



Introduction to Worksoft Certify® for SAP® Functional Testing

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IBM Software

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Agenda

- **Who is Worksoft?**
- The challenge
- Why automate and why do it now
- What to look for in automated technologies
- Worksoft Certify for SAP Functional Testing
- Conclusion

About Worksoft

- Based in Dallas, Texas
- Worldwide distribution model and partner ecosystem
- Thirteen-year history of test automation expertise delivered via superior products and services
- Strategic partnerships with IBM and SAP
- Nearly 100% proof-of-concept conversion
- Over 100 of the largest SAP customers in the world use Worksoft



WORKSOFT®

The Customers Who Rely on Us

Aerospace and Defense			Oil and Gas		
Retail			Utility		
CPG			Transportation		
Discrete Manufacturing			Insurance		
Distribution			IT		
Process Manufacturing			Government		
Healthcare			Telecom		

The Experts Know Us

Gartner

Magic Quadrant for Integrated Software Quality Suites

“ Worksoft is the leader for testing SAP applications with their strong support for the SAP Ecosystem.

“ Worksoft customers have in excess of 50% of their functional tests automated, leading all other vendors in the Magic Quadrant.

“ Worksoft strengths are in its resilience of tests to application changes, a high degree of reusability, and the leading edge script-free technology that enables a higher degree of test automation success.

Automated Testing Institute

Best Functional Automated Testing Tool for SAP

“ Worksoft, using an object-driven approach, eliminated the need for generating scripts or writing test code that legacy testing tools employ.

“ The automation community enthusiastically selected Worksoft Certify as their top rated pick for 2011's Best for SAP

“ The ATI Automation Honors are awards that celebrate excellence in the discipline of software test automation

Change is critical to Business Innovation



There are 3 key drivers for change events...

Business Drivers

- Changed Business Processes
- M&A and Reorganizations
- New Products, Vendors, ...

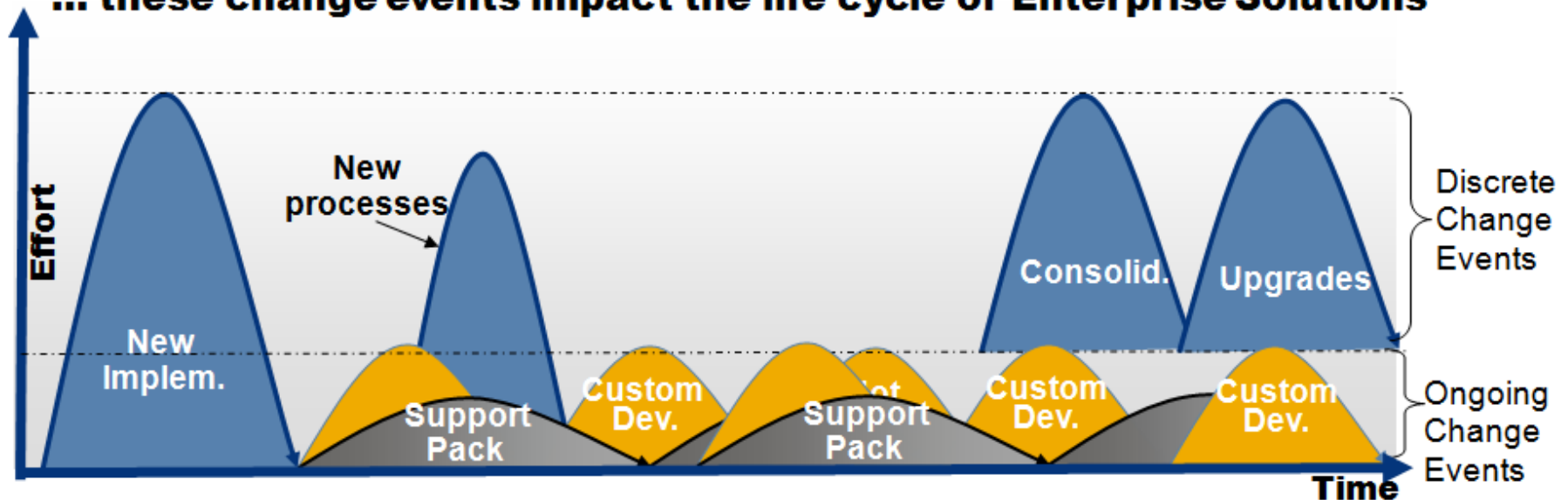
Compliance Drivers

- Governance
- Risk Management
- Compliance
- Examples: SOX, SEC, FDA, Basel2

Technology Drivers

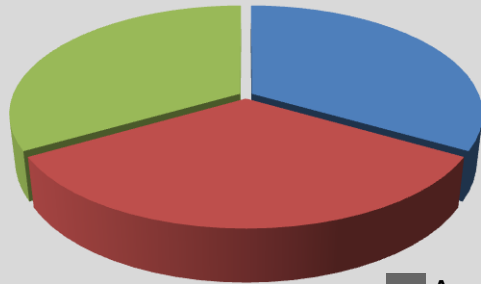
- Maintenance
- New functionality
- Upgrades
- (Global) Rollouts

... these change events impact the life cycle of Enterprise Solutions

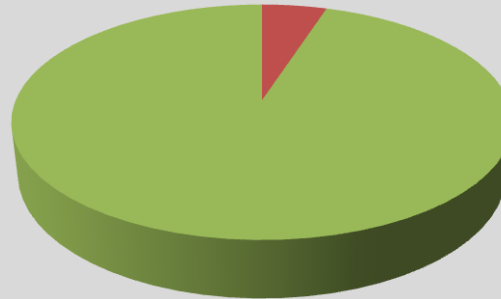


Typical SAP Maintenance Efforts

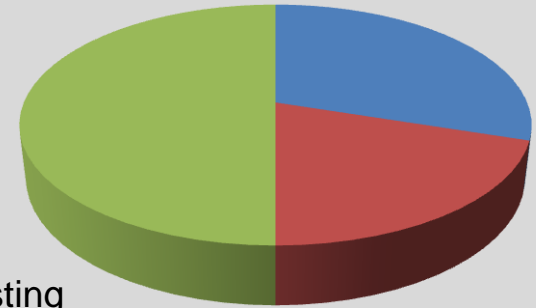
Initial Implementation



**Service Packs
Minor Releases**



**Upgrades and
Consolidations**

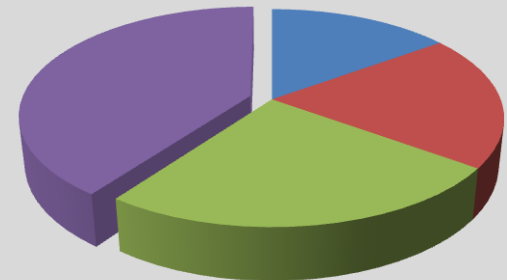


■ Analysis

■ Development

■ Testing

Worksoft Application Lifecycle Management



■ Analysis

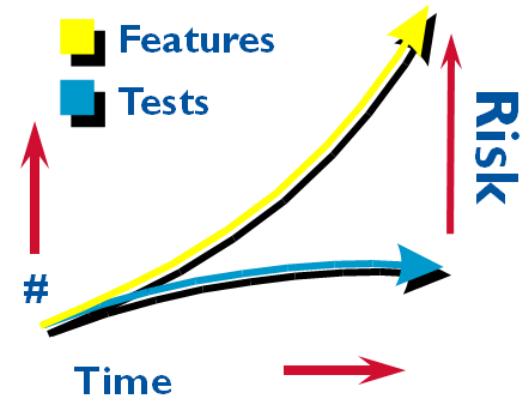
■ Development

■ Testing

■ Time Savings

So What's the Problem?

- SAP is all about change
 - Service packs, upgrades, enhancement packs, new applications
- Business is all about change
 - Mergers, acquisitions, new locations, new products and services
- Cycle times, resources are under pressure
 - Do more with less, faster
- SAP flexibility, integration introduces risk
 - Unintended up or downstream effects



This Is What is Needed

- End-to-end testing of critical processes
 - Comprehensive coverage and validation across operational areas
 - Assure changes do not introduce errors
- Automated, accurate execution
 - Liberate process experts from manual test tedium
 - Produce reproducible, documented results rapidly
 - Enterprise data strategy
 - Predictable, reusable data environment
 - Provide necessary test conditions repeatedly
- Integrated change impact analysis
 - Identify what needs to be tested
 - Know what isn't being covered



Traditional Automation

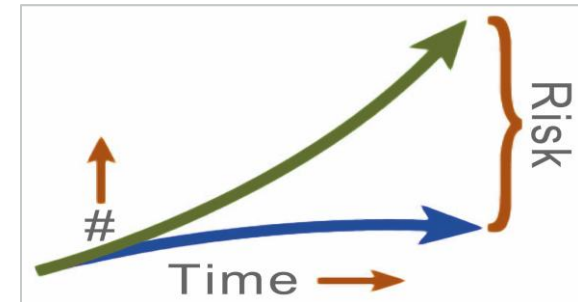
- 95%+ SAP software testing is manual
 - Yet automation has been around for 25+ years
 - Old technology record and play products cause more work than they are worth
 - Script generators just create more code faster
- Creating custom test code is crazy
 - You bought SAP software to get away from custom code
- Legacy scripting costs too much, takes too long
 - Need special skills to implement
- Code maintenance can't keep up
 - Too much code, pace of change is too fast



Why Automate at all? The Business Case for Test Automation

- Speed to Market is Top Priority
 - Limited / Fixed Resources
 - Manual Testing can't keep pace
 - Many changes go untested
 - No reusability means decreasing coverage
 - Time, turnover cause loss of knowledge
 - Backlog grows
 - Business agility suffers
- Traditional Methods are Too Costly
 - Script-based solutions require many customizations and an army of consultants or programmers
 - Writing code to test code is not the right answer
- Automation is the Right Answer
 - Reduced time and effort
 - Expanded coverage
 - More flexibility

Risk Increases Over Time



- Business processes
- Test resources

Product – What to look for in an automated testing solution

Simple

Allow business users to build tests
No programming skills required

Fast

Automate 60-70% of core business processes in 90 days or less
Run lights out regression tests daily/weekly

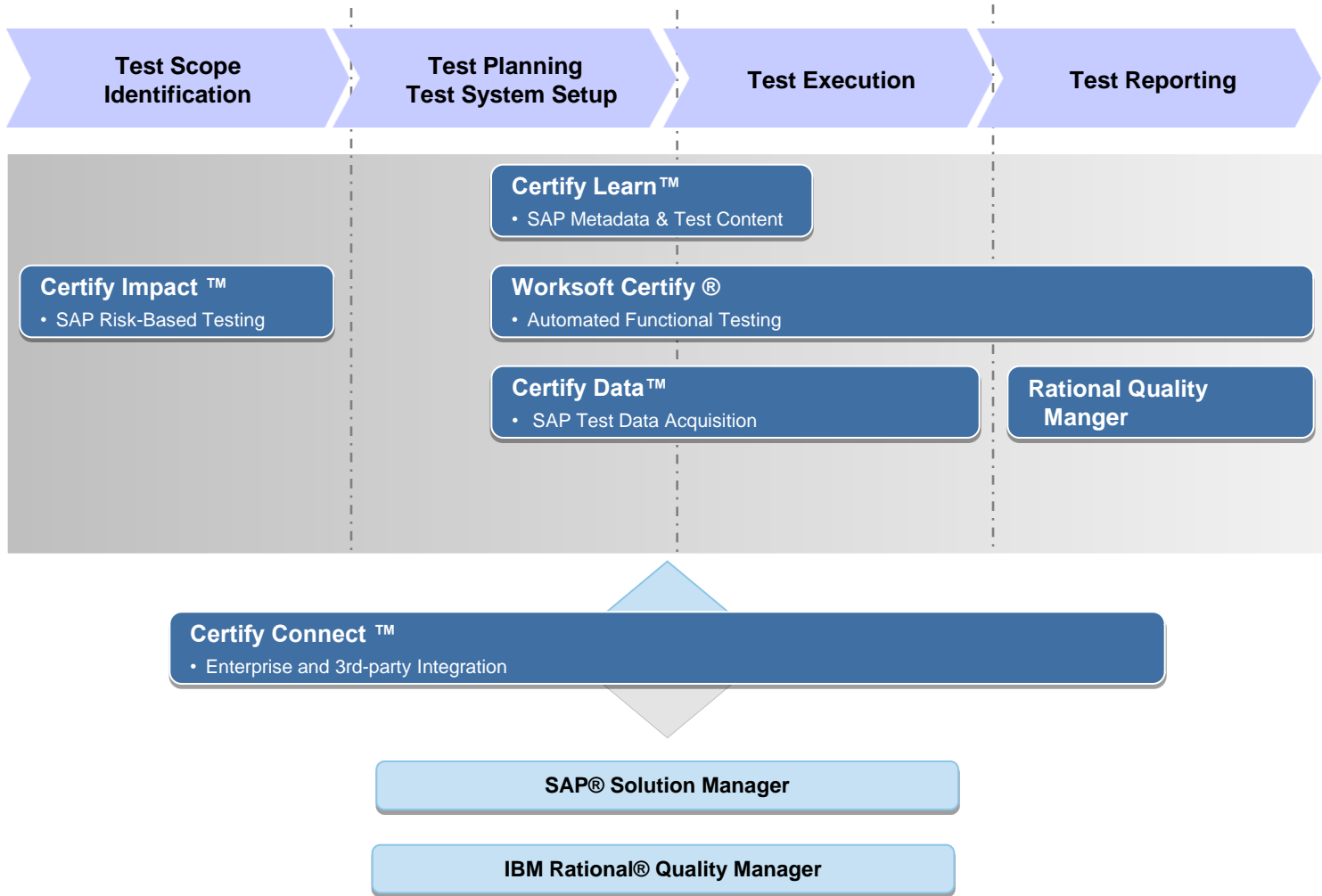
Resilient

Automated tests need to be resilient to changes in underlying applications
Simple test maintenance

Complete

Support all underlying software technologies
Domain knowledge and expertise in packaged application being tested

Worksoft Product Suite



Worksoft Certify for SAP Functional Testing

- Very Fast Test Development
- End-to-End Functional Testing
- Fast, Easy Test Maintenance
- Improve Development Cycle Time
- Lights-Out Test Automation Execution

Worksoft Certify for SAP

- **Simple**

- All solutions designed with non-technical, business users in mind
- Create automation by simply interacting with the application

- **Script Less**

- Object/Action paradigm fundamentally different from other automation solutions
- No scripts are ever generated, stored or required to be used
- No programming skills are required to create or maintain automated tests

- **Reusable**

- Automated tests can be reused saving hundreds of man hours
- Lights out regression tests can be used over and over again and can be run on a daily/weekly basis to ensure core business processes are functioning correctly

- **Maintainable**

- Simple single click maintenance by comparing maps from a new version with an old version of the application and automatically identifying/updating affected test steps

- **Versatile**

- Support provided for almost any kind of software technology used to build the enterprise/portal application



Worksoft Product Suite – Spanning the Lifecycle

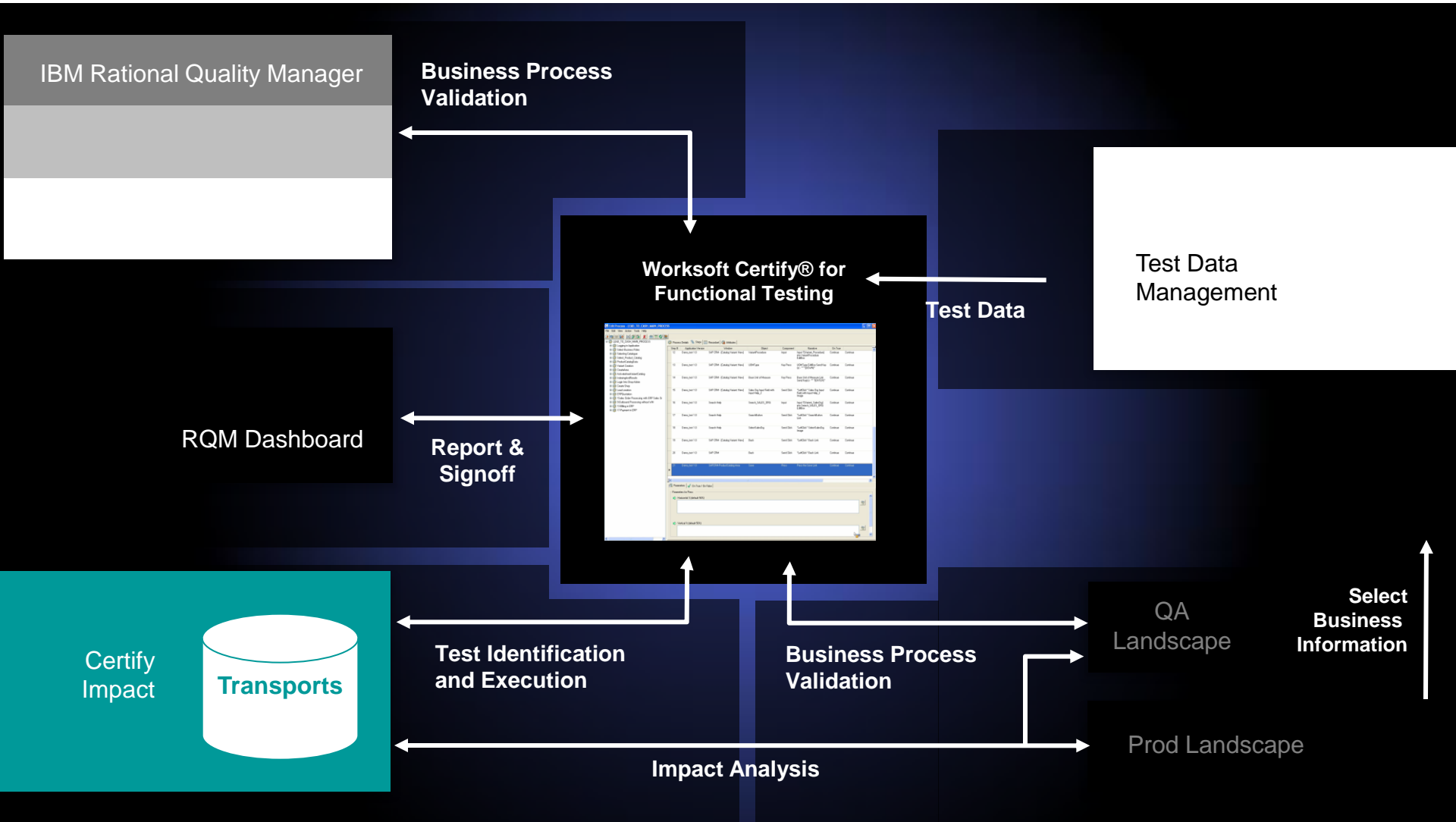
- **Certify LiveLearn & Certify SAP Test Content**
 - Automates the process of loading all SAP objects into Worksoft Certify allowing SAP teams to define and execute more automated tests in a shorter period of time
 - Includes comprehensive set of pre-built, re-usable SAP test content
- **Certify Connect**
 - Automates the connection of Worksoft Certify to enterprise or 3rd-party applications
 - Provides bi-directional integration with all leading SAP Test Management solutions:
 - SAP Solution Manager
 - IBM Rational Quality Manager
- **Certify Impact**
 - Automated risk-based testing solution that can identify, recommend, and execute end-to-end business process tests based on a set of proposed SAP application changes and their relationship to critical business processes (leveraging SAP BPCA)
 - Also identifies Certify tests that need to be updated, as well as a “gap” report listing SAP changes that do not have a corresponding Certify test

Worksoft Product Suite – Spanning the Lifecycle

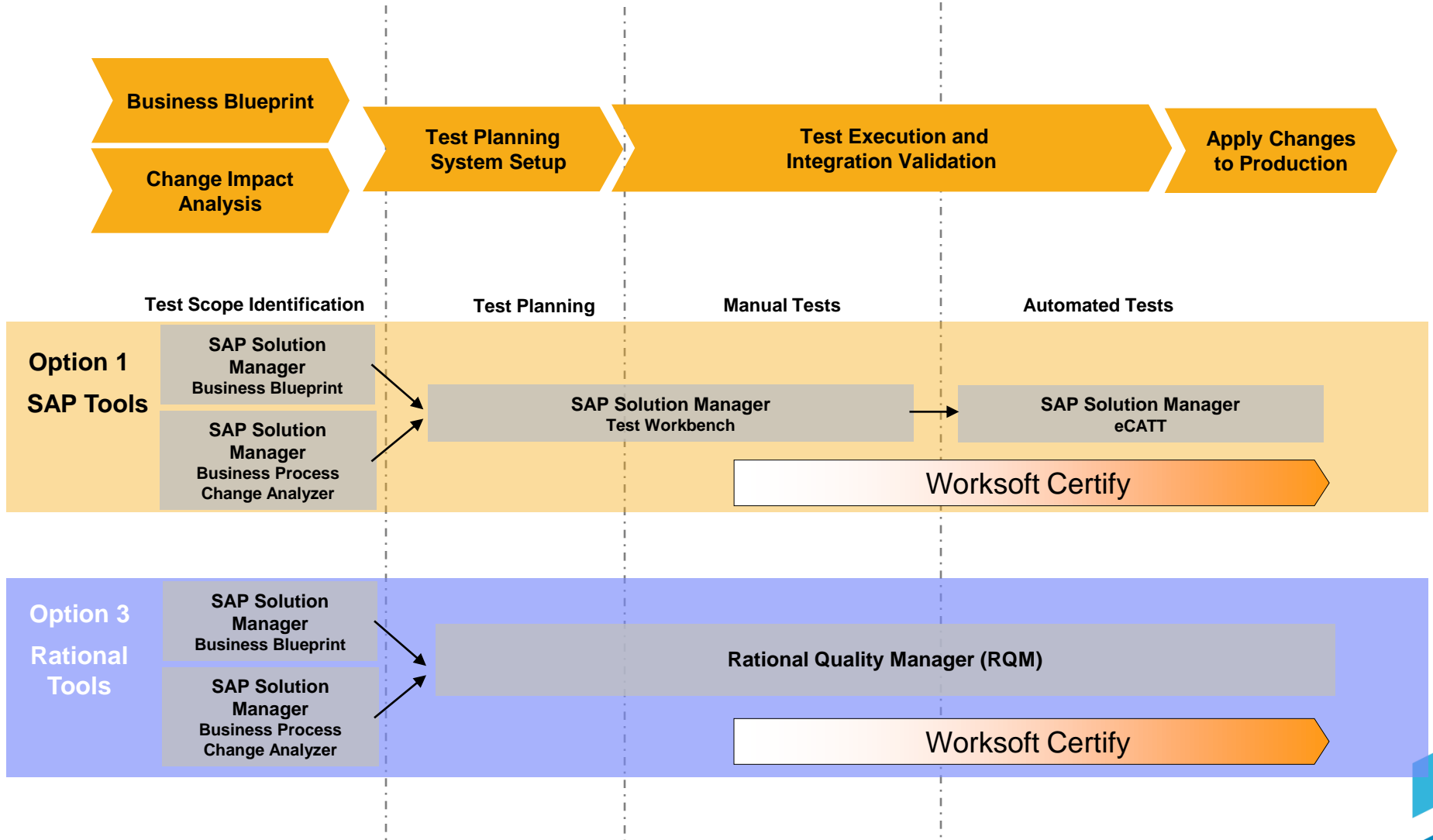
- **Certify Data**

- Automates the extraction of SAP data and storage in the corresponding Worksoft Certify test process as the test steps are constructed
- Minimizes the initial and recurring costs of test data acquisition and validation
 - Initial: During test construction, Certify Data extracts test data directly from the application under test
 - Recurring: Existing test data may be maintained and refreshed from within Certify

Worksoft Automation in Action



Supported SAP Testing Tool Suites



Worksoft Certify for SAP Functional Testing

The screenshot displays the Worksoft Certify application window. The interface includes a menu bar (File, Edit, View, Actions, Tools, LiveTouch, Reports, Help), a toolbar, and a sidebar with navigation options: Processes, Requirements, Data, Variables, Results, Reports, Applications, Projects, and Interfaces. The main area is divided into a 'Processes' table and a 'Details' pane.

Processes Table:

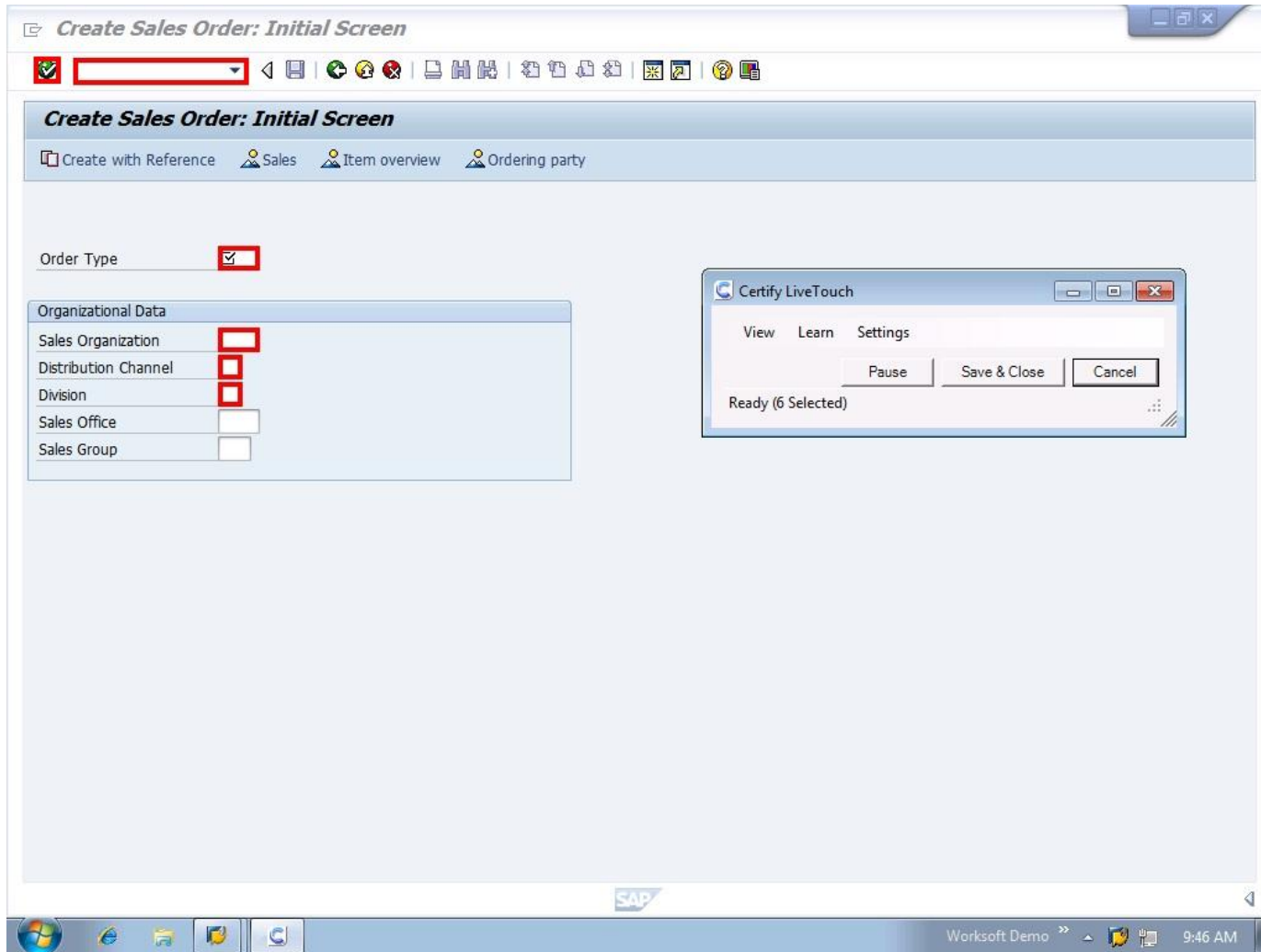
Name	Description	Status	Development Status
Cross Platform End to End Order to Cash (CRM)	Order to Cash spanning multiple platforms	Failed	Complete
Cross Platform End to End Order to Cash (Duwamish)	Order to Cash spanning multiple platforms	Failed	Complete

Details Pane (Process: Cross Platform End to End Order to Cash (CRM)):

- Name:** Cross Platform End to End Order to Cash (CRM)
- Layout:** Order to Cash Layout
- Description:** Order to Cash spanning multiple platforms
 - 1) SAP Portal CRM order/quote entry
 - 2) SAP GUI create delivery and billing document
 - 3) Fulfillment via AS/400
 - 4) SAP GUI capture completed order and all documents
- Recordset:** End to End (CRM)
- Recordset Variable:**
- Recordset Mode:** Read Only
- Status:** Failed

Project: Functional Tests (kleen) | Show desktop | Worksoft Demo | 9:37 AM

Worksoft Certify for SAP Functional Testing



Worksoft Certify for SAP Functional Testing

Recycle Bin

Certify Live Data

▼ Search Criteria

▲ Search Results

Sales Document: Header Data (10 rows)

Drag a column header and drop it here to group by that column

Sales Document Type	Division	Sales Organization	Distribution Channel
SAPMV45A-0101 VBAK-AUART	SAPMV45A-0101 VBAK-SPART	SAPMV45A-0101 VBAK-VKORG	SAPMV45A-0101 VBAK-VTWEG
TA	00	1000	10
TA	00	1000	12
TA	00	1000	12
TA	00	1000	12
TA	00	1000	12
TA	00	1000	12
TA	00	1000	12
TA	00	1000	12
TA	00	1000	10
TA	00	1000	10

▲ Selected Data

Insert a row of data automatically chosen from the values above

Sales Document Type	Division	Sales Organization	Distribution Channel
SAPMV45A-0101 VBAK-AUART	SAPMV45A-0101 VBAK-SPART	SAPMV45A-0101 VBAK-VKORG	SAPMV45A-0101 VBAK-VTWEG
TA	00	1000	12

Submit

Worksoft Demo 9:47 AM

Worksoft Certify for SAP Functional Testing

The screenshot displays the Worksoft Certify application window titled "View Process - Cross Platform End to End Order to Cash (Duwamish)". The interface is divided into several sections:

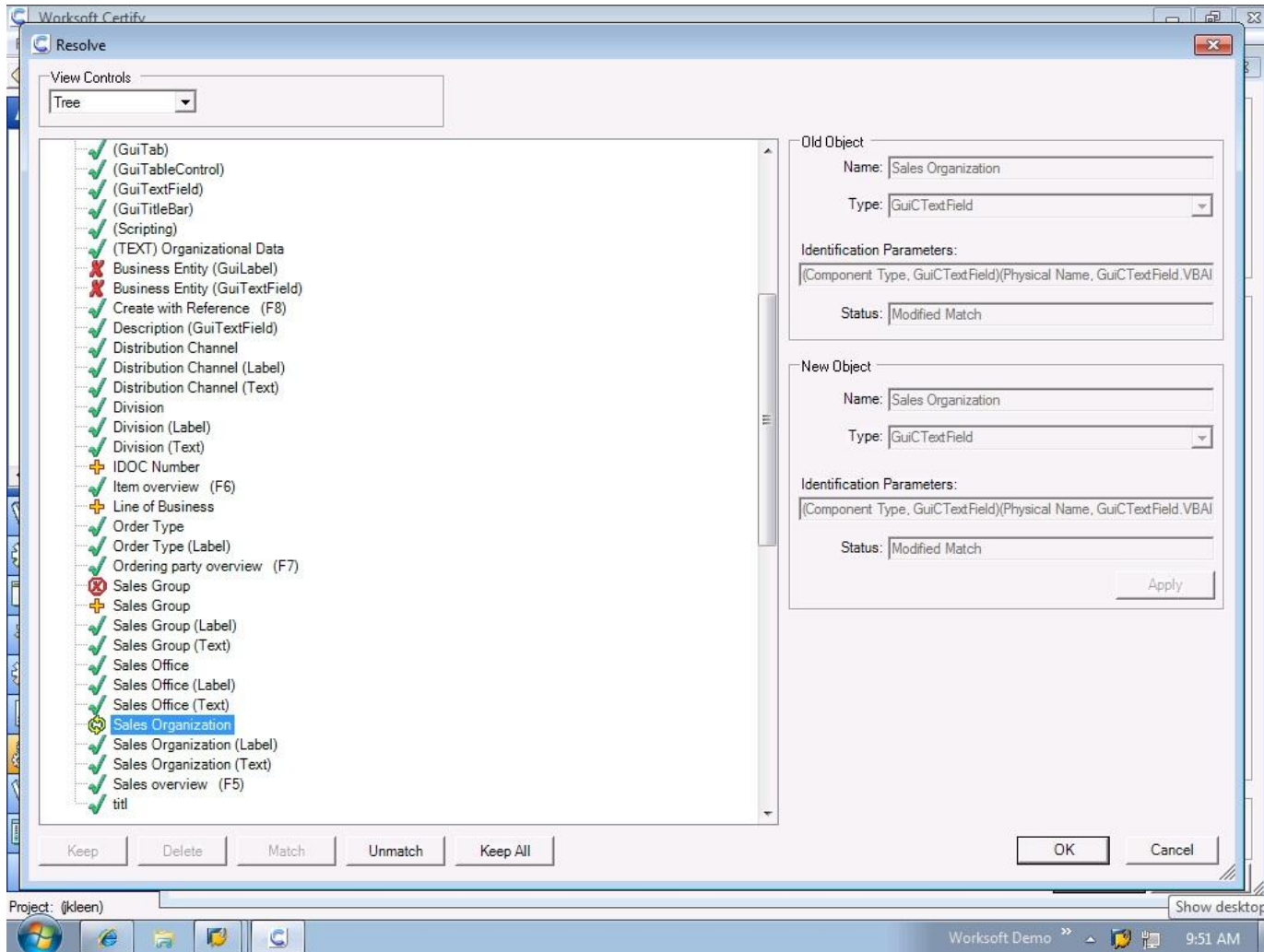
- Tree View (Left):** A hierarchical tree structure showing the process flow. The selected step is "VA01_CreateStandardOrder" under the "Order to Cash (SAPGUI)" category.
- Process Details (Center):** A table listing the steps of the process. The first step is highlighted.
- Parameters (Bottom):** A section for defining input parameters for the selected step, showing a "Value" parameter set to "/nVA01" and an "Instance (row)" parameter set to "1".

Step #	Narrative	Application Version	Window	Object
1	Input the value "/nVA01" into the Txn Code	SAP Core 1.0	SAP Main	Txn Code
2	Input the value "OR" into the Order Type CTextField	Sales and Distribution 1.0	Create Sales Order: Initial Screen	Order Type
3	Input the value N[Sales Organization (Number)] into the Sales Organization CTextField	Sales and Distribution 1.0	Create Sales Order: Initial Screen	Sales Organiz
4	Input the value T[Distribution Channel] into the Distribution Channel CTextField	Sales and Distribution 1.0	Create Sales Order: Initial Screen	Distribution Channel
5	Input the value T[Division] into the Division CTextField	Sales and Distribution 1.0	Create Sales Order: Initial Screen	Division
6	SendVKey "Enter" to SAP Main Window	SAP Core 1.0	SAP Main	SAP Main

Parameters for [Input]

- Value: /nVA01
- Instance (row): 1

Worksoft Certify for SAP Functional Testing



Worksoft Certify for SAP Functional Testing

The screenshot displays the Worksoft Certify Impact web application interface within a Windows Internet Explorer browser window. The browser address bar shows the URL `http://localhost/WorksoftCertifyImpact/`. The application header includes the Worksoft logo and the text "Worksoft Certify Impact™" with a version number "v 1.2.0" and a "View Help" link.

The main content area is titled "Select Transactions And Programs" and includes the instruction: "Select the SAP programs and transactions to be correlated with Certify processes". Below this, it states "Analyzed transports affect the following programs and transactions" and shows two columns of selected items:

- Programs (8 of 8 selected):**
 - SAPFV45K (SAPFV45K)
 - SAPFV45P (SAPFV45P)
 - SAPLV05K (SAPLV05K)
 - SAPLV50S (SAPLV50S)
 - SAPLVBAK (SAPLVBAK)
 - SAPLVKMP (SAPLVKMP)
 - SAPMV45A (SAPMV45A)
 - SAPMV50A (SAPMV50A)
- Transactions (45 of 45 selected):**
 - HBS0 (old) Create RE-SCM Sales Order
 - HBS1 (old) Create RE-SCM Inquiry
 - HBS2 (old) Create RE-SCM Quotation
 - MD81 (Create Customer Indep. Requirements)
 - MD82 (Change customer indep. requirement)
 - MD83 (Display Customer Indep. Requirements)
 - V-01 (Create Sales Order)
 - V-02 (Create Quotation)
 - V-03 (Create Quotation)

Below the selection lists, there are input fields for "Add Program:" and "Add Transaction:" with green plus icons. At the bottom of the main content area, there are navigation links: "Select Certify projects to analyze", "Return to previous step", and a message: "Some maps have changed. Click on the link below to download them." Below this message, two program entries are listed:

- Program SAPMV45A (Screen 0100)
- Program SAPMV45A (Screen 4001)

The browser's status bar at the bottom shows "Done", "Internet | Protected Mode: Off", "100%", and the system tray includes "Worksoft Demo" and the time "9:49 AM".

Worksoft Certify for SAP Functional Testing

The screenshot displays the Worksoft Certify Impact web interface. The main content area is titled "Test Coverage" and contains the following information:

- Test Coverage:** The Certify processes listed below impacts only **16.98 percent** of the selected programs and transactions.
 - [Show programs and transactions not covered by these tests](#)
 - [Print test coverage data](#)
- Select Impacted Processes:** Select impacted Certify processes used to validate the chosen SAP objects.
- Test List:**
 - 1.1 Integration Tests \ Cross Platform End to End Order to Cash (CRM)**
 - 9/1/2011 6:21 PM
 - min 00:00:00 average 00:02:40 max 00:15:28
 - Order to Cash spanning multiple platforms
 - 1) SAP Portal CRM order/quote entry
 - 2) SAP GUI create delivery and billing document
 - 3) Fulfillment via AS/400
 - 4) SAP GUI capture completed order and all documents
 - 1.1 Integration Tests \ Cross Platform End to End Order to Cash (Duwan)**
 - 9/1/2011 7:30 AM
 - min 00:00:31 average 00:01:43 max 00:20:12
 - Order to Cash spanning multiple platforms
 - 1) Duwanish online bookstore order entry
 - 2) SAP GUI create delivery and billing document
 - 3) Fulfillment via AS/400
- Estimated execution duration (HH:MM:SS):** min 00:04:15 average 00:10:10
- Location of results:** Certify Result Folder: [] Results of executing these processes will be saved to this folder. A results folder with

Worksoft Certify for SAP Functional Testing

E2E_CRM_O2C_BPP.pdf - Adobe Acrobat Pro

File Edit View Document Comments Forms Tools Advanced Window Help

Create Combine Collaborate Secure Sign Forms Multimedia Comment

15 / 46 102% Find

Order Type

Organizational Data

Sales Organization

Distribution Channel

Division

Sales Office

Sales Group

SAP

SAP Logon 720

Worksoft Demo 9:57 AM

Input the value "3020" into the Sales Organization CTextField
Input the value "30" into the Distribution Channel CTextField
Input the value "00" into the Division CTextField

SAP Main
SendVKey "Enter" to SAP Main Window

Sales Order: Partner Header
Input the value "301075" into the Sold To Party CTextField

What Are the Benefits Worksoft Delivers?

- 40% reduction in ongoing SAP operating costs
- 50% faster delivery of new functionality transports, enhancement packs, support packs
- 60% reduction in time to analyze, synchronize, and implement transports
- 90% improvement in quality, measured by helpdesk tickets, and development rework
- 100% compatibility between training material and business process documentation
- 100% auditable compliance

Gartner Says: “Worksoft’s customers have more than 50% of their functional tests automated, leading the other vendors...” – 2010 Integrated Software Quality Suites Magic Quadrant

It Can Be Done

- **Dow Corning** [\[Link to Case Study\]](#)
 - Experts being lost to rotation, retirement
 - Automation enabled knowledge capture, transfer to others
 - 75% processes automated in 90 days
 - 250 processes executed every night



Conclusion

- It is not as hopeless as it seems
 - Most companies have 150 – 250 critical business processes
 - Focusing on these with pre-built content from Worksoft makes it reasonable
- Adopt innovation
 - Reject what isn't working
 - Manual testing, script writing, generating
 - Invest in a proven strategy
 - Ask for proof on your own systems
- How long to automate critical processes?
 - 80-95% in 8 weeks with dedicated resources, focus
 - Longer with part-time attention

QUESTIONS

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