



Simplification through Automation

Kevin Tate



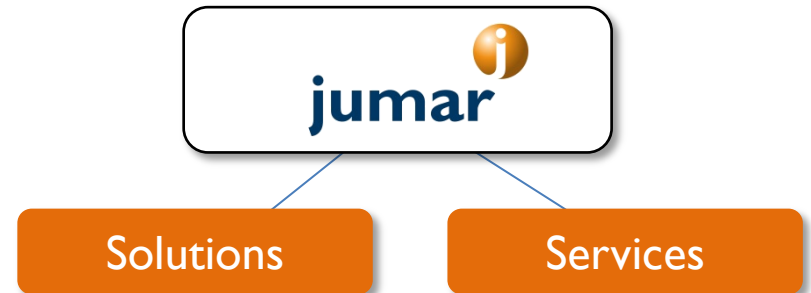
Our heritage

- Leading global resource
 - Services and solutions partner to CA Gen community and CA Technologies
 - Our people:
 - Strong pedigree
 - Been there from the start
 - 25 years – since beginning of IEF
 - CA
 - JMA
 - Sterling
 - Rainier
 - Company set up in 2000
 - More than 150 clients in 35 countries
- If Gen – then Jumar



What We Do

- Our Services
 - Modernisation & Migration
 - Application Development
 - Automation Software
 - Consultancy
 - Flexible Managed Service
 - Contract Resourcing
 - Permanent Recruitment
- Specialist Expertise
 - Project Phoenix
 - CA Gen
 - Agile Development
 - Architectures and SOA
 - Microsoft / Java / Web



Agenda

- Where are we now?
- Modernisation: Motivations and challenges
- The roadmap
- Model Analysis
- Modernisation framework
- Examples (Plan, Assess, Remediate)
- Summary

Where are we now?

- CA Gen applications have served ‘the company’ well for many years
- They were ‘leading edge’ at the time but the leading edge has moved forward
- Modernisation is now becoming more of a requirement
 - Take advantage of new technologies and interfaces
 - Provide flexibility in options going forward
 - Upgrade needed for compliance
- Perceived cost of change to “non-Gen’ers”
 - Pushing modernisations to start from scratch
 - Can result maintaining new and old
- Model driven provides basis for rapid change
 - Exploit current investments
 - Exploit context focused automation
- Time and Money limited in current economic climate

Modernisation motivations

Need to
integrate better

- Expose locked-away business rules – e.g. web services within SOA

Improve
compliance

- Comply with ever more demanding legal and regulatory requirements

Make business
functions
available via
web

- For e-commerce, self-service or simple deployment reasons

Keep up with
software stacks

- Work with, and be supported on, continually changing software stacks

Modernise look
and feel

- Prevent system from looking old-fashioned with better user interfaces

Improve
'business fit'

- Ensure systems fit with strategic direction for hardware & software

Move to new
platforms

- Migrate to better performing or more cost hardware and/or software

Uncouple and
remove
complexity

- Skills are hard to find, and individuals who wrote them have moved on

Challenges

Why is modernisation hard?

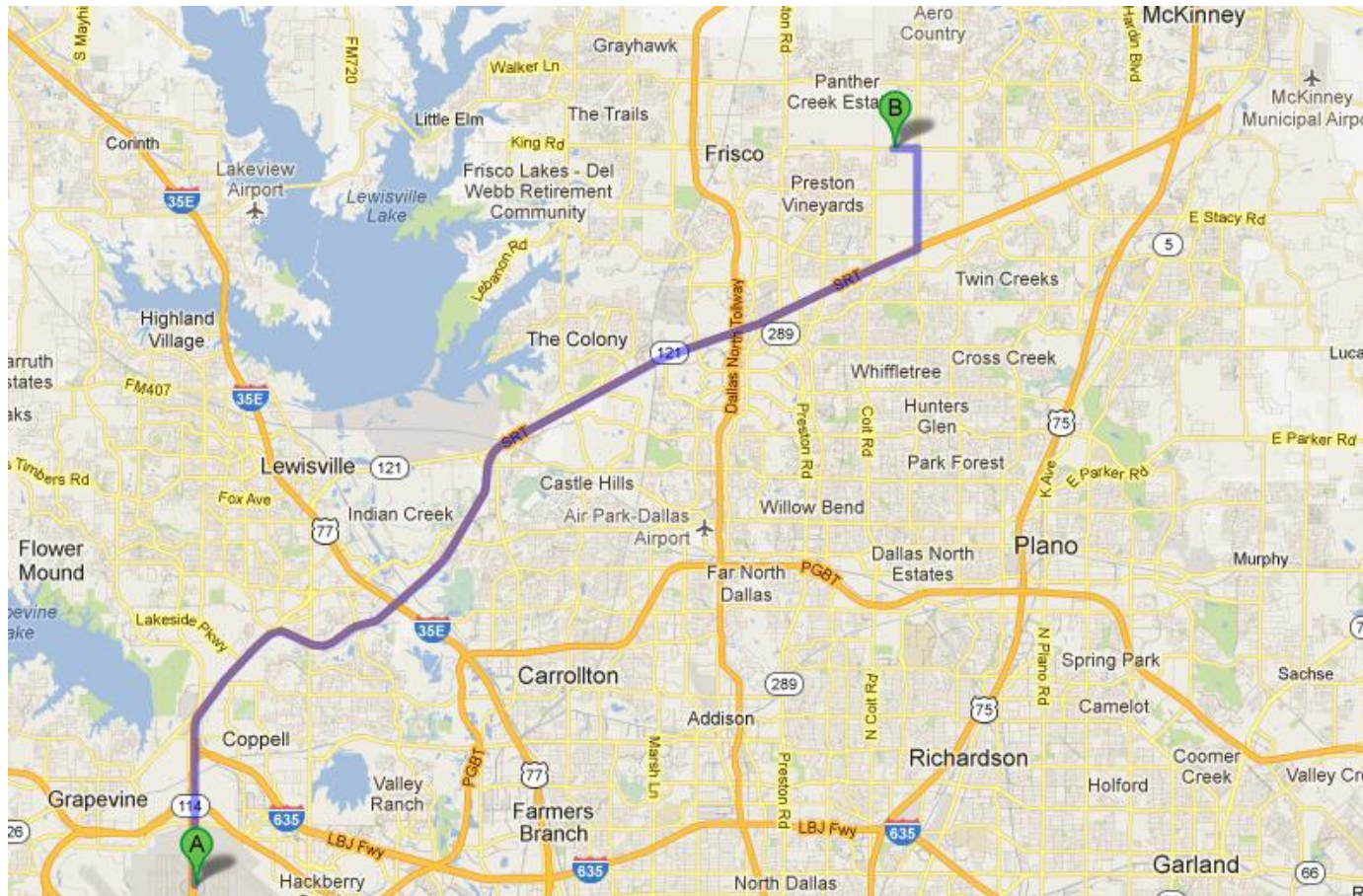
What will the issues be?
How will they affect my models?
How long will the project take?
How much resource will it consume?
What if I hit new issues during the project?
What will the cost of the project?

How automation helps

Speed /Cost reduction
Model Portfolio Impact Analysis
Where do the issues impact? What are the volumetrics?
Planning
Model Update
Fix the issues with custom CA Gen upgrade software
Use BulkUpdate for simple cases
Reacting to new issues
Rapid ad-hoc impact analysis and replanning

Plus... Productivity Tools for testing, documentation, etc

A Modernisation Roadmap



What Is Model Analysis?

“The extraction, manipulation and querying of low-level data describing CA Gen models, usually with a view to **determining their fitness for a specific purpose** and enabling a subsequent project to be planned with accuracy and confidence.”

Simplification through Automation



Model Analyser

Architecture Analyser

Performance Analyser

QA Compliance
Analyser

Corruption Analyser

Modernisation Roadmap



to



Application
Assessment

Technology
Assessment

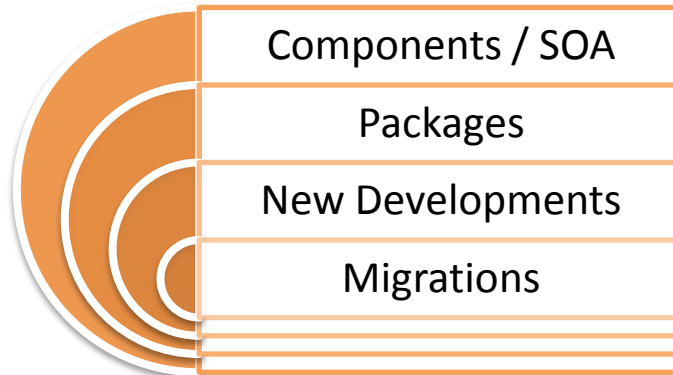
Business
Assessment



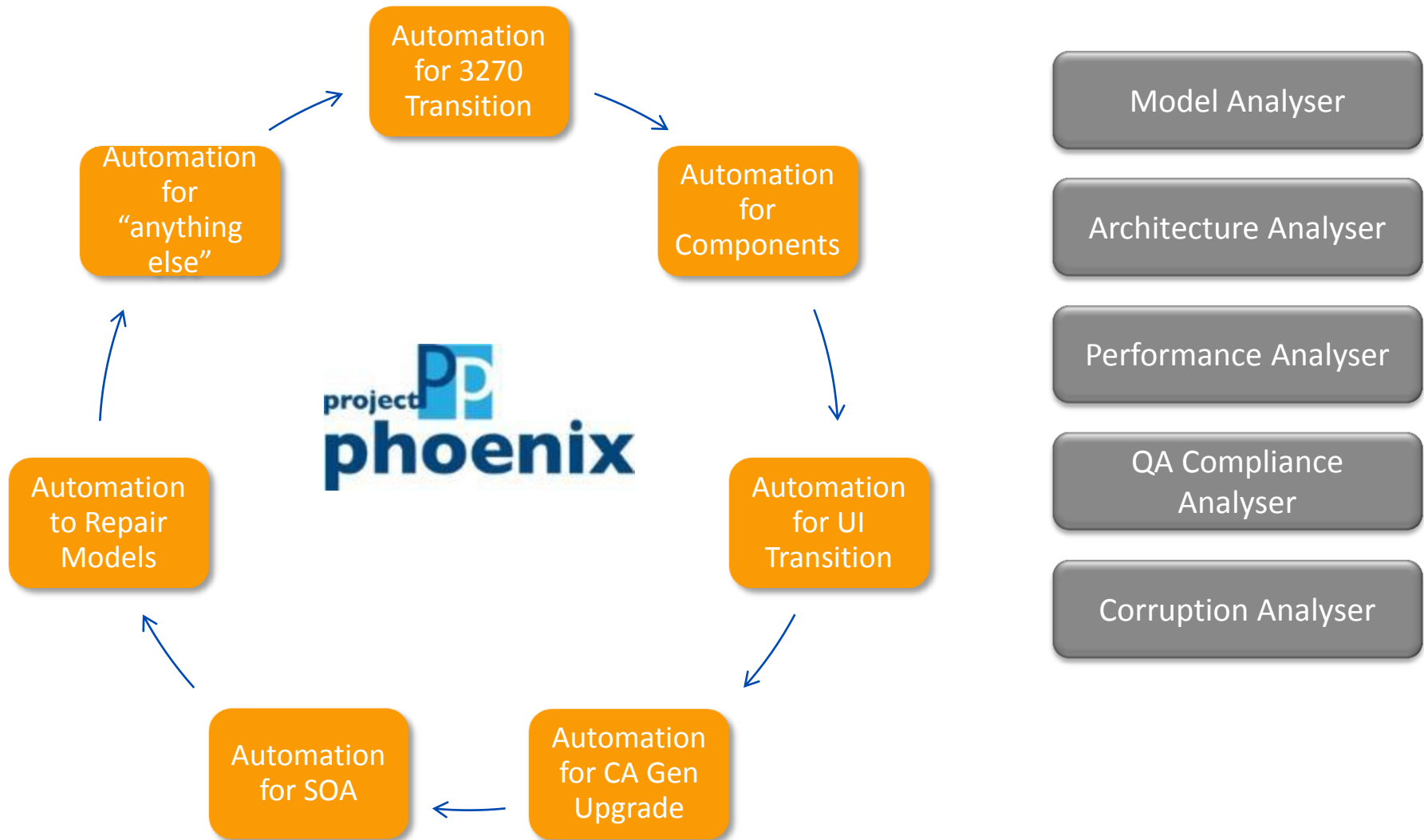
Define Future
Application
Landscape



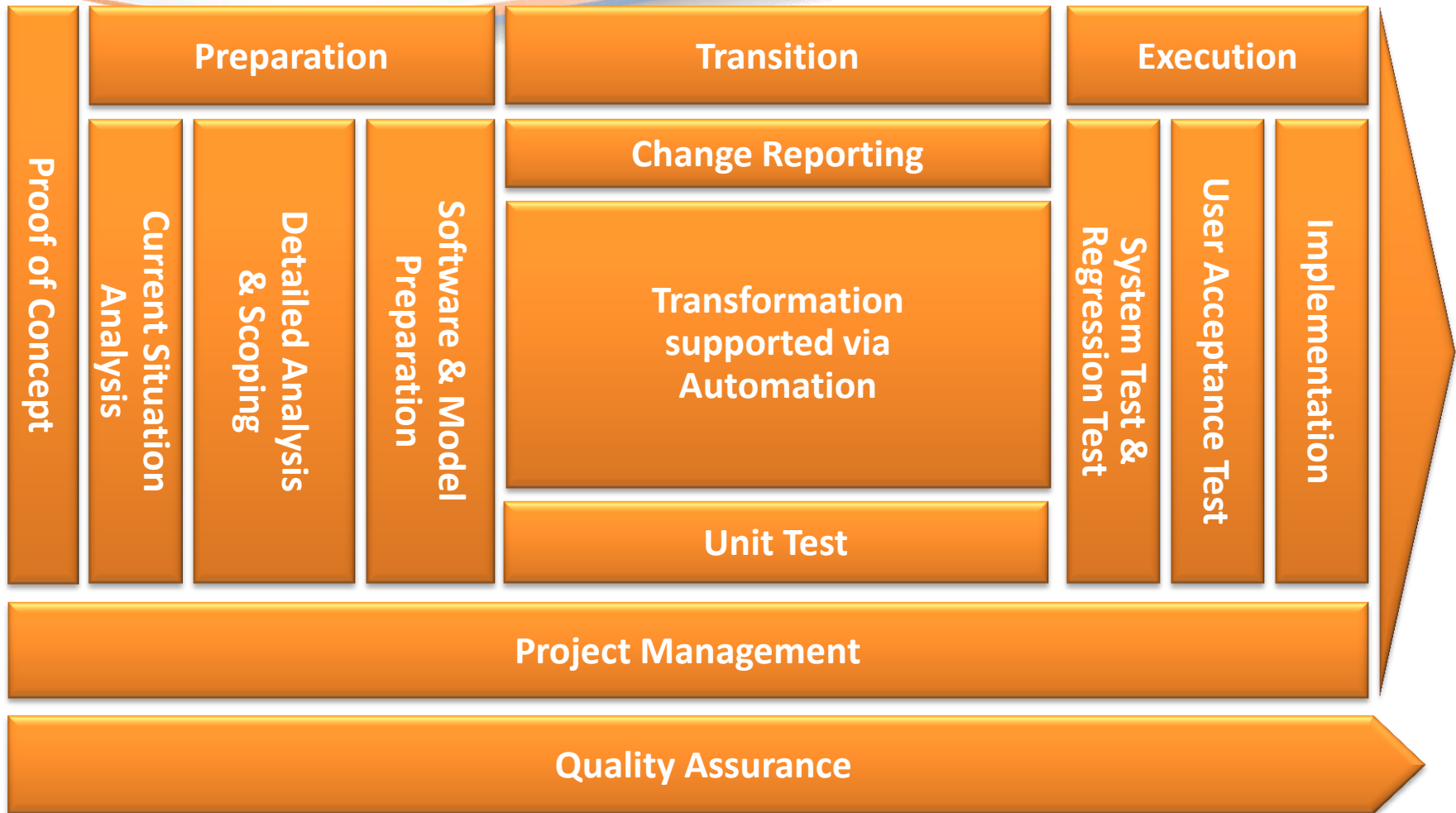
Create
Roadmap



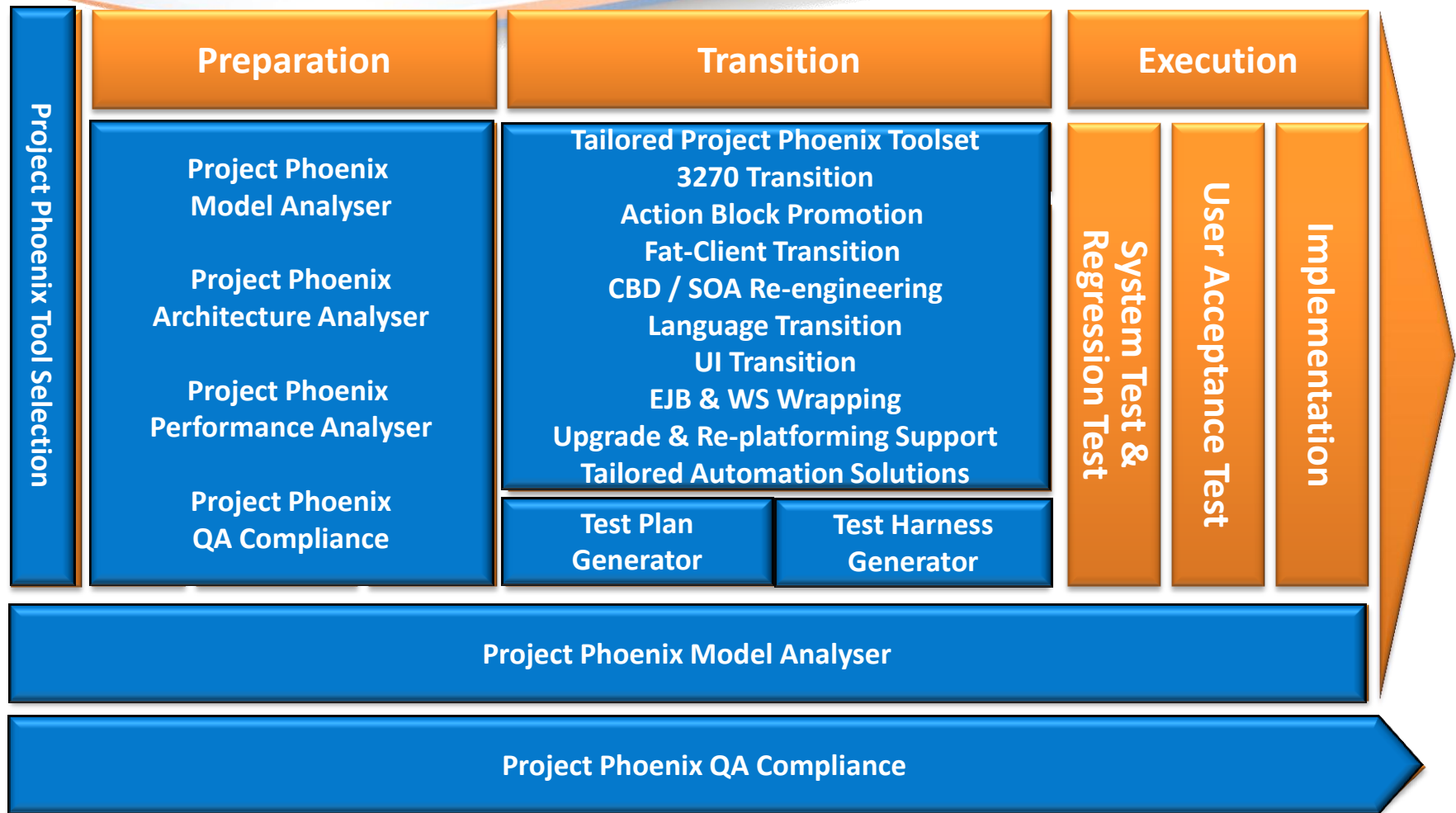
Simplification through Automation



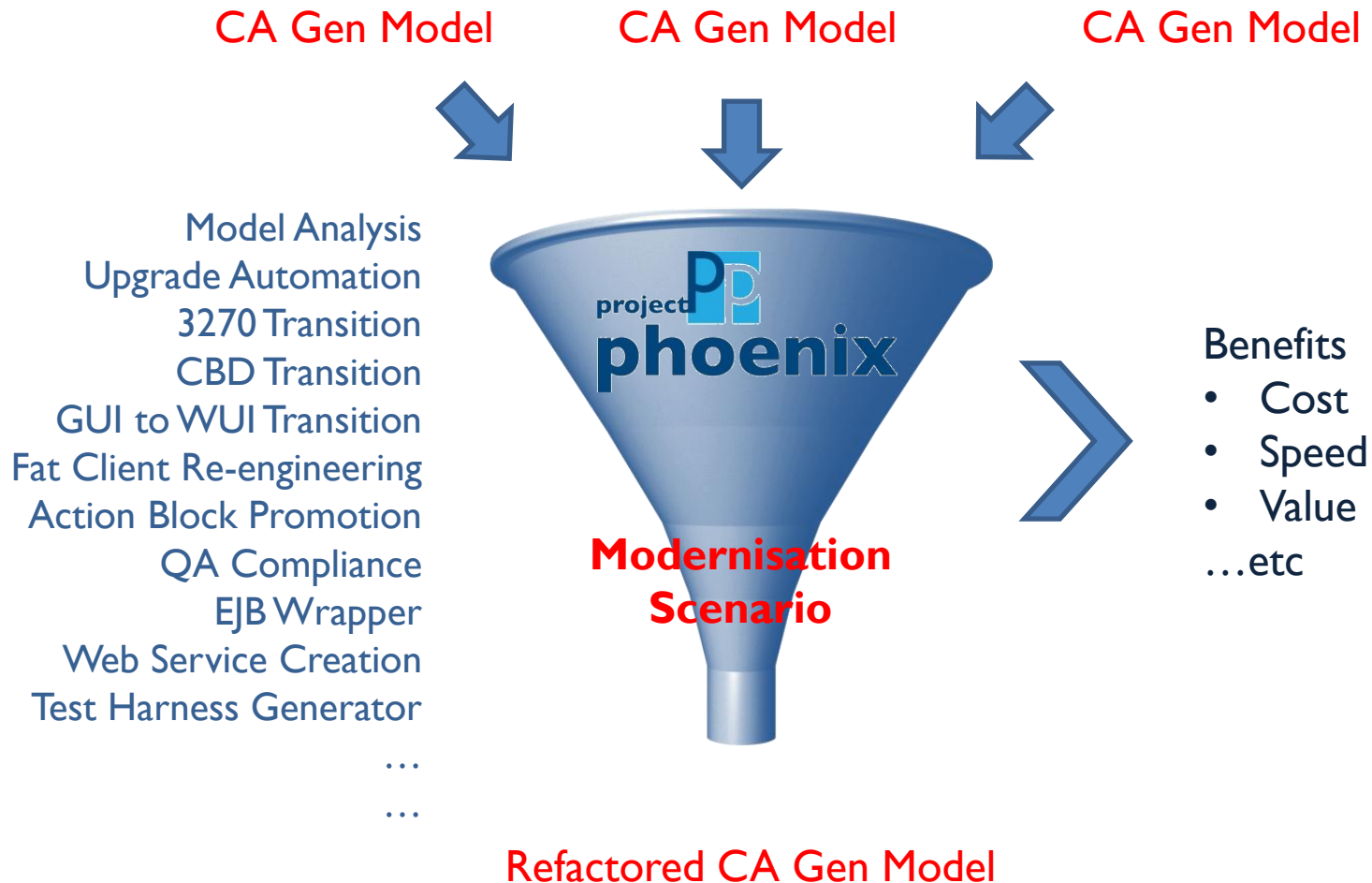
Project Phoenix Framework



Project Phoenix Framework

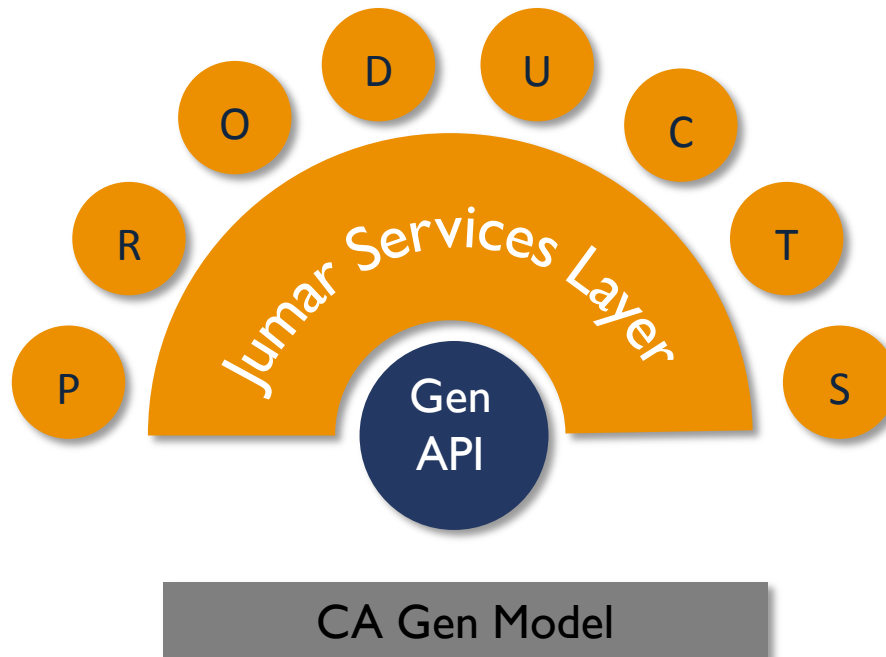


Project Phoenix Framework



How do we Automate?

- “Simple” - Exploit Gen’s API



Jumar Services Layer

```

cexAddAdtToAnalysisList
cexAddAlias
cexAddAssociation
cexAddAttribute
cexAddAttributeView
cexAddBAAActionBlock
cexAddBDSAActionBlock
cexAddBusinessSystem
cexAddCASEOFEXISTSTATE
cexAddCASEOFNumericAttribute
cexAddCASEOfTextAttribute
cexAddCASEStringToCASEOfTextAttribute
cexAddCOMMAND_IS
cexAddCREATE
cexAddChildEntityOrView
cexAddChildRepeatingGroupView
cexAddClassifierToPartitioning
cexAddClause_AndOrAttributeOperatorAttribute_ToCondition
cexAddClause_AndOrAttributeOperatorLiteral_ToCondition
cexAddClause_AndOrAttributeOperatorNumeric_ToCondition
cexAddCommandsToBusinessSystem
cexAddComponentOffersInterfaceAssociation
cexAddComponentSpecType
cexAddDELETE
cexAddENABLECOMMAND
cexAddDataField
cexAddDataRecord
cexAddDatabase
cexAddDefaultValueToAttribute
cexAddDefaultValueToAttributeWithoutExistingPVs
cexAddENABLECOMMAND
cexAddESCAPE
cexAddEXISTSTATE_IS
cexAddEntity
cexAddEntryPoint
cexAddEntryPointField
cexAddEventHandler
cexAddExistState
cexAddFOR_EACH
cexAddFOR_SUBSCRIPT
cexAddFlow
cexAddForeignKeyField
cexAddGETROWHIGHLIGHTED
cexAddHIGHLIGHT_ATTRSUBSCRIPT
cexAddIF_AttributeOperatorAttribute
cexAddIF_AttributeOperatorAttributeAndOrAttributeOperatorAttribute
cexAddIF_AttributeOperatorAttributeAndOrAttributeOperatorNumeric
cexAddIF_AttributeOperatorLiteral
cexAddIF_AttributeOperatorNumeric
cexAddIF_COMMAND
cexAddIF_EXISTSTATE
cexAddIF_GroupFullIdentity
cexAddIF_SUBSCRIPTOperatorN
cexAddIdentifier
cexAddInexpSpace
cexAddInterfaceType
cexAddLinkage
cexAddLoadModuleCooperativeClient
cexAddLoadModuleCooperativeServer
cexAddLoadModuleOnlineServer
cexAddLoadModuleWindowed
cexAddMAKE
cexAddMOVE
cexAddMOVEGroupViewToGroupView
cexAddMappingForHiddenView
cexAddNEXT
cexAddNOTE
cexAddObject
cexAddOpsLib
cexAddPStepToLoadModule
cexAddPStepUSE
```

```

cexAddPackagingDetailForPstep
cexAddPartitioning
cexAddPermittedRangeToAttribute
cexAddPermittedValueToAttribute
cexAddProcedure
cexAddREADWhereViewOperatorView
cexAddREMOVEDROW_ATTRSUBSCRIPT
cexAddRelationship
cexAddSETEntityActionToAttributeView
cexAddSETEntityActionToAttributeViewOperatorAttributeView
cexAddSETEntityActionToAttributeViewPlusMinus
cexAddSETEntityActionToLiteral
cexAddSETEntityDiagramToNumeric
cexAddSETSUBSCRIPTLAST_ToLastPlusOne
cexAddSETSUBSCRIPTLAST_ToNumeric
cexAddSETSUBSCRIPTToAttributeView
cexAddSETSUBSCRIPTToNumeric
cexAddSETSUBSCRIPTToSubPlusMinusN
cexAddSETToAttribute
cexAddSETToAttributeOperatorAttribute
cexAddSETToAttributePlusMinusN
cexAddSETToDatum0
cexAddSETToDatumYYYYMMDD
cexAddSETToLiteral
cexAddSETToNumeric
cexAddSETSUBSCRIPTPlusMinusN
cexAddSETToStringConcatString2
cexAddSETToSystemAttribute
cexAddSpecificationType
cexAddStmfrFromText
cexAddStorageGroup
cexAddSubjectArea
cexAddSubtype
cexAddTablespace
cexAddTechnicalDesign
cexAddTopLevelEntityOrWorkView
cexAddTopLevelRepeatingGroupView
cexAddUNHIGHLIGHT_ATTRSUBSCRIPT
cexAddUPDATE
cexAddUSE
cexAddUSEWithNameBasedViewMatching
cexAddUsageOfExistingEventHandler
cexAddWorkSet
cexAssignClassifyingValueToSubtype
cexAddCodeBlockPromote
cexAddCodeBlockPromote2
cexAddCodeBlockPromote3
cexAddCommentOutAdStatement
cexAddCommentOutAdStatements
cexAddCommentOutAdStatementsOfType
cexAddCommitUpdates
cexAddCompleteActionDiagramAnalysis
cexAddConnectEncy
cexAddCopyAdViews
cexAddCopyViewsWithMerge
cexAddCopyBusinessSystemGuIdDefaults
cexAddCopyCommandsAcrossBusinessSystems
cexAddCopyFlow
cexAddCopyPropertyValuesAcrossObjects
cexAddCopyView
cexAddCopyViewMatching_SameUsingDifferentSetUsing
cexAddCopyViewMatching_SameUsingDifferentSetUsing
cexAddCountModelObjcs
cexAddCountSaveUpFrontActionDiagramAnalyses
cexAddDeleteAdStatementsIfCommented
cexAddDeleteAdStatementsOfType
cexAddDeleteAssociation
cexAddDeleteLogStatements
cexAddDeleteObject
cexAddDeleteViewsIfUnused
cexAddDeleteViewsIfUnusedWithViewNameFilter
cexAddDigObject
cexAddDigObject2
```

```

cexDigObjectMulti
cexDigObjectMulti2
cexDisconnectEncy
cexDuplicateViewSet
cexFetchModelInfo
cexGetAdStatementDetails
cexGetActionDiagramAdditionalProperties
cexGetActionDiagramAnalysis
cexGetActionDiagramAnalysisAll
cexGetActionDiagramAnalysisEvent
cexGetActionDiagramAnalysisMainBlock
cexGetActionDiagramAnalysisWithStatementProperties
cexGetActionDiagramBusSysAndPstep
cexGetActionDiagramCRUD
cexGetActionDiagramForStatement
cexGetActionDiagramGroupAnalysis
cexGetActionDiagramObjcs
cexGetActionDiagramProperties
cexGetActivityUsageProperties
cexGetAdStatementOLEUsage
cexGetAdStatementOLEUsageByNameAtSpecificIndirectLevel
cexGetAllObjcsForOTC
cexGetAssociatedObjid
cexGetAssociatedObjcsMulti
cexGetAttributeObjcs
cexGetAttributeObjcsForEntity
cexGetAttributeObjcsForEntityOrWorkView
cexGetAttributeProperties
cexGetAutoflowCommandsUsedInPstep
cexGetBusinessSystemForActionDiagram
cexGetBusinessSystemForPstep
cexGetBusinessSystemGuIdDefaults
cexGetBusinessSystemObjcs
cexGetBusinessSystemProperties
cexGetCardAssociationPTCsOrOTCWithInfo
cexGetChildActivityUsageObjcsForActivityUsage
cexGetChildSAObjcsForSubjectArea
cexGetChildViewObjcsForGroupView
cexGetCommandsForBusinessSystem
cexGetCommandsUsedInActionDiagram
cexGetComponentSpecTypeObjcs
cexGetControlAction
cexGetControlLRTB
cexGetControlObjectIDFromCaption
cexGetControlObjectIDFromName
cexGetControlProperties
cexGetControlProperties2
cexGetControlsOfWindow
cexGetControlsOfWindowWithDetails
cexGetDatabaseExtProperties
cexGetDatabaseObjcs
cexGetDatabaseProperties
cexGetDynamicLinkPropertiesForBusinessSystem
cexGetDynamicLinkPropertiesForPstep
cexGetDynamicLinkPropertyForAD
cexGetEncyInfo
cexGetEntityObjcs
cexGetEntityOrWorkViewByName
cexGetEntityOrWorkViewByNameAtSpecificIndirectLevel
cexGetEntityProperties
cexGetEntityTriggerName
cexGetEventHandlerObjcsForAd
cexGetEventInfoForAd
cexGetExitStatesUsedInActionDiagram
cexGetExitStateObjcs
cexGetExitStateProperties
cexGetFieldExtProperties
cexGetFieldObjcsForRecord
cexGetFieldProperties
cexGetPkColumnRelationshipObjid
cexGetPkColumnTargetFieldObjid
cexGetFlowObjcsAll
```

```

cexGetFlowObjcsForPstep
cexGetFlowProperties
cexGetForeignKeyExtProperties
cexGetForeignKeyObjcs
cexGetForeignKeyObjcsForRecord
cexGetForeignKeyProperties
cexGetIdentifierObjcsForEntity
cexGetIdentifierProperties
cexGetIndexExtProperties
cexGetIndexObjcsForRecord
cexGetIndexProperties
cexGetIndexspaceObjcs
cexGetInterfaceObjcsForComponent
cexGetInterfaceTypeObjcs
cexGetLoadModuleContents
cexGetLoadModuleObjcsAll
cexGetLoadModuleObjcsBatch
cexGetLoadModuleObjcsOnline
cexGetLoadModuleObjcsWindowed
cexGetLoadModuleProperties
cexGetLoadModulePstepUsageProperties
cexGetLoadModules
cexGetLogicStatementAsStringWithRecursion
cexGetLogicStatementsForAdOrGroup
cexGetLogicStatementsForAdOrGroupAsTextString
cexGetLogicStatementsForAdOrGroupAsTextStringWithFormatting
cexGetLogicStatementsForAdOrGroupWithEvents
cexGetLogicStatementsForPstepEventsAsStringWithFormatting
cexGetLogicStatementsShortForAdOrGroup
cexGetMenuItemsProperties
cexGetMnemonicForOTC
cexGetModelsArray
cexGetModelsToTextFile
cexGetNOTEObjcsForActionDiagram
cexGetNOTENotes
cexGetNonNOTEObjcsForActionDiagram
cexGetObjAncestry
cexGetObjCkOutParentInfo
cexGetObjIdForNameAndType
cexGetObjIdForPropertyAndType
cexGetObjName
cexGetObjTypeForObjid
cexGetOperationObjcsForEntity
cexGetOrAddAttributeViewByName
cexGetOrAddEntityOrWorkViewByName
cexGetPstepObjcsWithAds
cexGetPstepProperties
cexGetPTCsForOTCWithInfo
cexGetPackagedObjectsForLoadModule
cexGetPartitionObjcsForEntity
cexGetPermittedValueObjcsForAttribute
cexGetPermittedValueProperties
cexGetPropertyValuesAsString
cexGetPstepUSEStatementObjcsAll
cexGetRIConstraintObjcsForRecord
cexGetRIConstraintProperties
cexGetRecordExtProperties
cexGetRecordObjcsAll
cexGetRecordObjcsForDatabase
cexGetRecorderProperties
cexGetRecursiveInformationForAllSavedAds
cexGetRelationshipObjcsForEntity
cexGetRelationshipProperties
cexGetRelationshipsForActionDiagram
cexGetRootActivity
cexGetRootOrgUnit
cexGetRootSubjectArea
cexGetSETUSINGStatementObjcsForUSEDAdWithinAd
cexGetSETUSINGWithinCREATORUPDATEStatementObjcsForUSEDAdWithinAd
cexGetSavedDIDAndNameFromArray
```

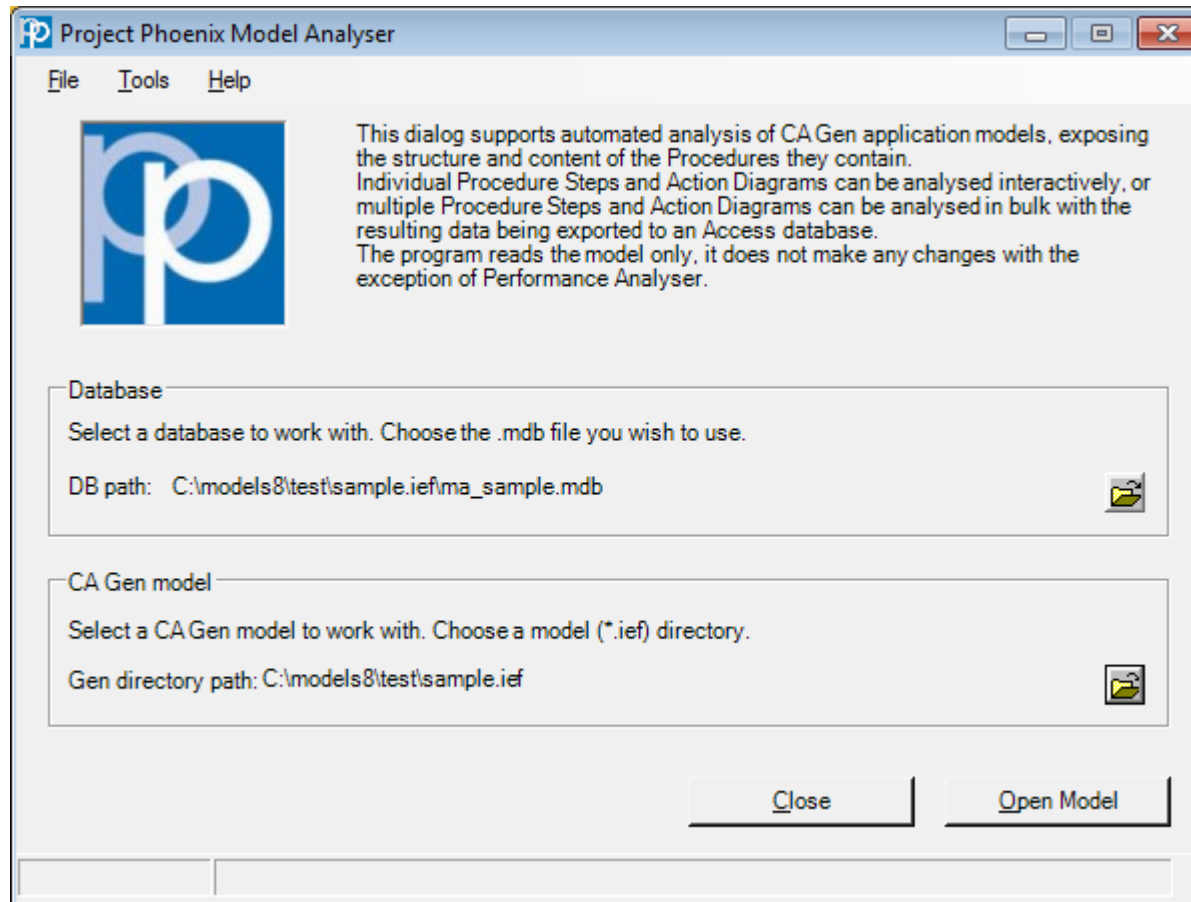
```

cexGetSavedStatementPropertiesForAd
cexGetScopeTypeDiagramObjcs
cexGetScopeTypeDiagramProperties
cexGetScreenItemObjcsForScreenOrTemplate
cexGetScreenItemProperties
cexGetScreenItemPropertiesForDialect
cexGetScreenTemplates
cexGetSingleProcedure
cexGetSpecTypeObjcs
cexGetStatementFirstInBlock
cexGetStatementIdForObject
cexGetStatementCommentedStatus
cexGetStatementLastInBlock
cexGetStatementObjcsForAdEventHandler
cexGetStatementObjcsForAdOrGroup
cexGetStorageGroupObjcs
cexGetStorageGroupProperties
cexGetSubjectAreaObjcs
cexGetSubjectAreaProperties
cexGetSubtypeObjcsForEntity
cexGetSubtypePropertiesForPartition
cexGetSubtypeProperties
cexGetSystemAttributeObjidForName
cexGetTablespaceExtProperties
cexGetTablespaceObjcs
cexGetTablespaceProperties
cexGetTechDesignExtProperties
cexGetTechDesignObjcs
cexGetTechnicalDesignList
cexGetTemplatesForScreen
cexGetUSEProperties
cexGetUSEStatementObjcsForUSEDAd
cexGetUSEStatementObjcsForUSEDAdWithinAd
cexGetUSEActionDiagrams
cexGetUSINGActionDiagrams
cexGetUniqueObjectName
cexGetUniqueObjectPropertyValue
cexGetViewByViewSetNameAndEntity
cexGetViewIdByName
cexGetViewsUsedStatus
cexGetViewsUsedStatusIgnoreGivenAssociations
cexGetViewsForActionDiagram
cexGetWindowMenuHierarchy
cexGetWindowObjcsForPstep
cexGetWindowObjcsForProperties
cexGetWorkSetObjcs
cexGetWorkSetProperties
cexGroupViewCompare
cexGroupViewComparableForMapping
cexFunctionName
cexIsOfFunctionSupportedInNWUI
cexLockModelForWrite
cexLogonUserid
cexMakeExtStateGlobalForBusSys
cexMakeOperation
cexMarkObjectAsUpdated
cexMatchFlowView
cexMatchUSEView
cexMatchUseViewByName
cexOpenModel
cexReorderAssociationAfter
cexReorderAssociationBefore
cexReorderFunctionInfoMatchedAttributeViews
cexReorderViewMatching
cexResetAnalysisList
cexRetrieveActionDiagrams
cexRetrieveActivities
cexRetrieveDataRecords
cexRetrieveEntities
cexRetrieveModelDetails
cexRetrieveModels
cexRetrievePackaging
```

```

cexRetrieveProcedures
cexRetrieveWinMaps
cexRollbackUpdates
cexSaveUpFrontAnalysisOfAllActionDiagramsGe
cexSaveUpFrontAnalysisOfAllActionDiagramsGe
cexSaveUpFrontAnalysisOfAllActionDiagramsGe
cexSaveUpFrontAnalysisOfAllActionDiagramsGe
cexSaveUpFrontAnalysisOfAllActionDiagramsGe
cexSaveUpFrontAnalysisOfAllActionDiagramsGe
cexSchemaCountAscForObjType
cexSchemaCountPrpForObjType
cexSchemaFetchAscForObjType
cexSchemaFetchAscTypeInfo
cexSchemaFetchPrpForObjType
cexSchemaFetchPrpTypeInfo
cexSetAttributeProperties
cexSetCharacterProperty
cexSetControlLRTB
cexSetEntityProperties
cexSetEntityTriggerName
cexSetLogfile
cexSetMaxAdSnInMemoryAtOnce
cexSetNummericProperty
cexSetPresentationStyleForListboxPrompt
cexSetPresentationStyleForObject
cexSetPropertyValuesFromString
cexSetPropertyValuesFromStringAllowingForeignCharacters
cexSetStringProperty
cexSetSubjectAreaProperties
cexSetWorkFolder
cexSortADViews
cexSortADViewsSpecifyingSortStandard
cexSortAnalysisList
cexSortGroupViewSameOrder
cexSortGroupViewWorkView
cexSubstituteViewDONOTUSE
cexTransformGenCoordinatesForControl
cexTransformGenCoordinatesForWindow
cexUnCommentOutAdStatement
cexUnlinkModel
cexUnmatchUSEViews
cexUpdateCard1Association
cexViewStructureCompare
cexWrapActionBlock
cexWrapActionBlockWithAdditionNoteText
cexXCopyAdStatement
cexXCopyEvent
cexXCopyEventAndReturnNewEventHandlerId
cexXCopyEvents
cexXCopyLogicCodeBlock
cexXCopyLogicCodeBlockBetweenObjectIds
cexXCopyLogicCodeBlockWithDelimitingNOTES
cexXCopyLogicStatements
cexXCopyLogicStatementsIncludingGui
cexXCopyScreen
cexXCopyWindows
cexXZKAttDomainX
cexXZKAttWithString
cexXZKFunctionUsage
```

In reality



In reality

Action Diagram Analysis

Action Diagram Navigation

← → Name: EMPLOYEE_LIST → Type: PStep

General | Screen Analysis | GUI Analysis | Cmd/Evt Analysis | Entity Actions | Logic Analysis | Code | AD Usage | Exit States | **Properties**

Properties:

Property	Value
Number of Statements	104
Maximum Indent Level	6
Uses Case of Command	True
Uses TIREVENT	False
Uses Unsupported Functions	False
Number of Unsupported Function Calls	0
Contains Disabled Logic	False
Has Empty Views	False
Has Nested Group Views	False
Uses OCX's	False
Possible Transactional Issues	
Number of Actual Servers Called	0
Number of Actual Server Calls	0
Number of Potential Server Calls	
Uses External Across Models	
Uses Action Diagrams Across Models	
Does CUD Across Models	
Does Read Across Models	
Has Entity Actions Across Models	
Uses Externals Recursive	False
Uses Action Diagrams Recursive	True
Uses Externals	False
Uses Action Diagrams	True
Does CUD Recursive	True
Does Read Recursive	True

Close

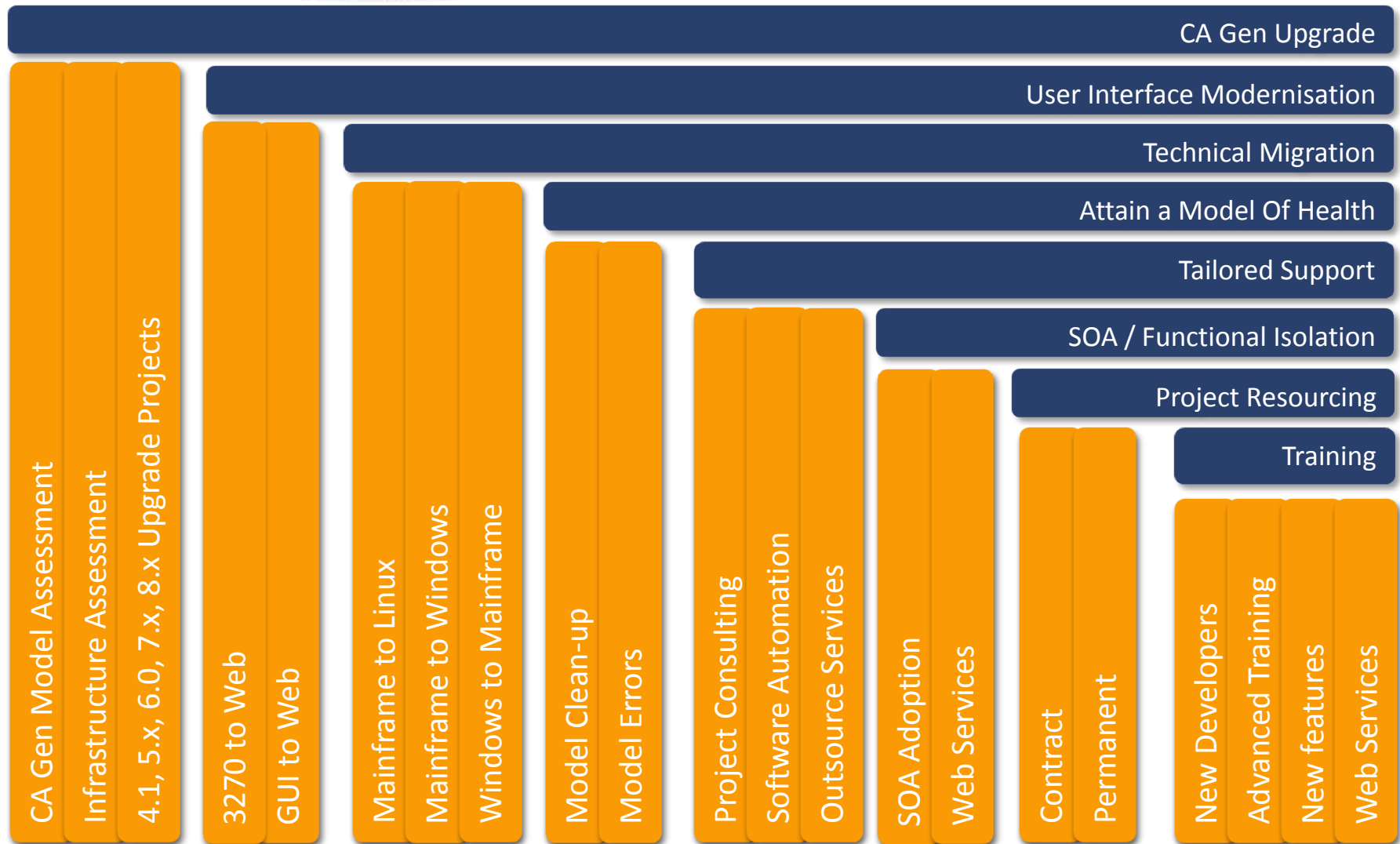
In reality

ActionDiagram - Microsoft Access

Tables	ID	Model	Name	Gen Object	MemberName	Type	Description
ActionDiagram Date Created: 13/01/2005 11:58:23 Date Modified: 23/11/2011 12:23:57 A Pstep, BSD or BAA action block. An Action...	1	GEN SAMPLE MODEL R8	ADD_DEPARTMENT	24117253	ADDDEPT	BAA	
	2	GEN SAMPLE MODEL R8	ADD_DIVISION	24117250	ADDDIV	BAA	
	3	GEN SAMPLE MODEL R8	ADD_EMPLOYEE	24117256	ADDEMP	BAA	
	4	GEN SAMPLE MODEL R8	CLIENT_DETAIL_DEPARTMENT	22020121	CLIENTDE	PStep	
	5	GEN SAMPLE MODEL R8	CLIENT_DETAIL_DIVISION	22020123	CLIENTD1	PStep	
	6	GEN SAMPLE MODEL R8	CLIENT_DETAIL_EMPLOYEE	22020125	CLIENTD2	PStep	
	7	GEN SAMPLE MODEL R8	CLIENT_FILE_FUNCTIONS_READ	22020134	CLIENTFI	PStep	
	8	GEN SAMPLE MODEL R8	CLIENT_FILE_FUNCTIONS_WRITE	22020135	CLIENTF1	PStep	
	9	GEN SAMPLE MODEL R8	CLIENT_MAINTAIN_DEPARTMENT	22020127	CLIENTMA	PStep	
	10	GEN SAMPLE MODEL R8	CLIENT_MAINTAIN_DIVISION	22020129	CLIENTM1	PStep	
	11	GEN SAMPLE MODEL R8	CLIENT_MAINTAIN_EMPLOYEE	22020131	CLIENTM2	PStep	
	12	GEN SAMPLE MODEL R8	CLIENT_MENU	22020133	CLIENTME	PStep	
	13	GEN SAMPLE MODEL R8	DELETE_DEPARTMENT	24117255	DELDEPT	BAA	
	14	GEN SAMPLE MODEL R8	DELETE_DIVISION	24117252	DELDIV	BAA	
	15	GEN SAMPLE MODEL R8	DELETE_EMPLOYEE	24117258	DELEMP	BAA	
	16	GEN SAMPLE MODEL R8	EMPLOYEE_DETAIL	22020111	EMPDET	PStep	Employee Detail allows update to a sin
	17	GEN SAMPLE MODEL R8	EMPLOYEE_LIST	22020110	EMPLIST	PStep	Employee List allows listing of employ
	18	GEN SAMPLE MODEL R8	FILE_FUNCTIONS_READ	22020096	FILEFUNC	BSD	This example is valid for the file func
	19	GEN SAMPLE MODEL R8	FILE_FUNCTIONS_WRITE	22020097	FILEFUN1	BSD	This example is valid for the file func
	20	GEN SAMPLE MODEL R8	GUI_DETAIL_DEPARTMENT	22020115	GUIDETA2	PStep	
	21	GEN SAMPLE MODEL R8	GUI_DETAIL_DIVISION	22020114	GUIDETA1	PStep	
	22	GEN SAMPLE MODEL R8	GUI_DETAIL_EMPLOYEE	22020118	GUIDETA1	PStep	
	23	GEN SAMPLE MODEL R8	GUI_FILE_FUNCTIONS_READ	22020120	GUIFILEF	PStep	
	24	GEN SAMPLE MODEL R8	GUI_FILE_FUNCTIONS_WRITE	22020119	GUIFILE2	PStep	This Procedure Writes, Copies and Ren
	25	GEN SAMPLE MODEL R8	GUI_MAINTAIN_DEPARTMENT	22020117	GUIMAIN2	PStep	
	26	GEN SAMPLE MODEL R8	GUI_MAINTAIN_DIVISION	22020113	GUIMAIN1	PStep	
	27	GEN SAMPLE MODEL R8	GUI_MAINTAIN_EMPLOYEE	22020116	GUIMAIN1	PStep	
	28	GEN SAMPLE MODEL R8	GUI_MENU	22020112	GUIMENU1	PStep	
	29	GEN SAMPLE MODEL R8	MAINTAIN_DEPARTMENT	22020109	MAINTDEP	PStep	Maintain Department allows update to
	30	GEN SAMPLE MODEL R8	MAINTAIN_DIVISION	22020108	MAINTDIV	PStep	Maintain Division allows update to div

Datasheet View

Common examples



Our approach

Investigate



Report



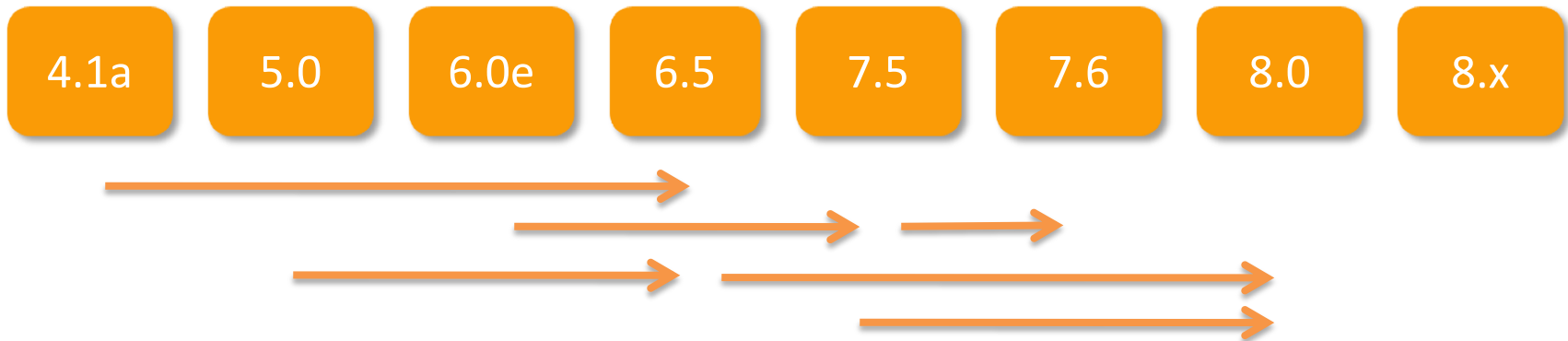
Plan



Fix

What is a 'Gen' upgrade?

Simplistically, this is the task for moving from an older version of Gen to a newer version.

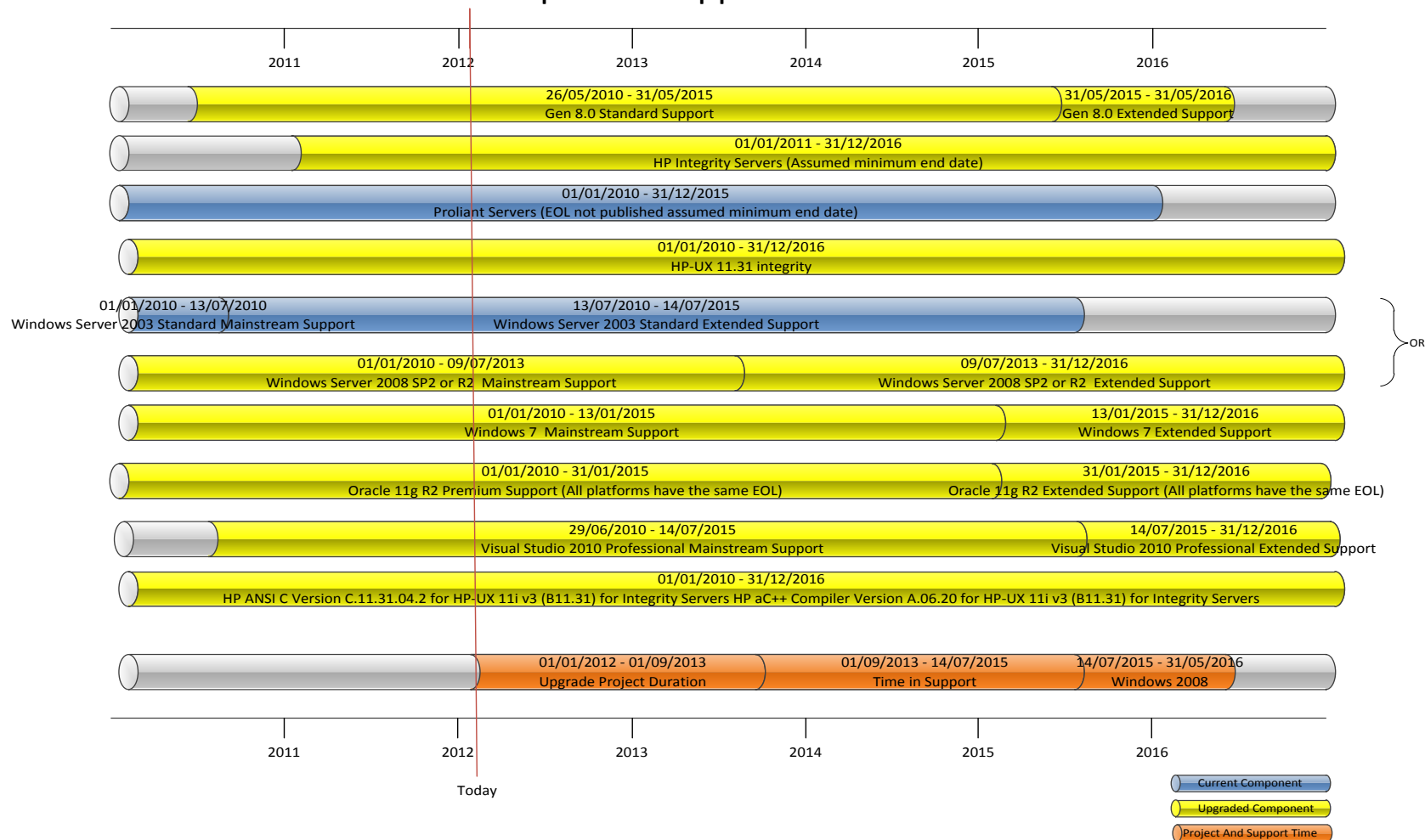


Investigate – Model & Infrastructure

- Impacts of PTF
- New features
- Behavioural Change
- Now working as designed

Report

Option 4 Support TimeLine



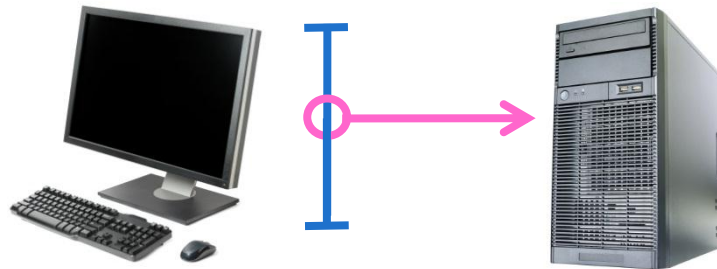
Consider a 3270 block mode transition...

Block
mode

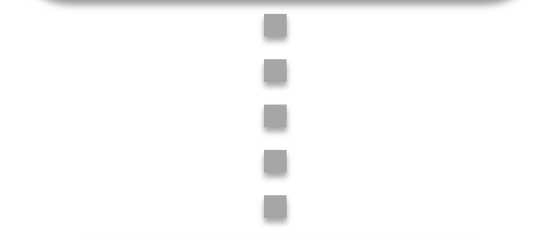
Database Access
UI (Screen)
Presentation logic
Business logic
MAKE statements

Client

Server



Existing 3270 procedure



Existing 3270 Action Diagram

```

1000 ACTION_SELECTED_FOR_BATCH_0
  (IMPORTS) ...
  (EXPORTS) ...
  (LOCALS) ...
  (ENTRY ACTIONS) ...

  NOTE ** RETURN      : Change SCHMITZ to 01/00
  ** UPDATED BY      : Initial Changeover 19/00
  ** BY NAME         : J.P. Kallala      19/00
  ** STANDARD RETURN : 1-7

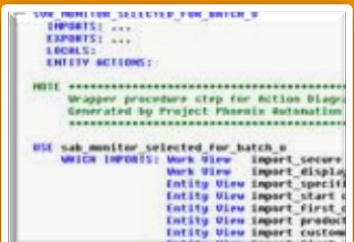
  NOTE 1A/01/2000 (RC): Portability Project: Update the
  NOTE John Phoenix WENT and CSD error handling
  SET export cld_workout_return_code TO 1
  SET export cld_workout_return_code TO 1
  SET export cld_workout_return_message TO SPACES

  EXIT STATE IS processing_started_exit WITH MESSAGE

  WHEN Import area_pane TO export area_pane

  WHEN Import general TO export general
  WHEN Import display nr2_work TO export display nr2_work
  WHEN Import customer_order_item TO export customer_order_item
  WHEN Import secure nr2_work TO export secure nr2_work
  
```

New Server Procedure

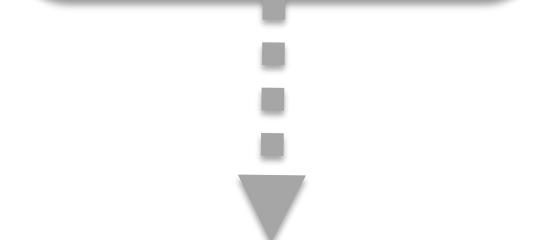


```

SQL MONITOR SELECTED FOR BATCH N
IMPORTS: ***
EXPORTS: ***
SQLBLS:
ENTITY ACTIONS:

NOTE *****
Wrapper procedure step for Action Diagram
Generated by Project Phoenix Automation
*****

USE sub_monitor_selected_for_batch_n
  when imports:
    Mark View      Import Secure
    Mark View      Import Display
    Entity View     Import Specific
    Entity View     Import Start n
    Entity View     Import First n
    Entity View     Import Product
    Entity View     Import Custom
    Entity View     Import First...
  
```

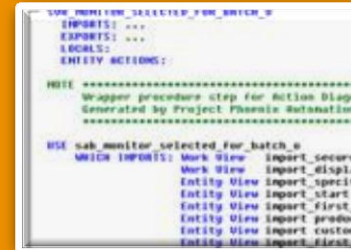


New Server Action Block (SAB)

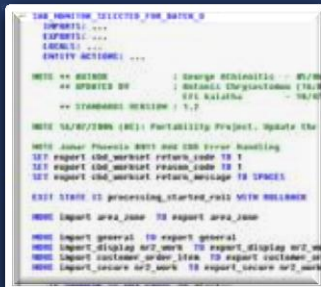
Existing 3270 procedure



New Server Procedure



Existing 3270 Action Diagram



New Server Action Block (SAB)

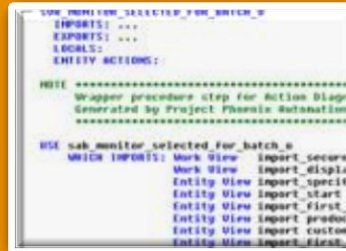




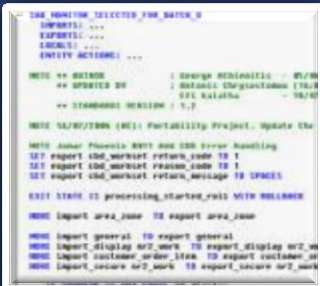
Existing 3270 procedure



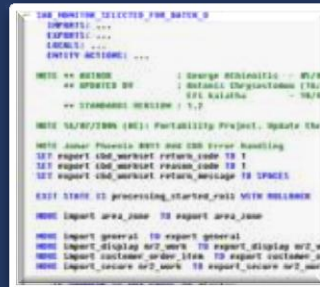
New Server Procedure



Existing 3270 Action Diagram



New Server Action Block (SAB)



Existing 3270 procedure

```
***
IMPORTS: ***
EXPORTS: ***
LOCALS: ***
ENTITY ACTIONS: ***

NOTE *****
Wrapper procedure (step for Action Diagram)
Generated by Project Phoenix Automation
*****

USE sab_monitor_selected_for_batch_n
WHICH IMPORTS: Work View Import_secure
Work View Import_display
Entity View Import_specifi
Entity View Import_start_i
Entity View Import_product
Entity View Import_custom
Entity View Import_first_s
```

New server procedure

```
***
IMPORTS: ***
EXPORTS: ***
LOCALS: ***
ENTITY ACTIONS: ***

NOTE *****
Wrapper procedure (step for Action Diagram)
Generated by Project Phoenix Automation
*****

USE sab_monitor_selected_for_batch_n
WHICH IMPORTS: Work View Import_secure
Work View Import_display
Entity View Import_specifi
Entity View Import_start_i
Entity View Import_product
Entity View Import_custom
Entity View Import_first_s
```

Existing 3270 Action Diagram

```
***
IMPORTS: ***
EXPORTS: ***
LOCALS: ***
ENTITY ACTIONS: ***

NOTE *****
Wrapper procedure (step for Action Diagram)
Generated by Project Phoenix Automation
*****

USE sab_monitor_selected_for_batch_n
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New Server Action Block (SAB)

```
***
IMPORTS: ***
EXPORTS: ***
LOCALS: ***
ENTITY ACTIONS: ***

NOTE *****
Wrapper procedure (step for Action Diagram)
Generated by Project Phoenix Automation
*****

USE sab_monitor_selected_for_batch_n
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Work View Import_display
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Entity View Import_product
Entity View Import_custom
Entity View Import_first_s
```

3270 Auto

Summary (1 of 2)

- Decide what your objectives are
- Establish a project
- Analyse your CA Gen portfolio
- Create a Roadmap

Remember: application is not just the model

- Establish a CA Gen modernisation team
- Analyse your CA Gen portfolio
- Determine initial modernisation process
- Do a pilot project
- Refine the modernisation process
- Rollout

Summary (2 of 2)

- You need to be **organised**, with clear **objectives**, a **Roadmap** and a **dedicated project**.
- Modernise in **parallel** with everything else but drive it, don't just let it happen.
- Your **CA Gen applications can integrate** with everything else.
- Make it happen, don't throw away all those business rules you've already implemented.
- The **model-based paradigm** makes it possible. **Automation** makes it practical.
- Remember the **Roadmap** – know where you are before you set off
- Analyse first **then** update
- Analysis is **usually within a context** – with a view to doing something
- The Model Analyser database **simplifies the Gen schema and opens it up for querying by anyone**
- **Add-on modules** focus on different contexts
- Enables **planning with confidence**

Automation Centric Modernisation



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