mode: Managed

Step Delay: 0.000 seconds

Data

Layout: [none]

Recordset: [none]

Recordset Mode: [none]

Logging Settings

Log Step Mode: Log All Steps

Capture Screen On: Capture Aborted Steps

Screen Capture Mode: Capture Desktop

Output Location: Results

☐ Auto Save Results

Application Version Startup Data

Application Versions Already In Context:

Restore Defaults Export Start Cancel

Executing Processes

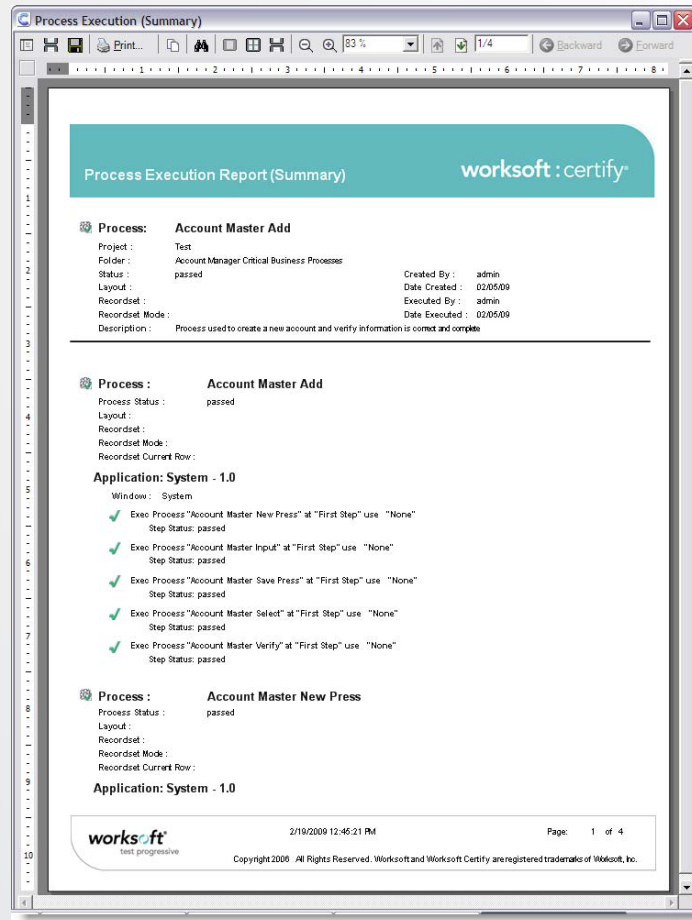
The screenshot shows the 'Execution' window of a software testing tool. The window has a toolbar with buttons for Run, Step, Skip, Stop, and Capt... Below the toolbar are tabs for Steps, Variables, Recordset, Breakpoint, Stack, and Log. The main area displays a table of execution steps. The table has columns for Step #, Log Status, Object Name, Action, and Narrative. The steps are as follows:

Step #	Log Status	Object Name	Action	Narrative
1	passed	Execution	Execute Process	Exec Process "Account Master New Press" at "First Step" use "None"
2	passed	Execution	Execute Process	Exec Process "Account Master Input" at "First Step" use "None"
2.1	passed	Operating System	Capture Screen Image	Capture Current Screen
3		Execution	Execute Process	Exec Process "Account Master Save Press" at "First Step" use "None"
4		Execution	Execute Process	Exec Process "Account Master Select" at "First Step" use "None"
5		Execution	Execute Process	Exec Process "Account Master Verify" at "First Step" use "None"

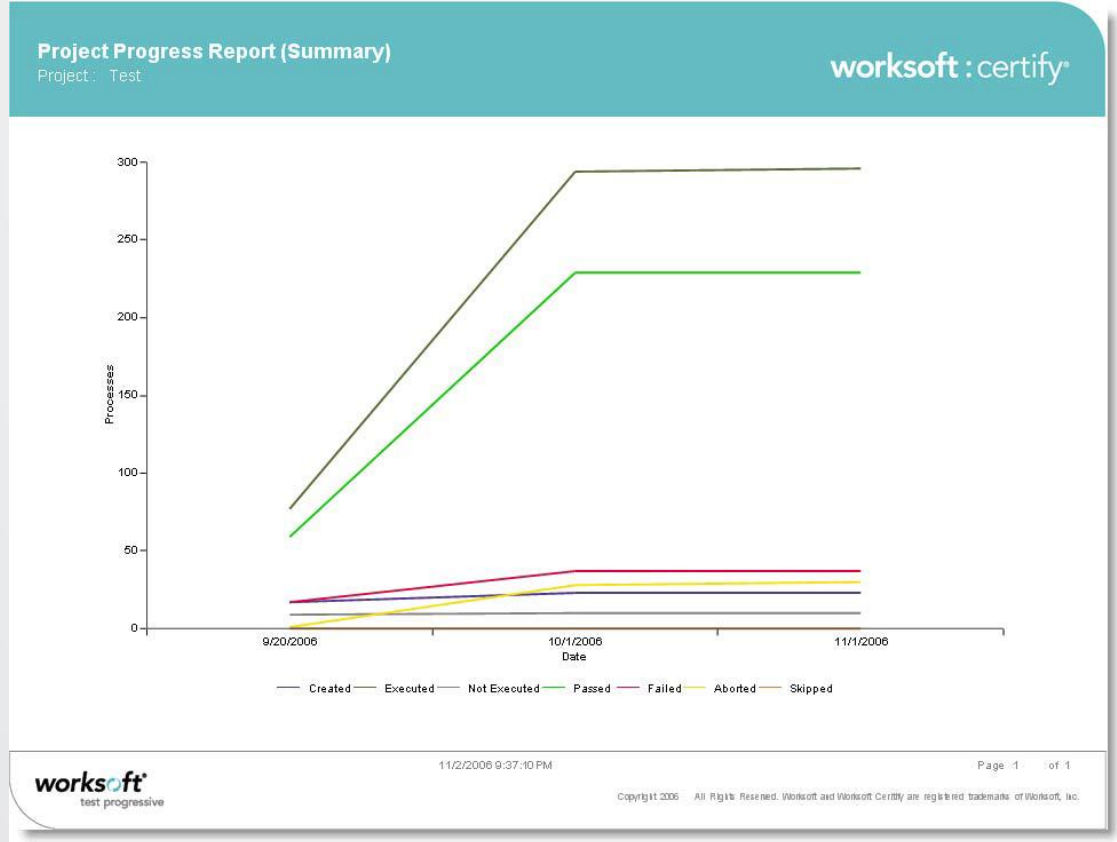
Step 2.1 is highlighted with a red box. The bottom of the window shows a status bar with the following information:

- Process: Account Master Add
- Step Count: 12 (passed), 0 (failed), 0 (skipped)

Executing Processes



Executing Processes



Suchen

- Personen
- Geschäfte
- Erweiterte Geschäftssuche
- Dokumente
- Spruchbuch
- Wissensmanagement

Eingänge

- Personen
- Geschäfte
- Erweiterte Geschäftssuche
- Dokumente
- Spruchbuch
- Wissensmanagement
- Abtretungen
- Polizeirapporte
- Haftrichter-Geschäfte

Aufgaben / Termine

- Abtretungen

Mein RIS2

Geschäftskontrolle

Klientenbuchhaltung

Setup/Administration

Codes

KLIBU Codes

Systemwartung

Entwickler-Sektion

Home ZP x

Suchen Zurücksetzen

Suchfeld

Name

Vorname

Strasse

PLZ/Ort

Geburtsdatum

Geburtsjahr

Personen Nr.

Beginnt mit

Beginnt mit

Beginnt mit

☐ Inklusive Geburtsname

Trefferlimit

gefunden

Ausprägungsart

Konzern-Stichwort

Verwendungsnachweis

Ergebnissuche

(Gefundene Personen im Grid durchsuchen)

☐ Gruppe?

P	A	G...	Name(n)	Vornamen(n)	C	Eltern	Strasse	P	Ort	Land	Nationalität(en)	Geburtsort	A	A	T
---	---	------	---------	-------------	---	--------	---------	---	-----	------	------------------	------------	---	---	---

Value Add for the CA Plex/2E Customer

- CA Plex C++ Interface (5250, Java, C# also supported)
 - Co-Developed with Worksoft
 - CodeJock support
- CA 2E Screen Import
- CM First Experience with API / Customization
 - Adding components, specialized map import
- Training around to CA 2E/Plex User

Department of Justice Zuerich

- DOJ Zuerich Justice Management Solution: prosecution, court system, penal system

Development Goals

- High development efficiency
- High quality / Low risk
- User friendly interface, low training cost
- Highly maintainable code

Enterprise app for thousands of current users

- Solution
 - CA Plex
 - CM MatchPoint
 - SCRUM
 - Training / Implementation
 - CM First Development Team
 - **Worksoft Certify**
 - C++ interface

Project Scope

- Development of a case management system for DOJ, Switzerland:
 - Team
 - 12 developers
 - 4 QA engineers
 - 2 Requirement engineers
 - 4 Scrum masters
 - 2 Product owners
 - 2 Product managers
 - 4 Operations
 - 4 Scrum teams

Project Scope - continued

- Project schedule
 - Phase A: Implementation Summer 2014
 - Phase B: Summer 2015
 - Phase C: Spring 2016
 - Phase D: 2017
- Application
 - 3 CA Plex models
 - 1,500+ panels
 - 700+ entities

Application Testing Challenges

– Complex application / complex

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The screenshot displays a complex application interface, likely a personnel management system. The main window shows a detailed form for a person's profile, including fields for personal data, contact information, and administrative details. The interface is cluttered with many buttons and tabs, indicating a high level of complexity. The left sidebar contains a navigation menu with various categories like 'Suchen', 'Eingänge', 'Aufgaben / Termine', 'Statistiken (ZS)', and 'Geschäftskontrolle'. The top bar shows the user's name and the application's title. The bottom status bar indicates the user is 'Ready'.

Suchen

- Personen
- Geschäfte
- Erweiterte Geschäftssuche
- Dokumente
- Spruchbuch
- Wissensmanagement

Eingänge

- Abtretungen
- Polizeirapporte
- Haftrichter-Geschäfte

Aufgaben / Termine

- Meine Geschäfte
- Pendenzenliste Büro
- Strafbefehle rechtskräftig
- Fristenkontrolle

Statistiken (ZS)

- Eingänge in Periode

Geschäftskontrolle

- Jur. Sachbearbeitung / Büro
- Rechnungswesen
- Statistiken / Controlling
- Setup/Administration
- Codes
- Systemwartung
- Entwickler-Sektion

Personen

PersonenNr. 1
Personenart Natürliche Person
AHV / SV-Nr.
POLIS-P-Nr.
N-Nummer 0
AK-Nummer
Name Moscardini
Vorname Renzo
Geschlecht männlich
Geburtsdatum 22.07.1961
Personenstatus Definitiv
Informationsbasis Einwohnerkontrolle
Ausländerkategorie Aufenthaltlerin/Aufenthalter (Ausweis B)
Beruf Hausmeister
Sprache Italienisch
Vater Brawand, Karl, 8627 Grüningen
Ehepartner
Zivilstand ledig
Land (Nationalität) Italien
GebOrt Land Frankreich
Adresszusatz
Strasse Rämistrasse 52
PLZ 8001 Zürich
Landbezeichnung Schweiz
Geburtsort Cipulli / Korsika
Telefon 4456456464564
Mobile +41 79 311 22 67
Email renzo.moscardini@hotmail.ch
wünscht elektronische Zustellung
Ausprägungsart Krankenkasse
Gültig von 03.05.2011
Gültig bis 31.12.9999
Krankenkasse
PersonenAusprägungsArtBezeichnung
JO683359 AS892417

Vio

RIS2 / DB.ENTW (Stand konf vom 23. März 2012) / Benutzer: Alder Lorenz / OE.STAZL(STR)

Datei Arbeitskontext Extras Ansicht Hilfe

Suchen

- Personen
- Geschäfte
- Erweiterte Geschäftssuche
- Dokumente
- Spruchbuch
- Wissensmanagement

Eingänge

- Personen
- Geschäfte
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- Abtretungen
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Aufgaben / Termine

- Abtretungen

Mein RIS2

- Geschäftskontrolle**
- Klientenbuchhaltung
- Setup/Administration
- Codes
- KLIBU Codes
- Systemwartung
- Entwickler-Sektion

Home ZP x

Suchen Zurücksetzen

Suchfeld

Name Beginnt mit

Vorname Beginnt mit

Strasse Beginnt mit

PLZ/Ort

Geburtsdatum 0/0/0000 Geburtsjahr 0 Personen Nr. 0

☐ Inklusive Geburtsname

Trefferlimit 200 gefunden

Ausprägungsart (Alle Ausprägungsarten)

Konzern-Stichwort

Verwendungsnachweis

Ergebnissuche (Gefundene Personen im Grid durchsuchen) ☐ Gruppe?

P	A	G...	Name(n)	Vornamen(n)	C	Eltern	Strasse	P	Ort	Land	Nationalität(en)	Geburtsort	A	A	T

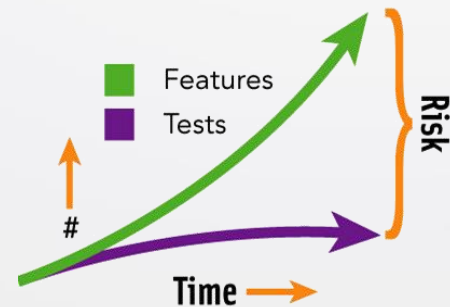
Ready

JOB118583 AS250872 NUM

Start RIS2-Start... RIS2 / DB.ENTW (Stand ... Worksoft Certify GoToMeeting 10:44 AM

Summary

- **Value add to QA**
 - Greater application quality
 - Faster time to market
- More enterprise visibility
- **Tighter integration with business**
 - Subject matter experts fundamental to the process
- **Faster delivery cycles**
 - 80% less training required
 - 92% faster design
 - 95% faster test development
 - 97.5% more efficient maintenance



Q&A, Discussion

<http://cmfirstgroup.com>

