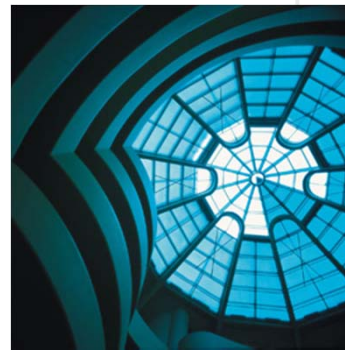
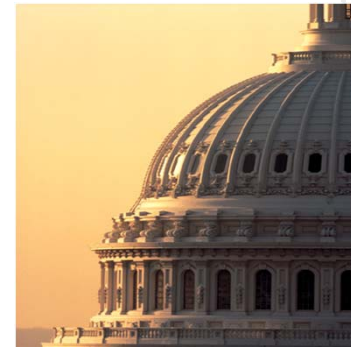


Neoiz Ltd.

Introduction of Amain for EPM





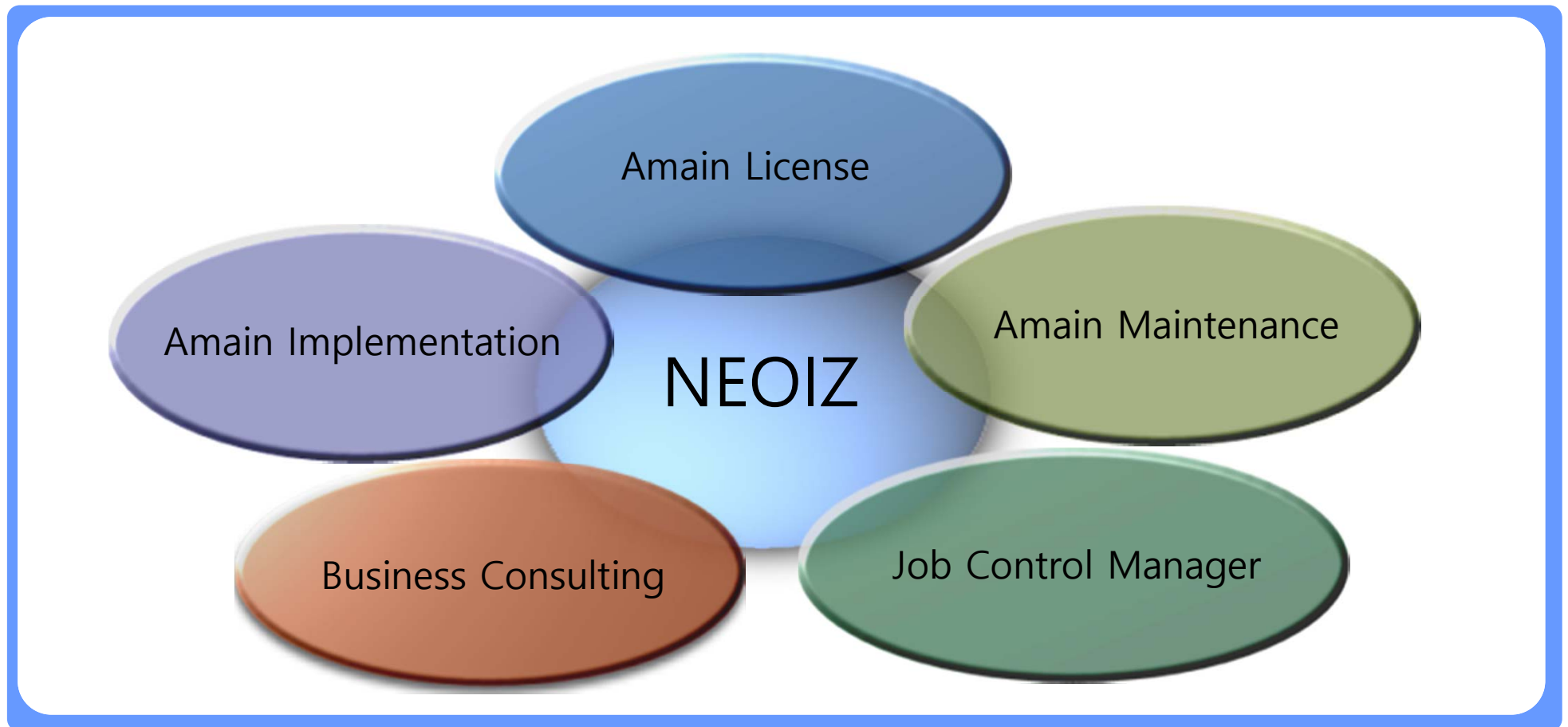
Agenda

I. Amain for EPM

1. Introduction
2. Amain for FTP
3. Amain for PCA
4. Amain for JOB

NEOIZ – Business Area

- ❑ NEOIZ is a company focused on Financial industry with business areas of FTP, Cost, ALM and IFRS with Job Scheduler as follows.



Amain for EPM – Introduction

- ❑ Most companies are looking for managerial accounting system which is concerned with providing useful information for decision making and planning and controlling operations.
- ❑ Amain for EPM was developed to satisfy those needs in financial institution with accurate and valuable profiles of profitability based on advanced modeling and powerful functions.



Amain for EPM – Main Benefits

Input Data Check

Reconciliation : Reconcile between GL data and Instrument Data

Master Code Check : Detect missing master code in Input Data

Cashflow Columns Check : Validate Cashflow Columns against Checking Rules

Efficient Maintenance

Easy Setup : Most setup can be upload/download from Excel

Setup Review : Auto Setup-Document and Check Setup against Requirement

Strong Engine : Strong and Flexible Engine to meet most of Requirements

Save User Time : Support to work on Analysis rather than Maintenance

Strong Result Verification

Result Validation : Validate Amain Results on FTP and Allocation

Validation Document : Auto Validation-Document for Communication with User

Job Monitoring : Monitor Job status and show detail log when error occurs

Garbage in, Garbage out

- Spend time to Setup up a mechanism to check Input Data

Focus on Maintenance, not only Implementation

- Make sure solution have enough functions for Maintenance

No Verification, No Requirement

- If you can't verify the Results, you can't use the Requirements

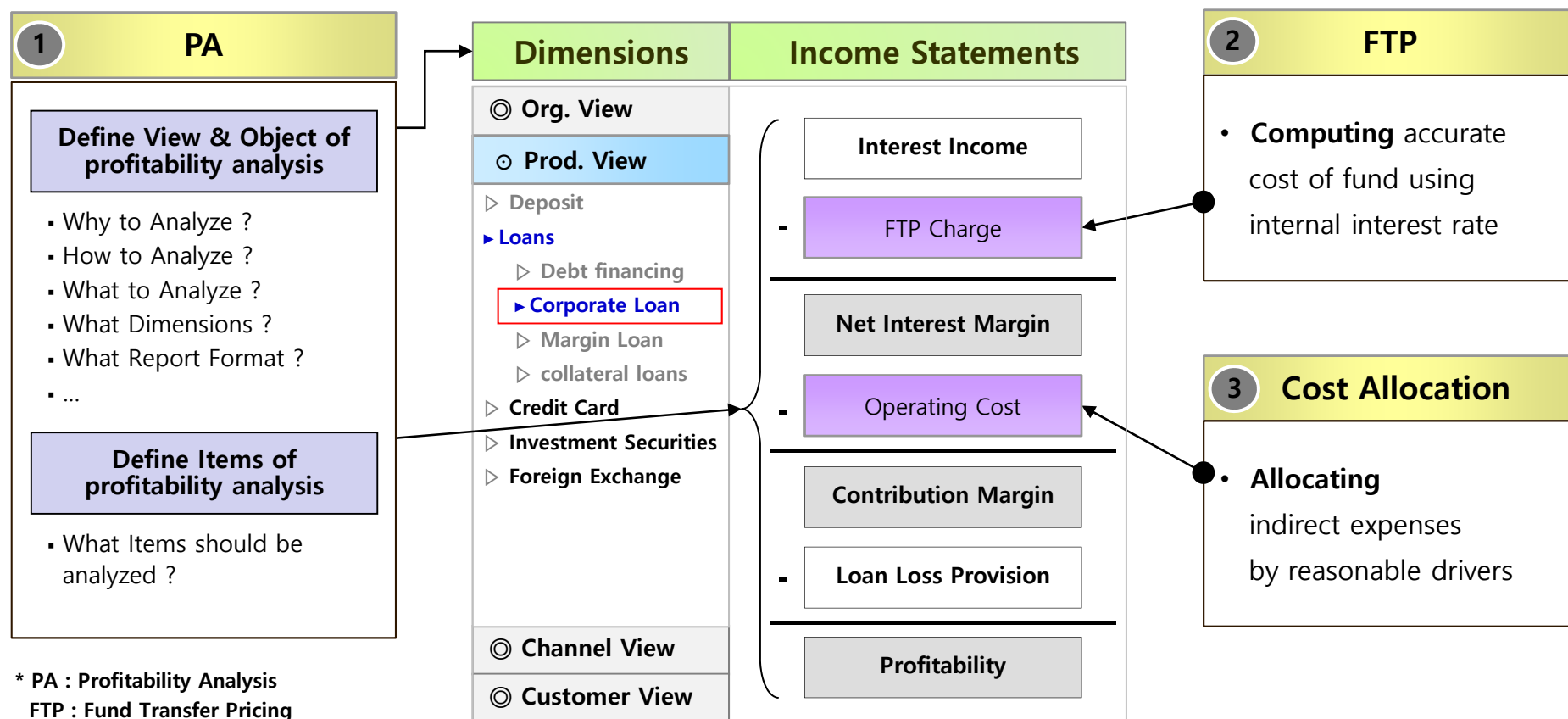
Don't believe Power Point or Demo system

- Should see the Results and Functions from POC

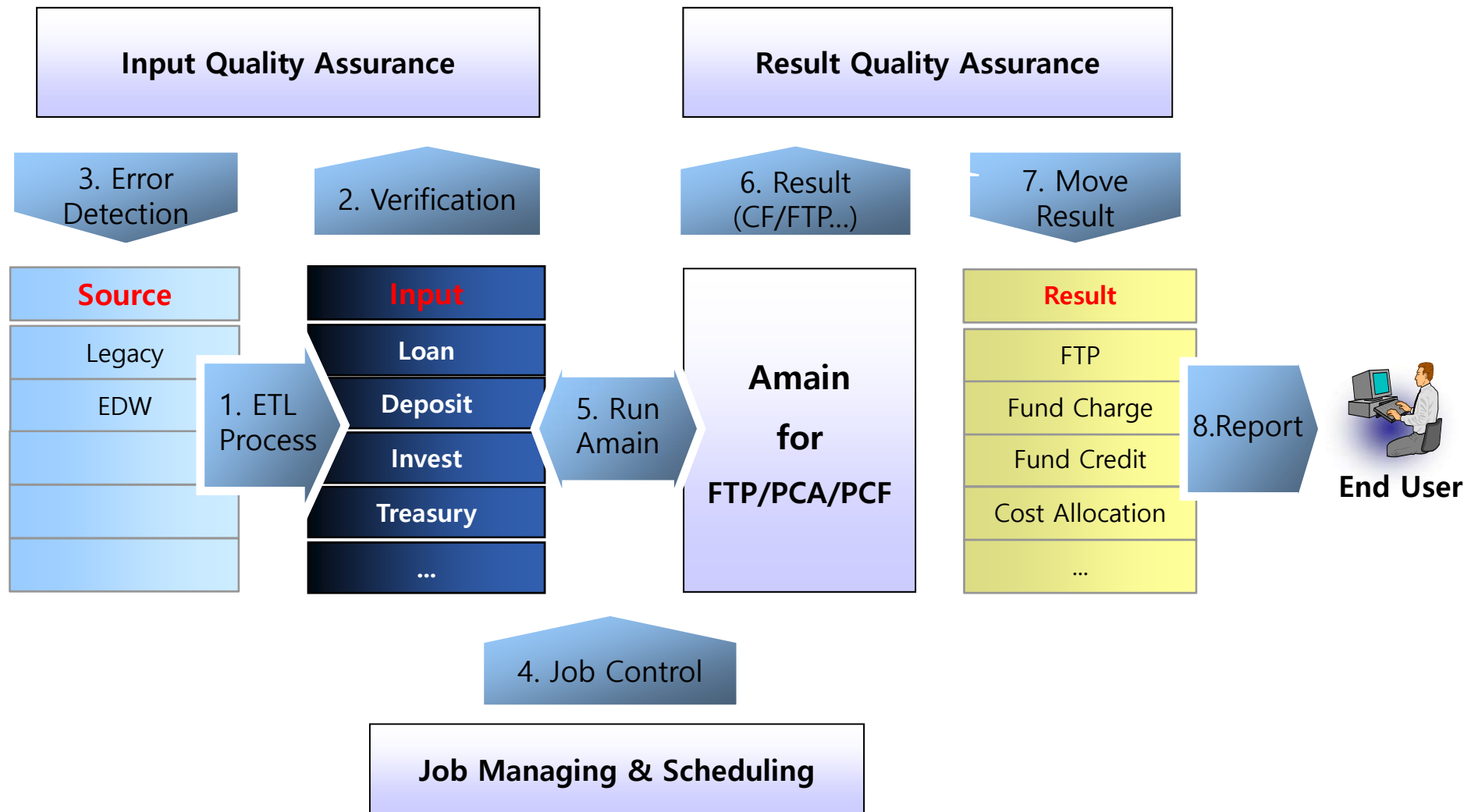
Amain for EPM - Framework of Profitability Management

- ❑ Profitability analysis consists of three areas, PA, FTP and Cost Allocation. ①PA area is overall architecture for profitability management, ②FTP area computes costs of funds and ③Cost Allocation area allocates indirect cost to cost object.

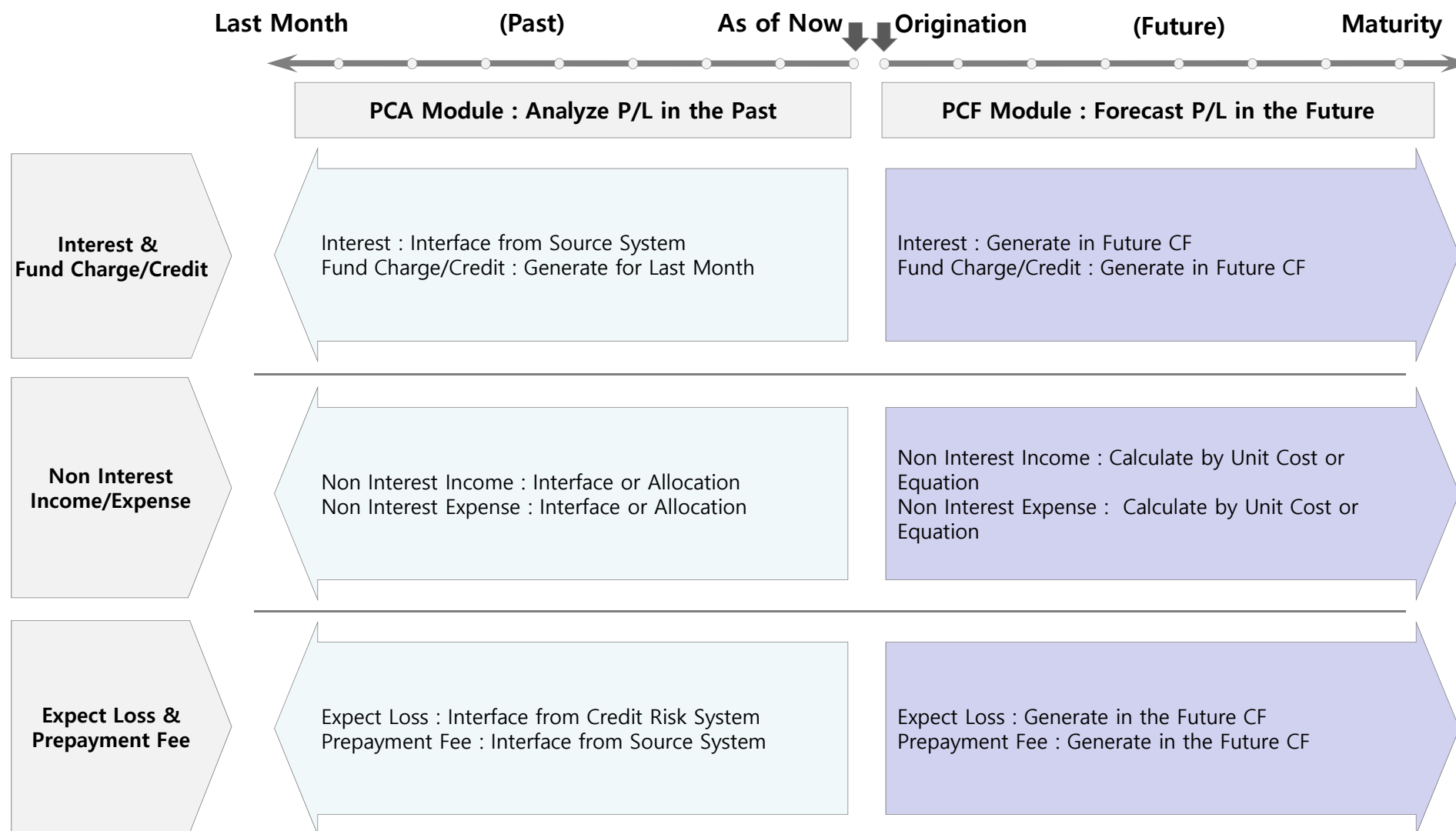
Framework of Profitability Analysis



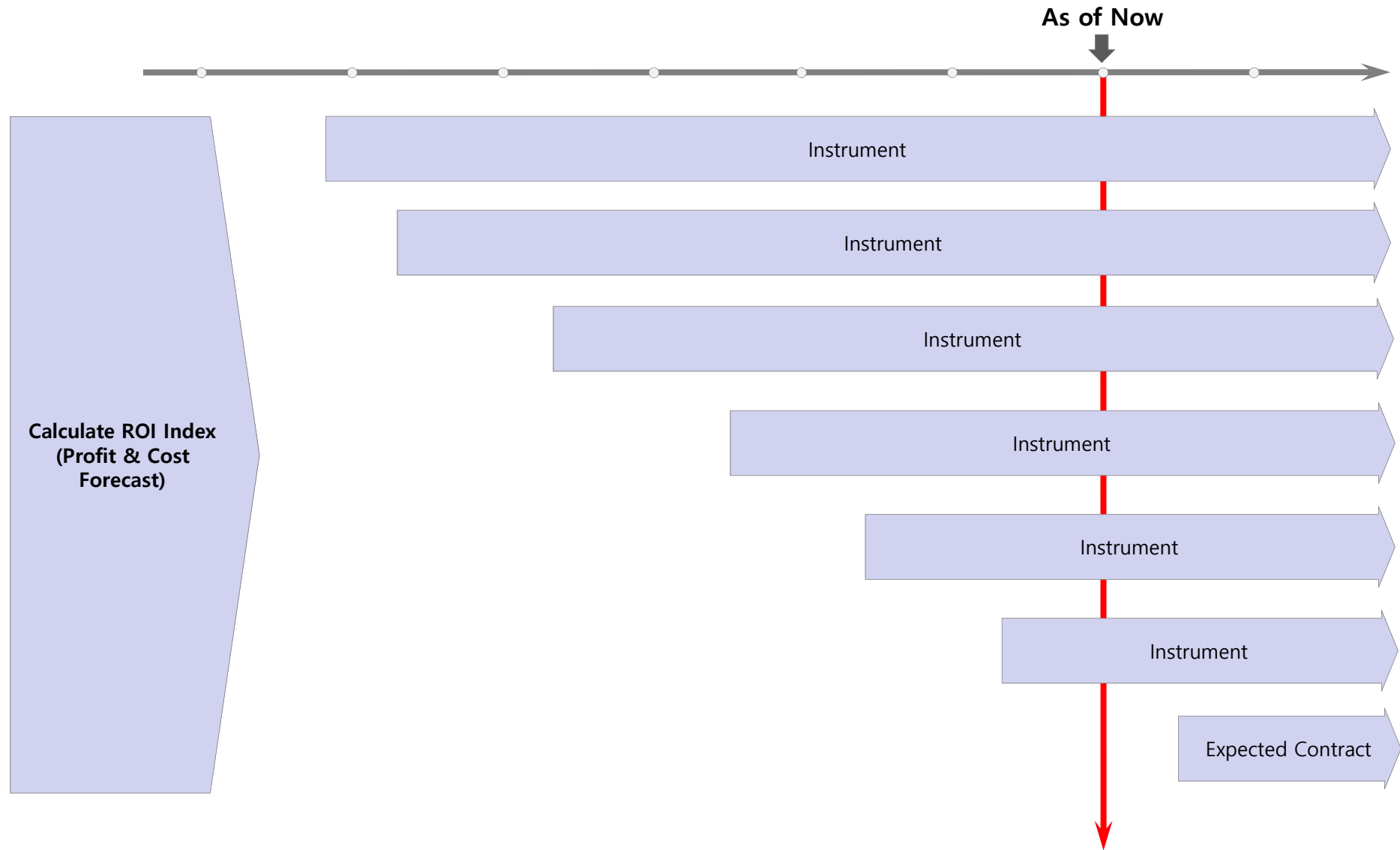
Amain for EPM - System Flow



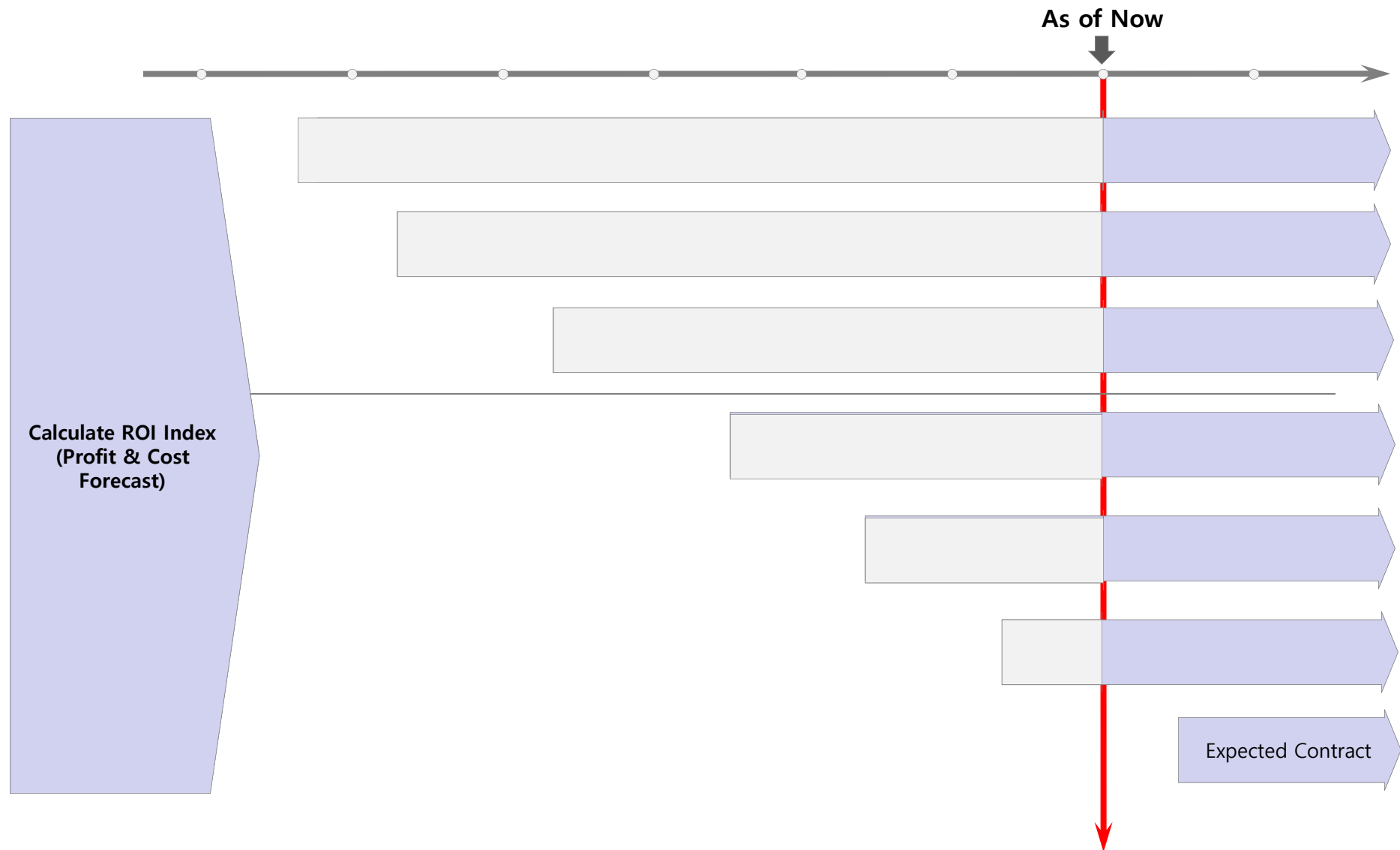
Amain for EPM – Comparison of PCA & PCF Module



Amain for EPM – Forecast Mode – Entire Mode

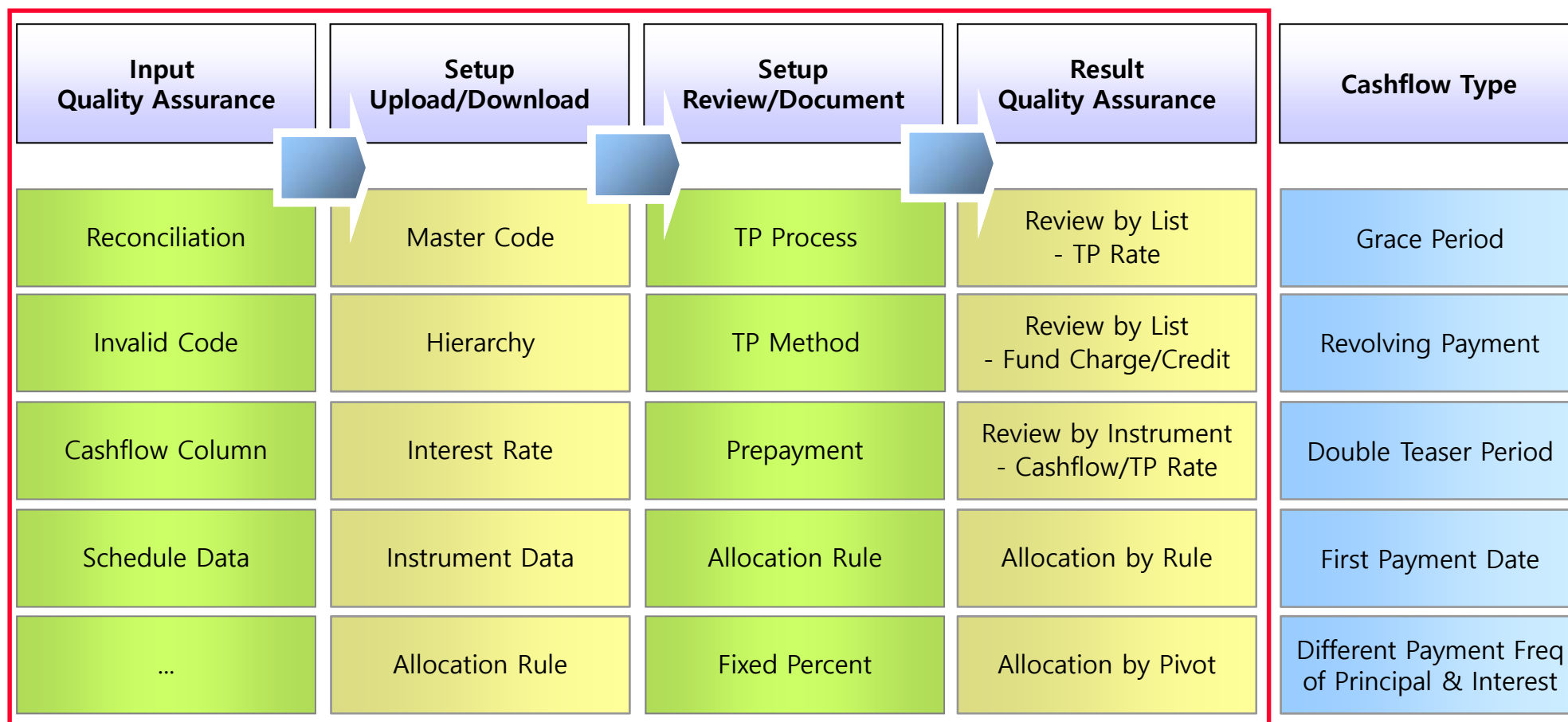


Amain for EPM – Forecast Mode – Remaining Mode

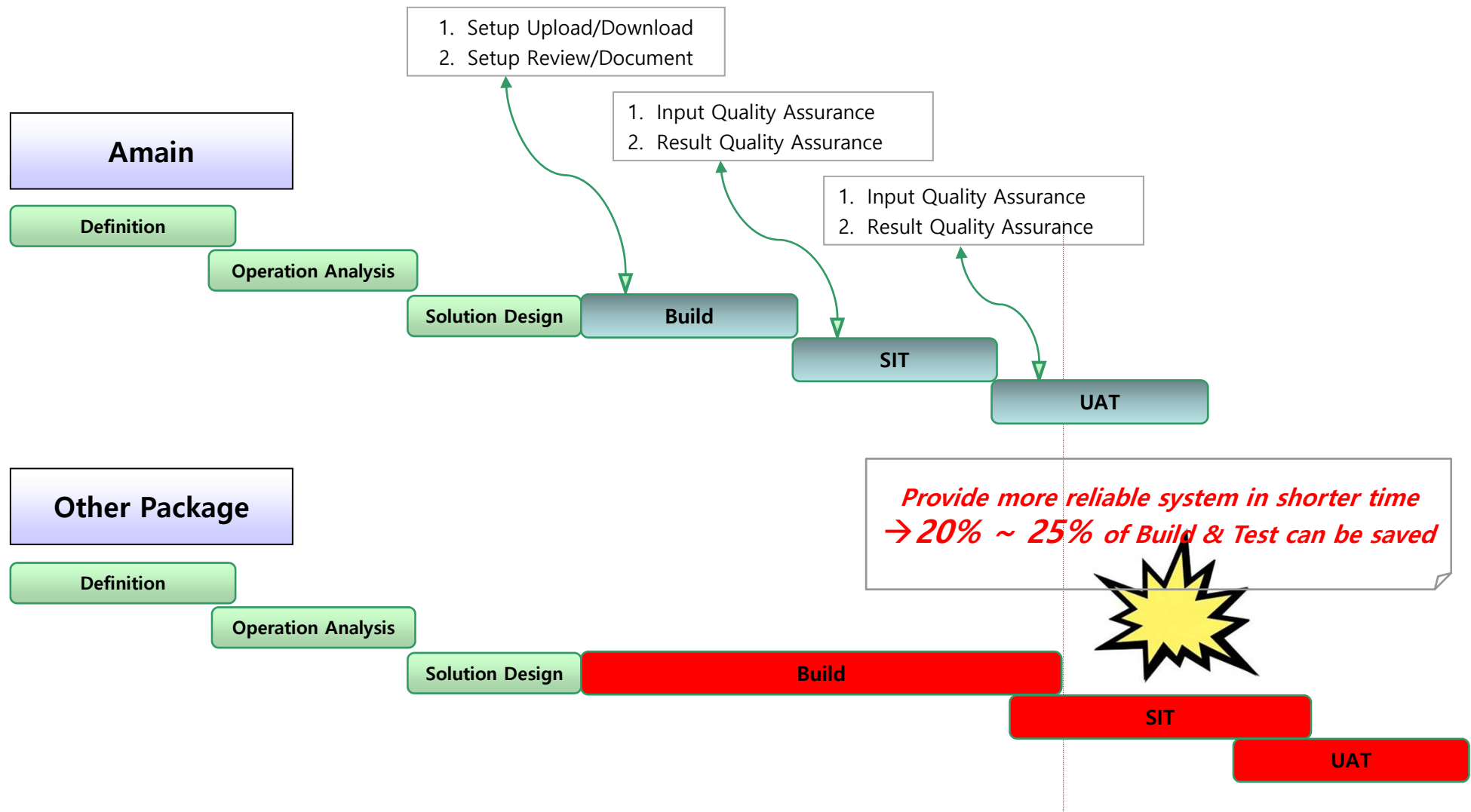


Amain for EPM – Main Menus for Maintenance & User Convenience

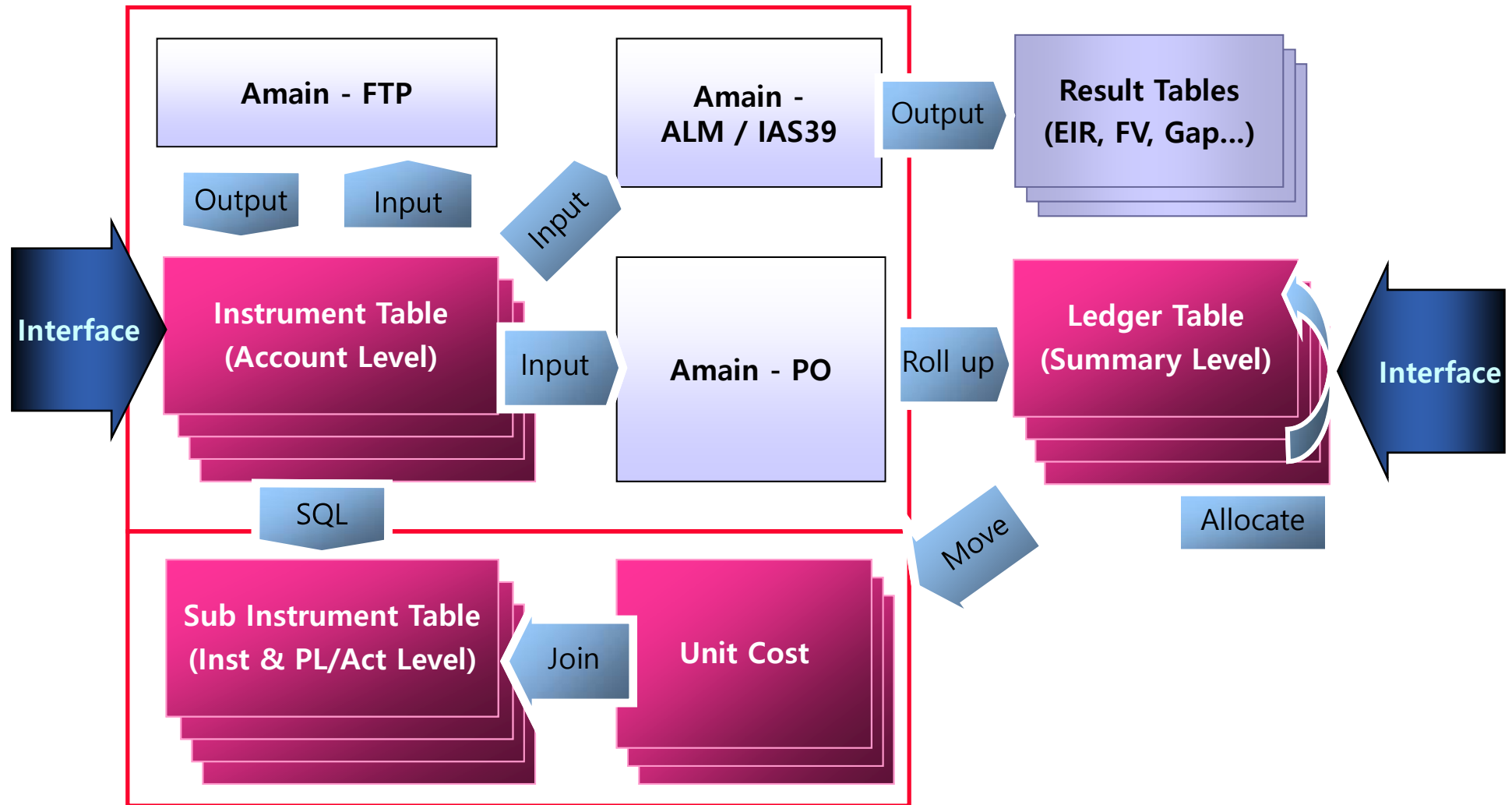
- ❑ Amain was designed to fully satisfy the needs related to Maintenance & Implementation to make the most of the Amain system for Easy maintenance and User convenience.



Amain for EPM – Benefit in Project Duration

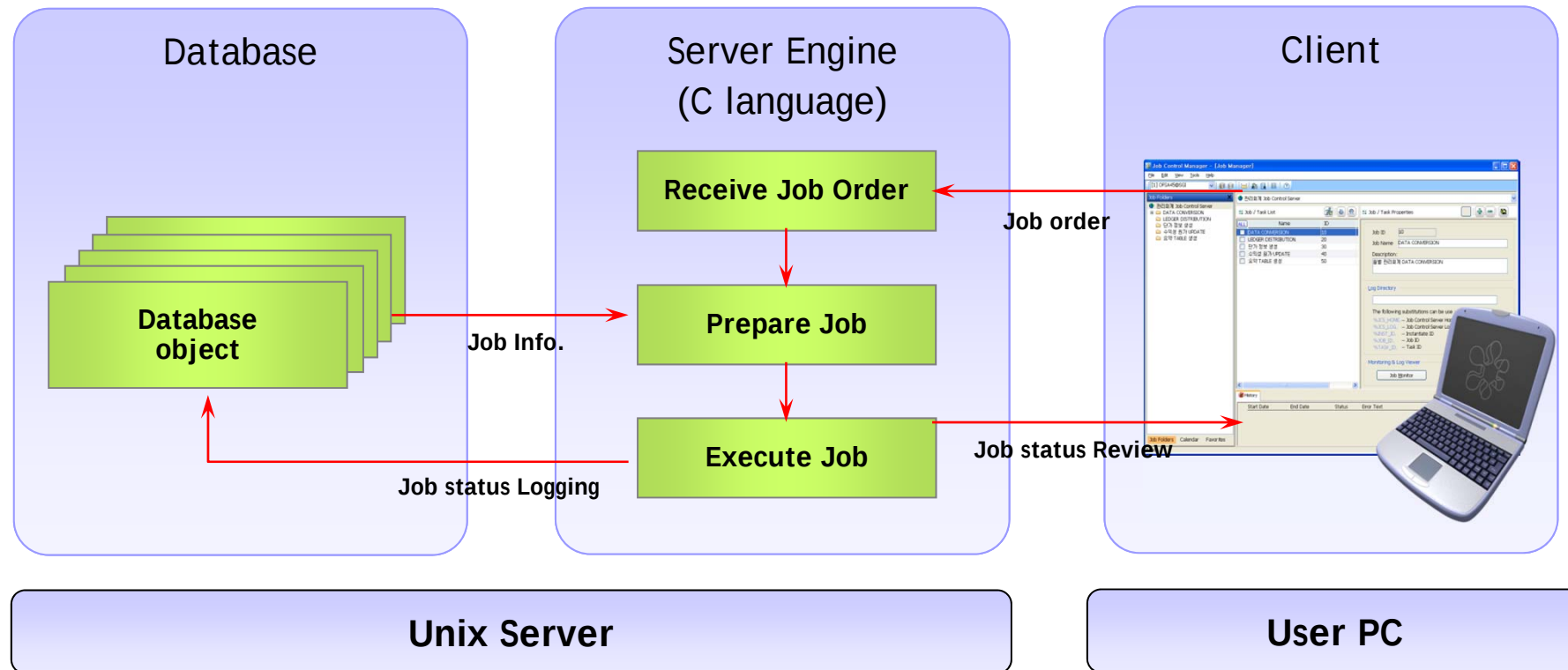


Amain for EPM - Data Flow & Main Tables



Amain for EPM - System Architecture

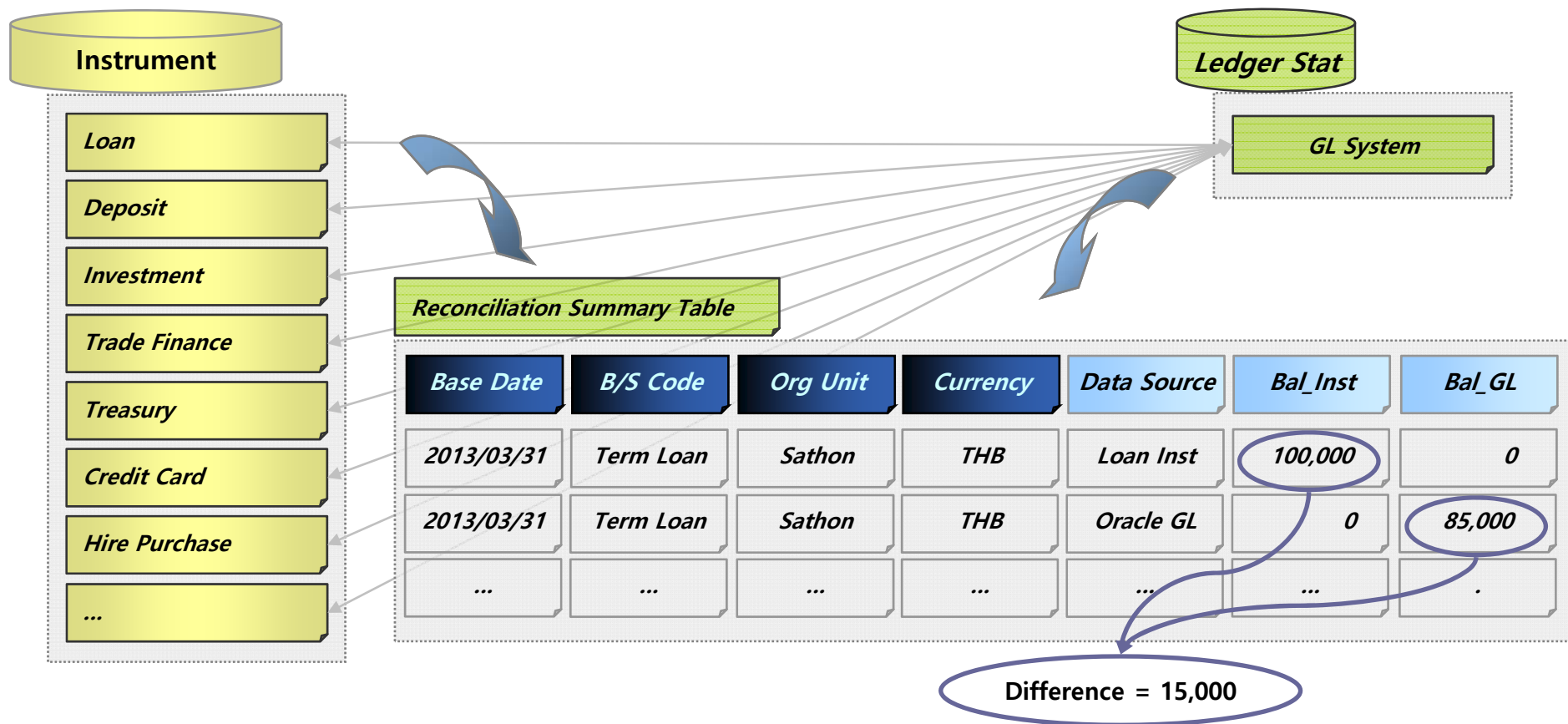
- ❑ The Amain consists of 3 parts – Client(User Interface), Server(Engine) and Database



- When a job is requested by user at Client, Daemon program recognizes this request and executes the task in connection with database after collecting the job information. If job log option is turn on, log data is saved in Log table or Log file in the server to be used for analyzing causes of errors or other analysis.

Amain for EPM – Detail Feature : Reconciliation – B/S Item

- ❑ Amain provides a function to reconcile between General Ledger and Instrument Data. If there are differences between them, these differences will be shown in the embedded report so that user can recognize the reason or get the clue of the error.



Amain for EPM – Detail Feature : Invalid Master Code Checking

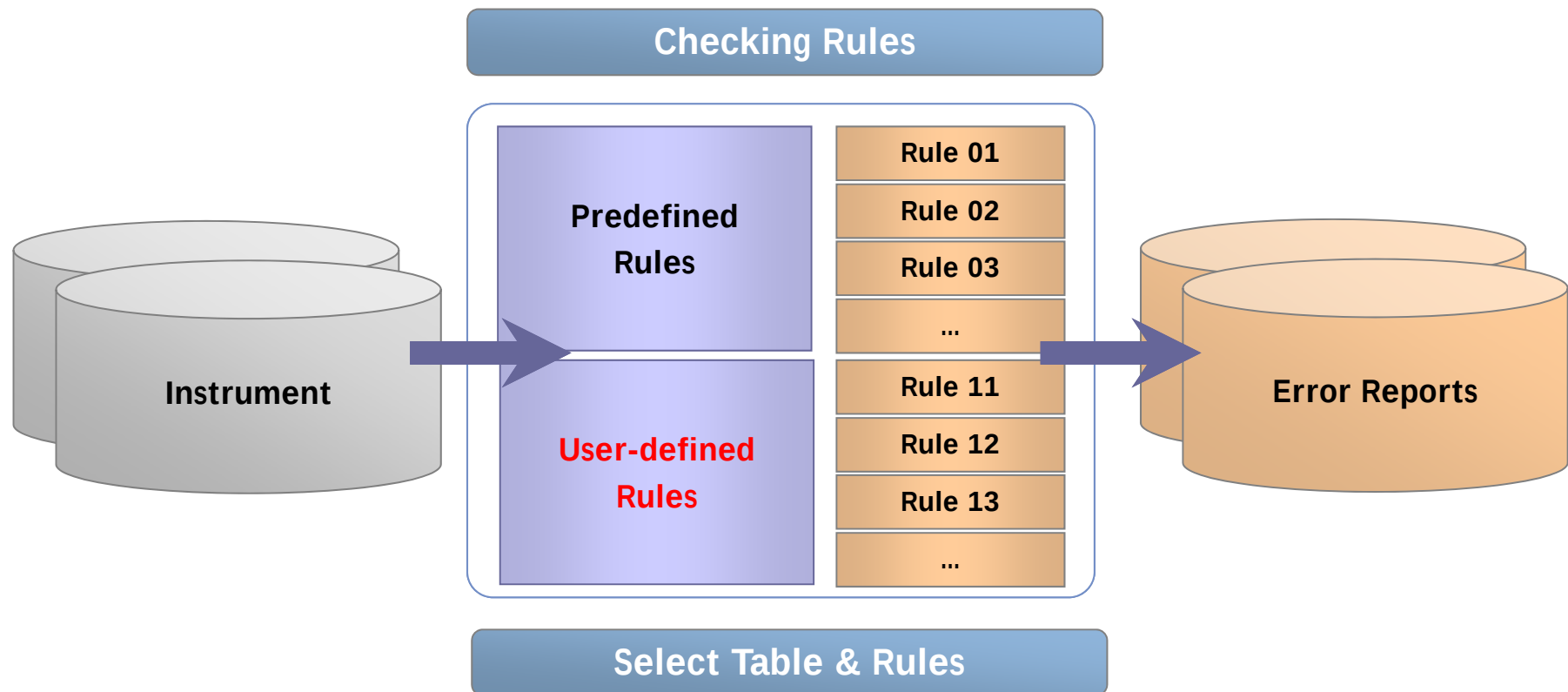
- ❑ Amain provides a function to detect missing Master Code from Input Data against Master Code in Amain. If registration is required, able to jump to setup menu just by double-click.

Master Code in Amain	Master Code in Input Data
Code – 10001	Code – 10001
Code – 10002	Code – 10002
Code – 10003	Code – 10003
Code – 10004	Code – 10004
Code – 10005	Code – 10005
	Code – 10006
	Code – 10007

Invalid Code

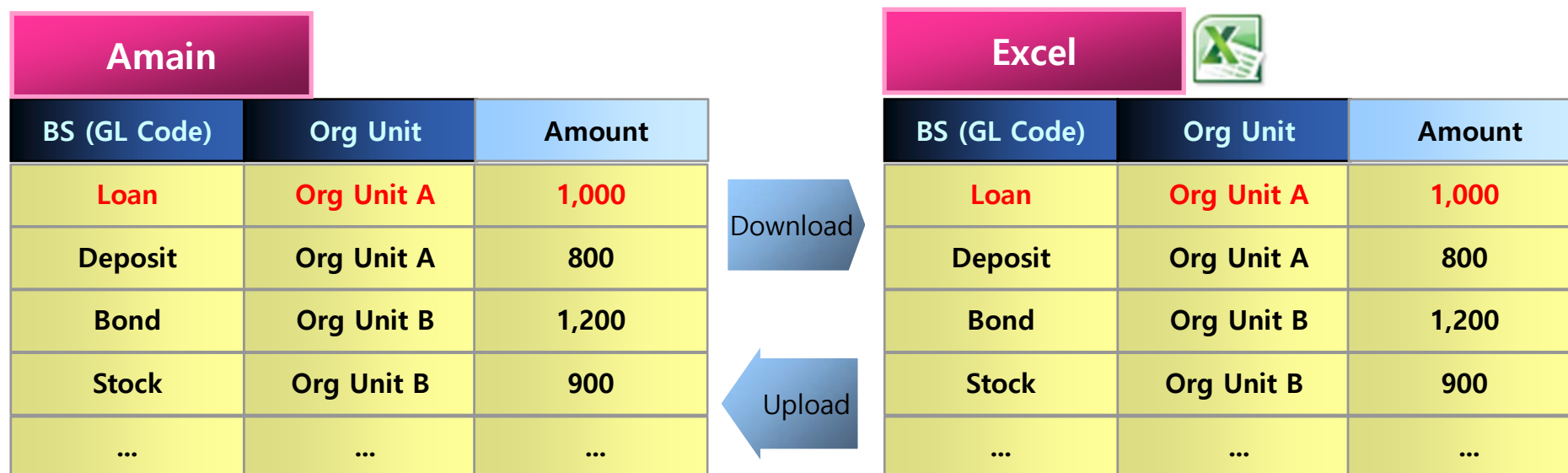
Amain for EPM – Detail Feature : Cashflow Column-Validation

- ❑ Amain provides Cashflow Column-validation mechanism to minimize the unexpected results from erroneous input data. The input data will be checked before processing to avoid any unnecessary job.



Amain for EPM – Detail Feature : Input Verify (+ Upload/Download)

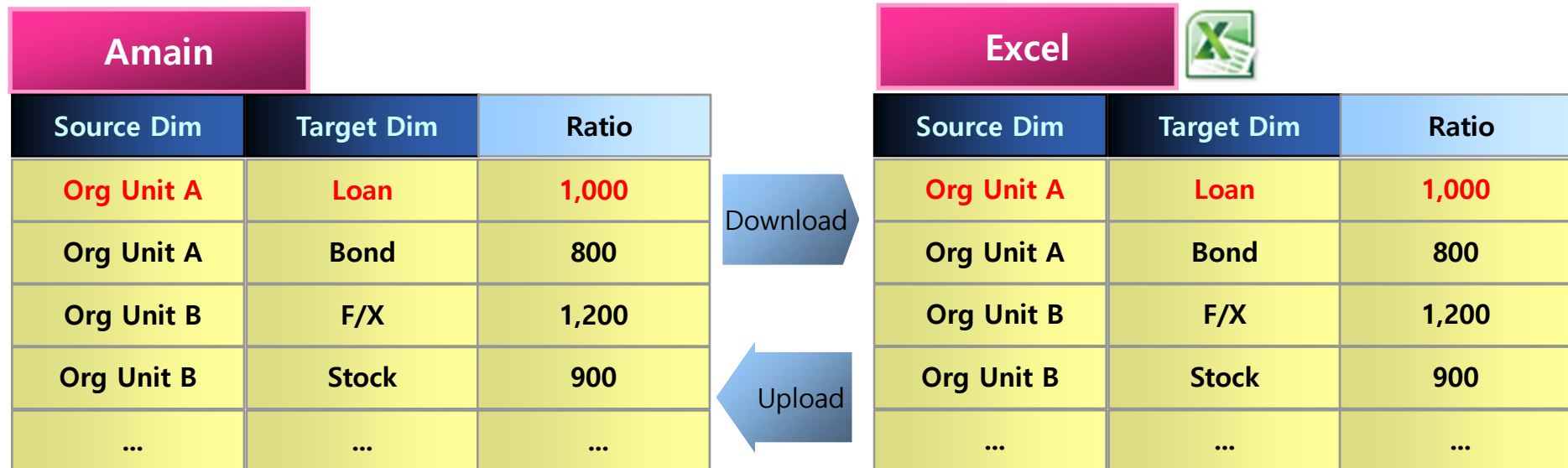
- ❑ Review Data from all kind of tables and Upload/Download
- ❑ Table Type : Ledger Table, Instrument Table, Lookup Table and Any Table



- Detail Function :
 - ✓ Select Column List to use
 - ✓ Apply additional condition

Amain for EPM – Detail Feature : Setup Upload and Setup Document

- ❑ Upload Setup Info and generate Setup Document
- ❑ Rule Type : Fixed Ratio, FTP Method and Hierarchy Filter

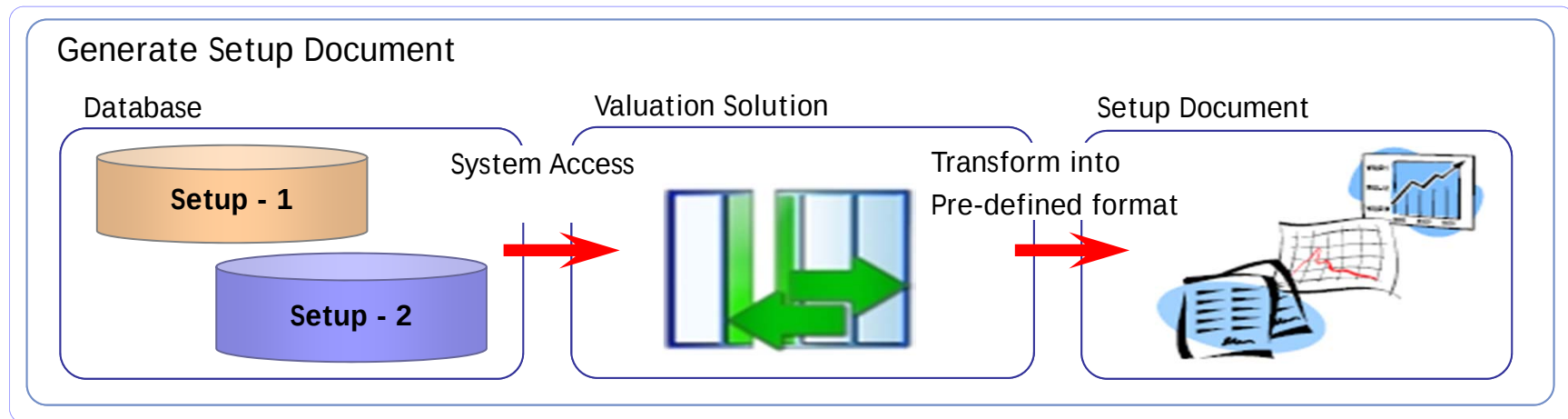


- Detail Function :
 - ✓ Upload Setup Info from Excel
 - ✓ Download Setup Info to Excel

Amain for EPM – Detail Feature : Automated Documentation

- ❑ Amain provides a function to generate Setup Document to keep the consistency between Amain system and documentation automatically.

Consistency	Keep consistency between Amain setup and Document
Standardization	Well-Formatted Document based on expertise and consulting experience
Reliability	Generate document by direct access to Amain database
Efficiency	Save User from time-wasting manual job for Documentation



Amain for EPM – Detail Feature : Setup Verification

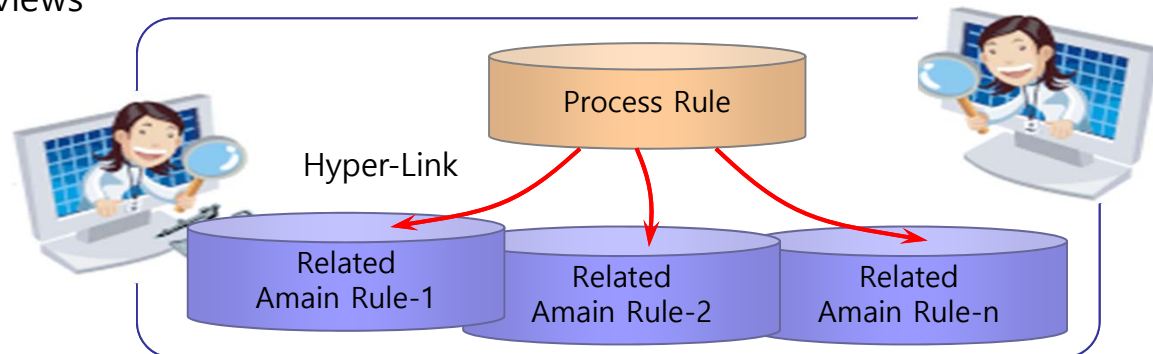
- ❑ Amain provides intuitive user interface, setup review function and hyper-link between Amain rules to help user verify the Amain setup.

Intuitive User Interface Provide intuitive and outstanding User Interface for user friendly operation of Amain system.

Amain Setup Verification Provide well-arranged Setup screens in user's point of view and allow to modify the setup information from the same screen.

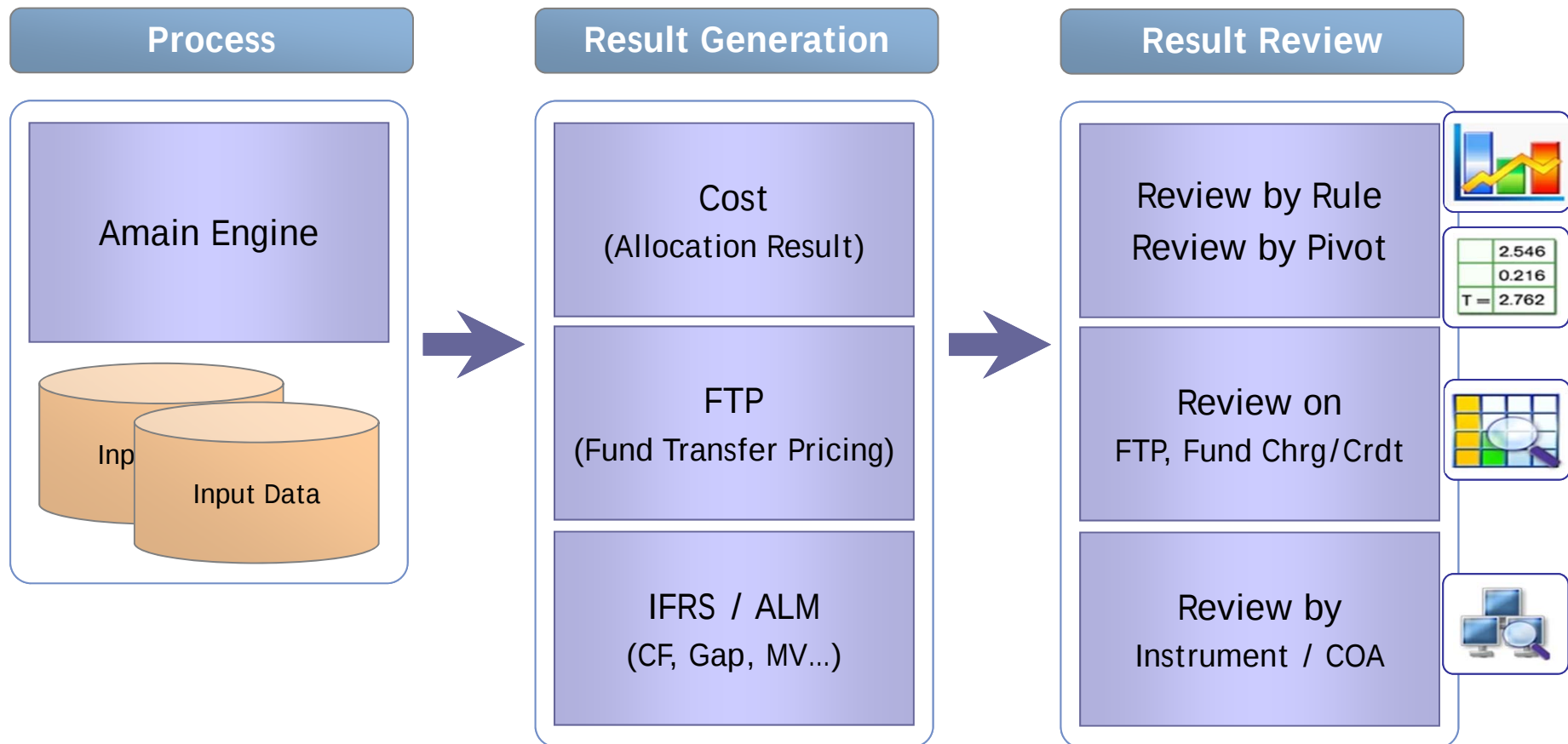
Hyper-Link between Amain Rules Provide a function to navigate between menus based on Hyper-Link. With this function any Rules can be reached by jumping down from Process Rule.

Verify in various point of views



Amain for EPM – Detail Feature : Result Quality Assurance

- ❑ Amain provides several menus to check the Amain results in various kinds of view such as review by single instrument, review by instrument list and review with hierarchy for user's convenience.



Amain for EPM – Detail Feature : Result Quality Assurance

- ❑ Amain provides a function to show the results and information related to FTP calculation and Cost allocation so that anyone can understand and explain about the numbers from Amain process easily.

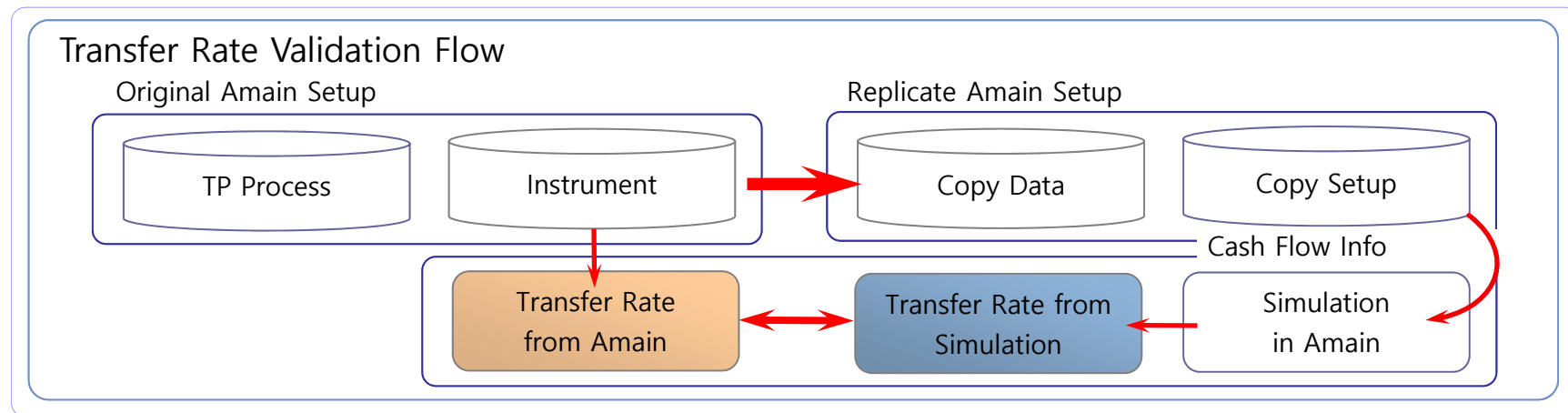
FTP Rate Validation

Provide a function to validate FTP Rate by showing related information in detail such as FTP Yield Curve, FTP Method, Cashflow and Quotation Date.

Allocation Validation

Provide 2 functions to validate allocation results.

1. Review by Rule : shows result related to a specific allocation rule in detail
2. Review by Pivot : shows results in a user-defined format of pivot similar to MS excel by setting the page item, row item and column item.



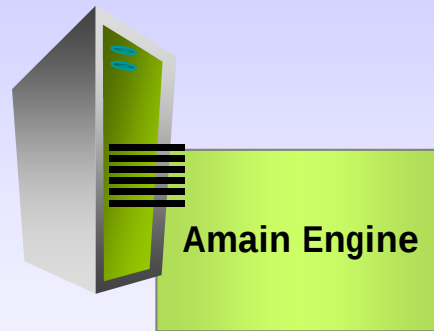
Amain for EPM – Detail Feature : High Performance

- ❑ Better performance can be achieved based on multi processing, c language and efficient algorithm,
- ❑ Especially multi processing Option is quite useful to make the most of Server resources such as CPU by dividing the single process into multiple process with distinct sets of rows.

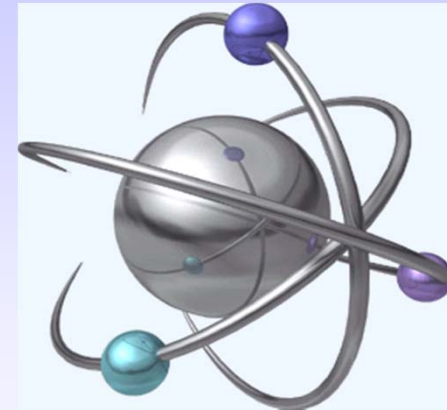
Multi Processing



C Language



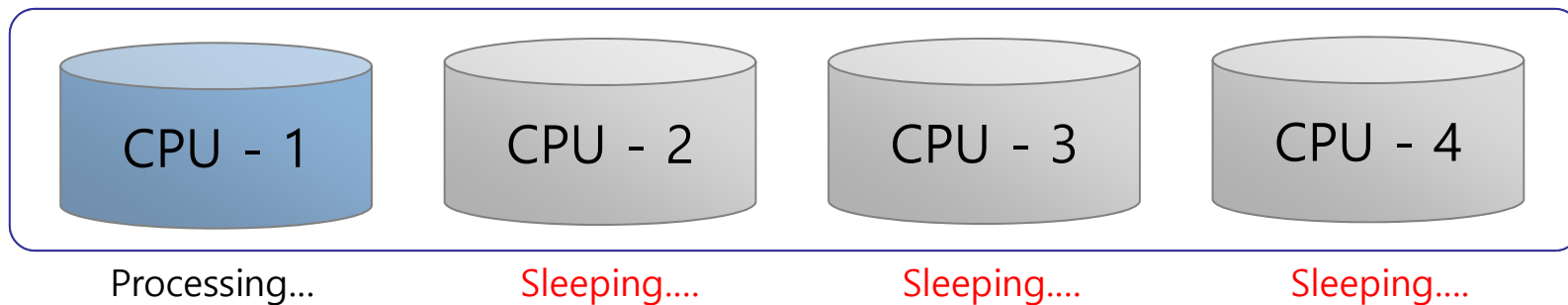
Efficient Algorithm



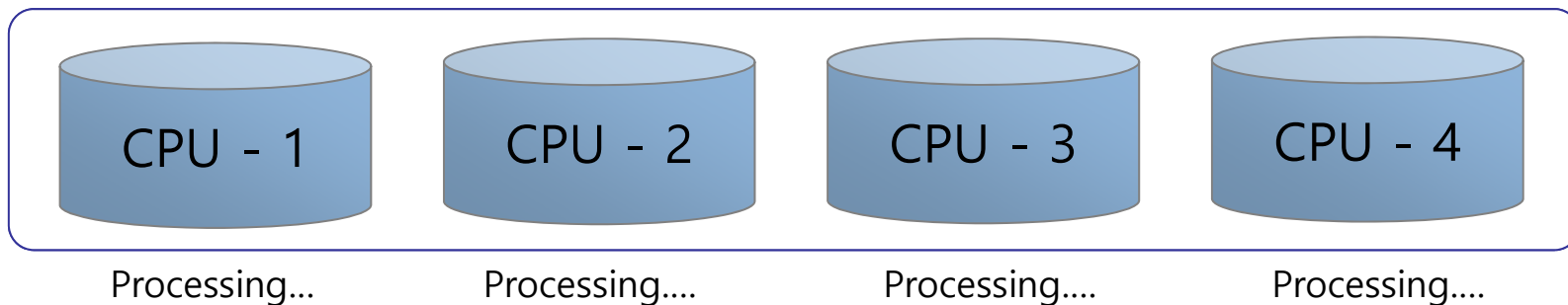
Amain for EPM – Detail Feature : Multi Processing

- ❑ If Multi Processing option is setup, then hardware resources can be utilized efficiently.
- ❑ if not, most CPUs are doing nothing.

Before Multi Process Setup

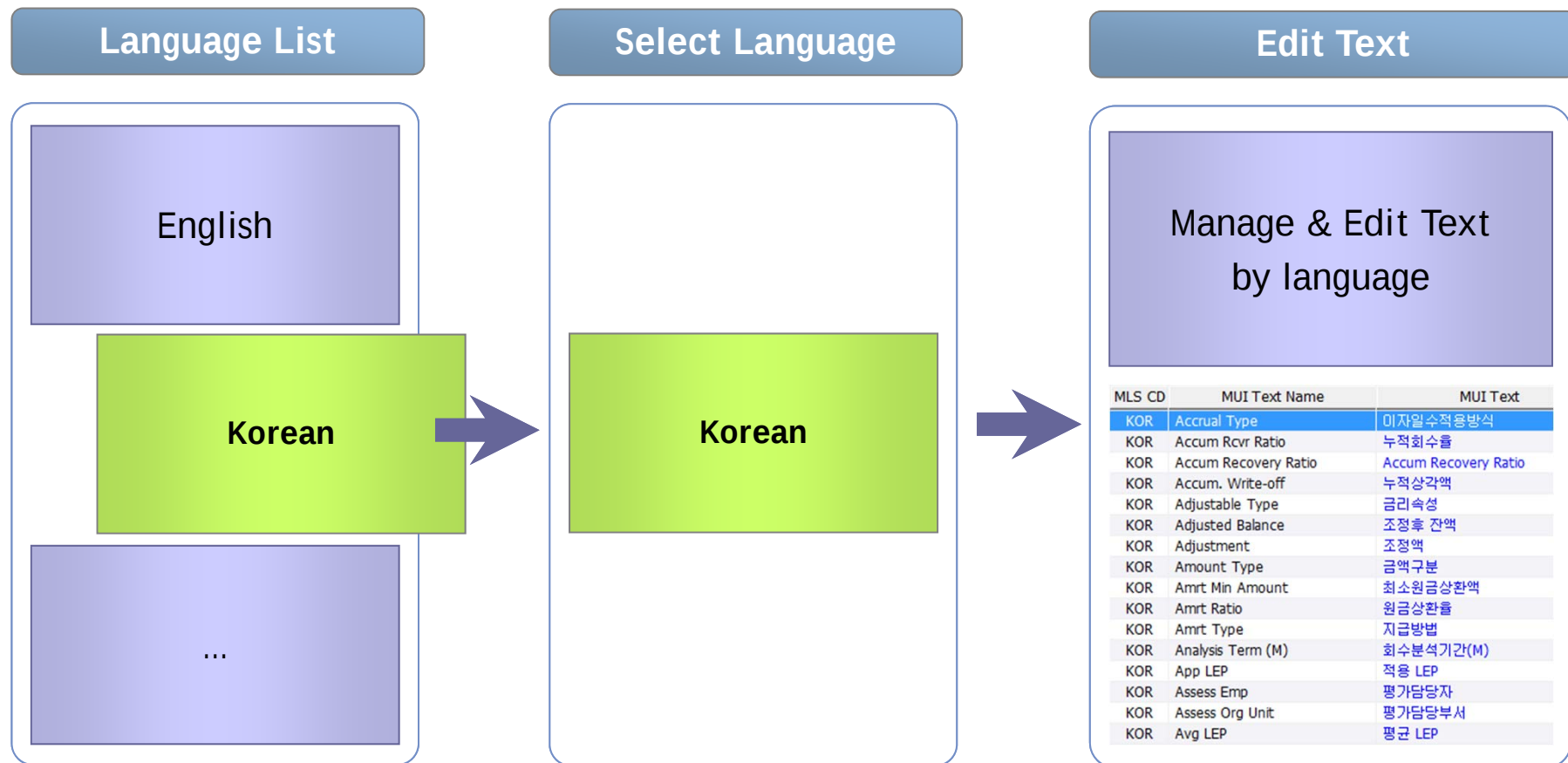


After Multi Process Setup



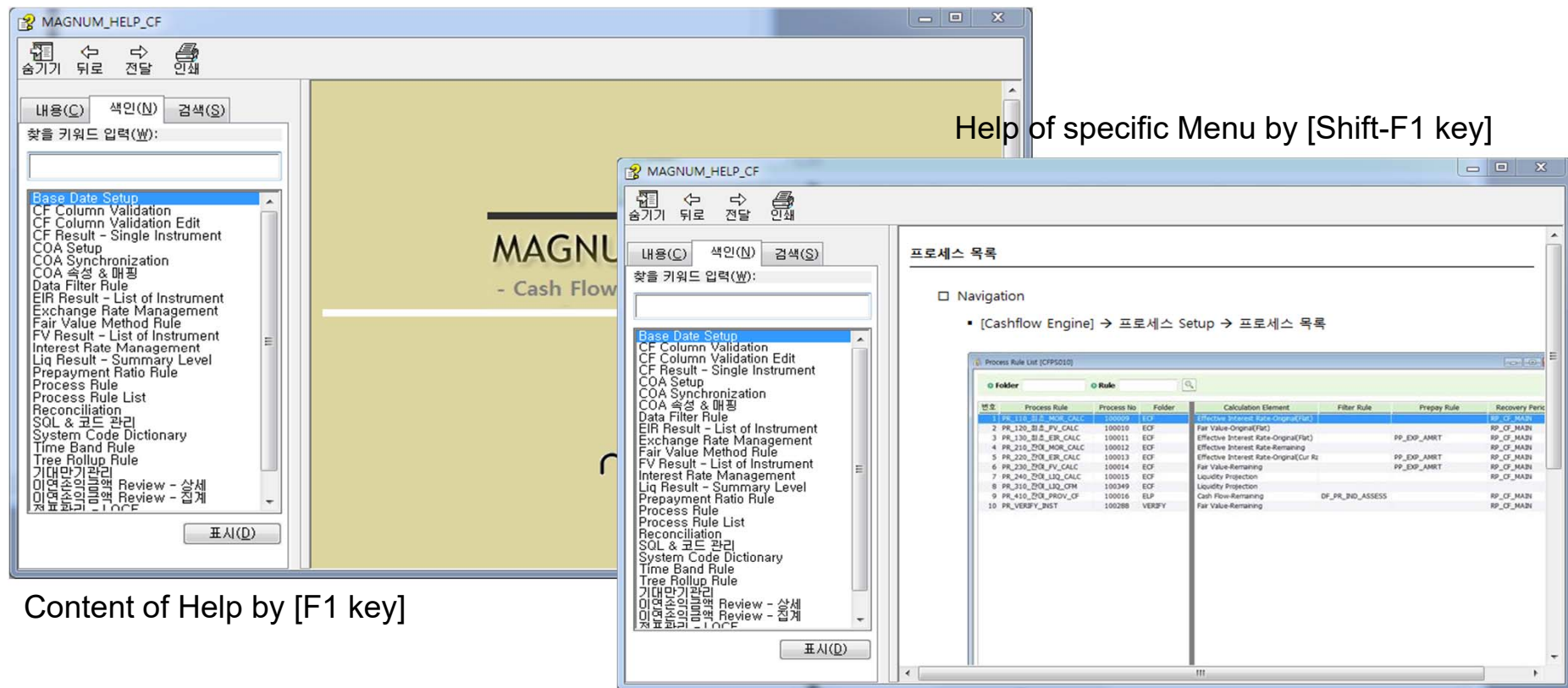
Amain for EPM – Detail Feature : Multi Language Support

- ❑ Display language can be selected for user's convenience.
- ❑ Moreover each text on the screen can be edited and managed by user.



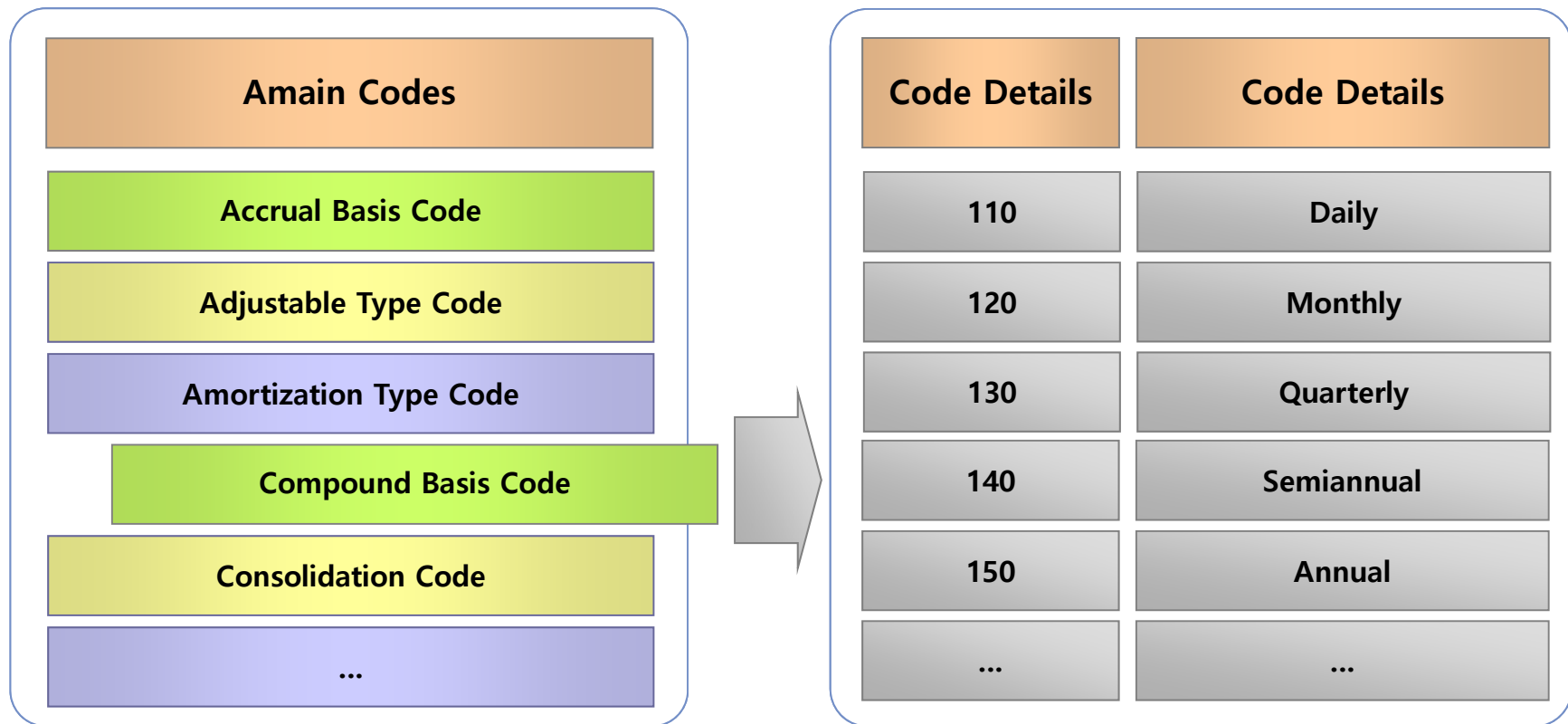
Amain for EPM – Detail Feature : Online Help

- ❑ Amain provides online help for user's reference.
- ❑ [F1 Key] : open a pop-up screen including contents of manual for user's search.
- ❑ [Shift-F1 Key] : open a pop-up screen including explanation about current menu.



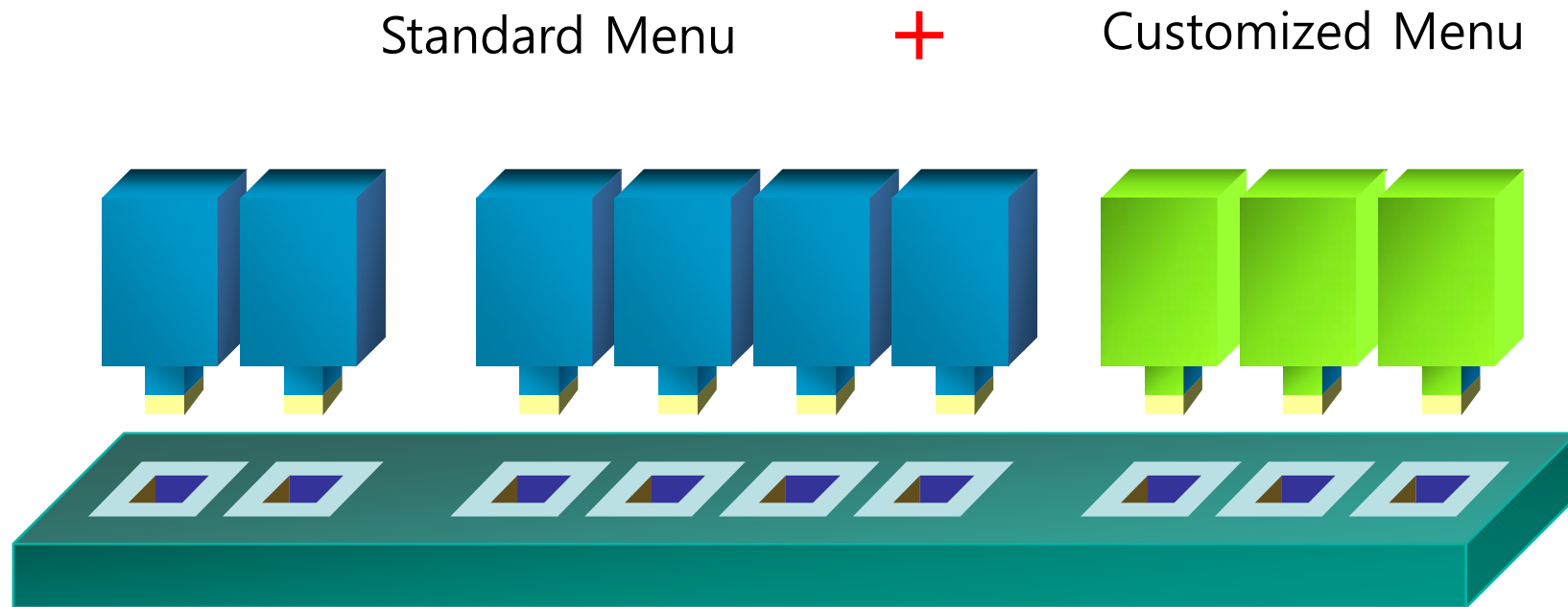
Amain for EPM – Detail Feature : System Code Dictionary

- ❑ Most System Codes can be looked up in this menu so that user can analyze the Amain input and output data without memorizing system code and code description.
- ❑ Any code and description can be retrieved easily in a single screen.



Amain for EPM – Easy Customization

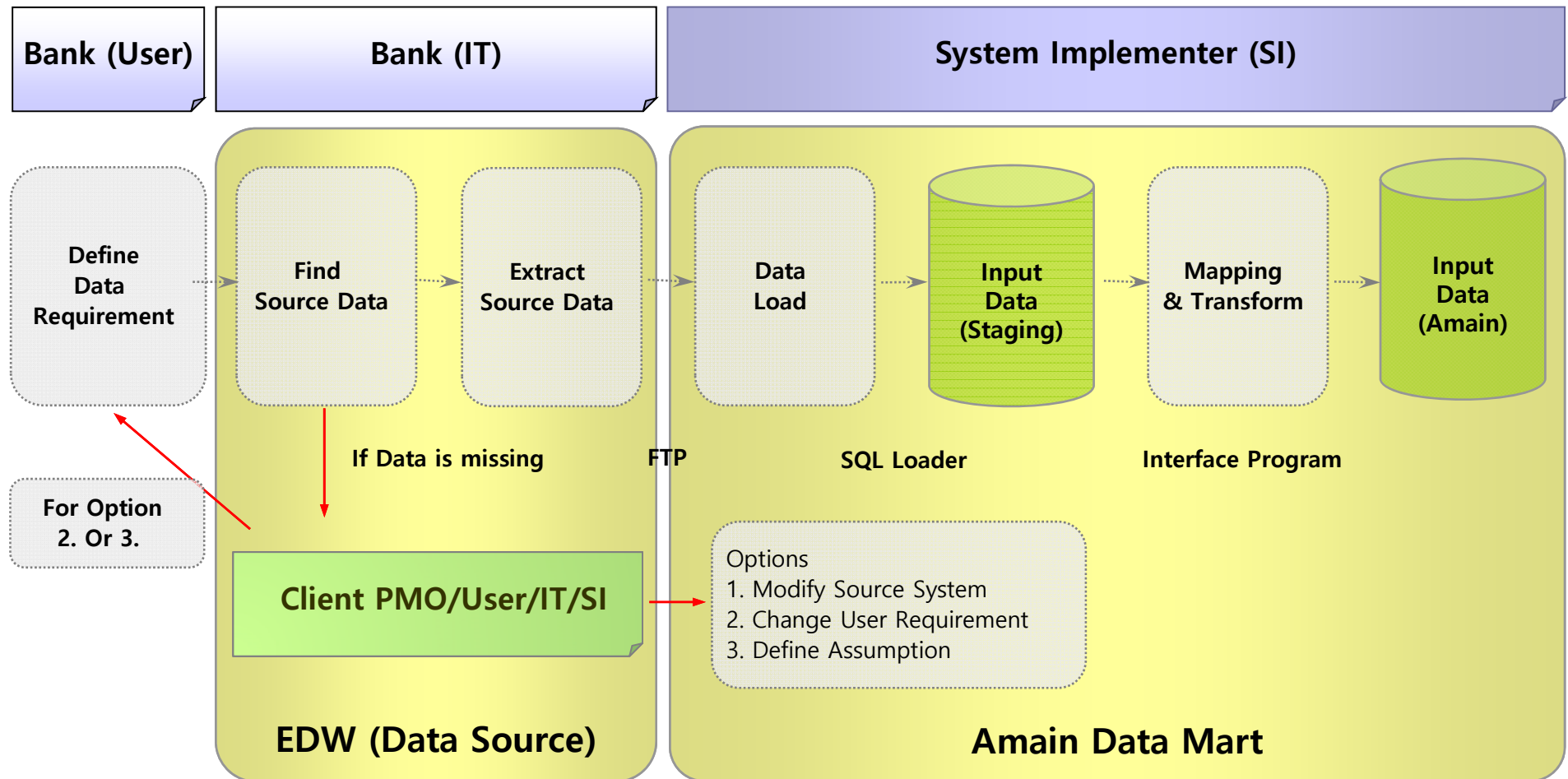
- ❑ Amain provides Tailor-made Menu for each customer by combining Standard Menu and Customized Menu



Amain Menu for Each Customer

Amain for EPM - Data Interface Flow

❑ Data Interface Flow



Amain for EPM – Ledger Table Layout

Ledger Table

Base Date	Dim-Class	Dim-Org Unit	Dim-BS Code	...	Amount
2013/03/31	End Bal	Saladaeng	Loan	...	100,000
2013/03/31	Avg Bal	Saladaeng	Loan	...	100,000
2013/03/31	Fund Charge	Siam	Fund Charge	...	1,600
2013/03/31	Interest	Siam	Loan Interest	...	2,000

- Main Features
 - : **Multiple Tables** in Amain Data Model (can be added according to your requirement)
 - : Keep the Data by Dimension code
 - : Have 1 amount column to keep current month amount
 - : Used for indirect income/expense allocation
 - : Have Allocation Rule No. for Undo Function

Amain for EPM – Instrument Table Layout

Instrument

Base Date	Reference No	Org Date	Mat Date	Interest Rate	Balance
2013/03/31	1001	2003/03/23	2006/03/23	4%	100,000
2013/03/31	1002	2003/04/12	2005/04/12	6%	300,000
2013/03/31	1003	2004/01/05	2005/01/05	5%	250,000
2013/03/31	1004	2004/02/26	2006/02/26	3%	150,000

- Main Features
 - : **Multiple Tables** in Amain Data Model (can be added according to your requirement)
 - : Keep the Data by Reference Number which is unique identifier
 - : Comprised of Cashflow columns, Amain Result columns and Information columns
 - : Used as input data to calculate FTP and generate Cashflow
 - : Base_Date is one of the primary key to accumulate data historically

Amain for EPM – Sub Instrument Table Layout

Sub Instrument

Base Date	Reference No	Org Unit	Activity	Frequency	Cost
2013/03/31	1001	New York	Loan Review	1	30,000
2013/03/31	1001	New York	Open Account	1	10,000
2013/03/31	1002	New York	Close Account	1	2,000
2013/03/31	1002	New York	Withdraw	4	2,000

- Main Features
 - : **Multiple Tables** in Amain Data Model (can be added according to your requirement)
 - : Keep the Data by Reference Number & additional Dimension (ex : PL Code or Activity Code)
 - : Used to calculate cost for each Instrument based on the formula [Unit Cost * Frequency]
 - : Base_Date is one of the primary key to accumulate data historically

Amain for EPM – Unit Cost Table Layout

Unit Cost

Base Date	Org Unit	Activity	Unit Cost
2013/03/31	New York	Loan Review	30,000
2013/03/31	New York	Open Account	10,000
2013/03/31	New York	Close Account	2,000
2013/03/31	New York	Withdraw	500

- Main Features
 - : **Multiple Tables** in Amain Data Model (can be added according to your requirement)
 - : Keep the Data by Activity (or Activity & Org Unit)
 - : Have 1 amount column to keep current month amount
 - : Base_Date is one of the primary key to accumulate data historically

Amain for EPM – How to save allocation result for Ledger Table ?

- **When Target table is Ledger Table**

- ✓ Allocation results are appended in the Ledger table as new records with the Rule Number from Amain engine.
- ✓ Every Allocation Rule has a unique Rule Number so that Amain can Undo based on the Rule Number.
- ✓ When executing Undo, All the result records are deleted from Ledger Table.

Amain for EPM – How to save allocation result for Ledger Table ?

Ledger Table

Base Date	Dim-Org Unit	Dim-PL Code	Rule Number	Amount
2013/03/31	Saladaeng	Expense	...	100,000
2013/03/31	Saladaeng	Expense	...	200,000

Undo

Process

Base Date	Dim-Org Unit	Dim-PL Code	Rule Number	Amount
2013/03/31	Saladaeng	Expense	...	100,000
2013/03/31	Saladaeng	Expense	...	200,000
<i>2013/03/31</i>	<i>Saladaeng</i>	<i>Expense</i>	<i>1000</i>	<i>-100,000</i>
<i>2013/03/31</i>	<i>Saladaeng</i>	<i>Expense</i>	<i>1000</i>	<i>-200,000</i>
<i>2013/03/31</i>	<i>Saladaeng</i>	<i>Expense</i>	<i>1000</i>	<i>120,000</i>
<i>2013/03/31</i>	<i>Saladaeng</i>	<i>Expense</i>	<i>1000</i>	<i>180,000</i>

Amain for EPM – How to save allocation result for Instrument Table ?

- **When Target table is Instrument Table**
 - ✓ Allocation results are updated in the existing records with the Rule Number from Amain engine.
 - ✓ When executing Undo, All the allocation results are set to zero.

Amain for EPM – How to save allocation result for Instrument Table ?

Instrument

Base Date	Reference No	Org Date	Rule Number	Amount
2013/03/31	1001	2003/03/23	0	0
2013/03/31	1002	2003/04/12	0	0
2013/03/31	1003	2004/01/05	0	0

Undo

Process

Base Date	Reference No	Org Date	Rule Number	Amount
2013/03/31	1001	2003/03/23	2000	100
2013/03/31	1002	2003/04/12	2000	300
2013/03/31	1003	2004/01/05	2000	250

Process
again

Base Date	Reference No	Org Date	Rule Number	Balance
2013/03/31	1001	2003/03/23	2000	100
2013/03/31	1002	2003/04/12	2000	300
2013/03/31	1003	2004/01/05	2000	250



Agenda

I. Amain for EPM

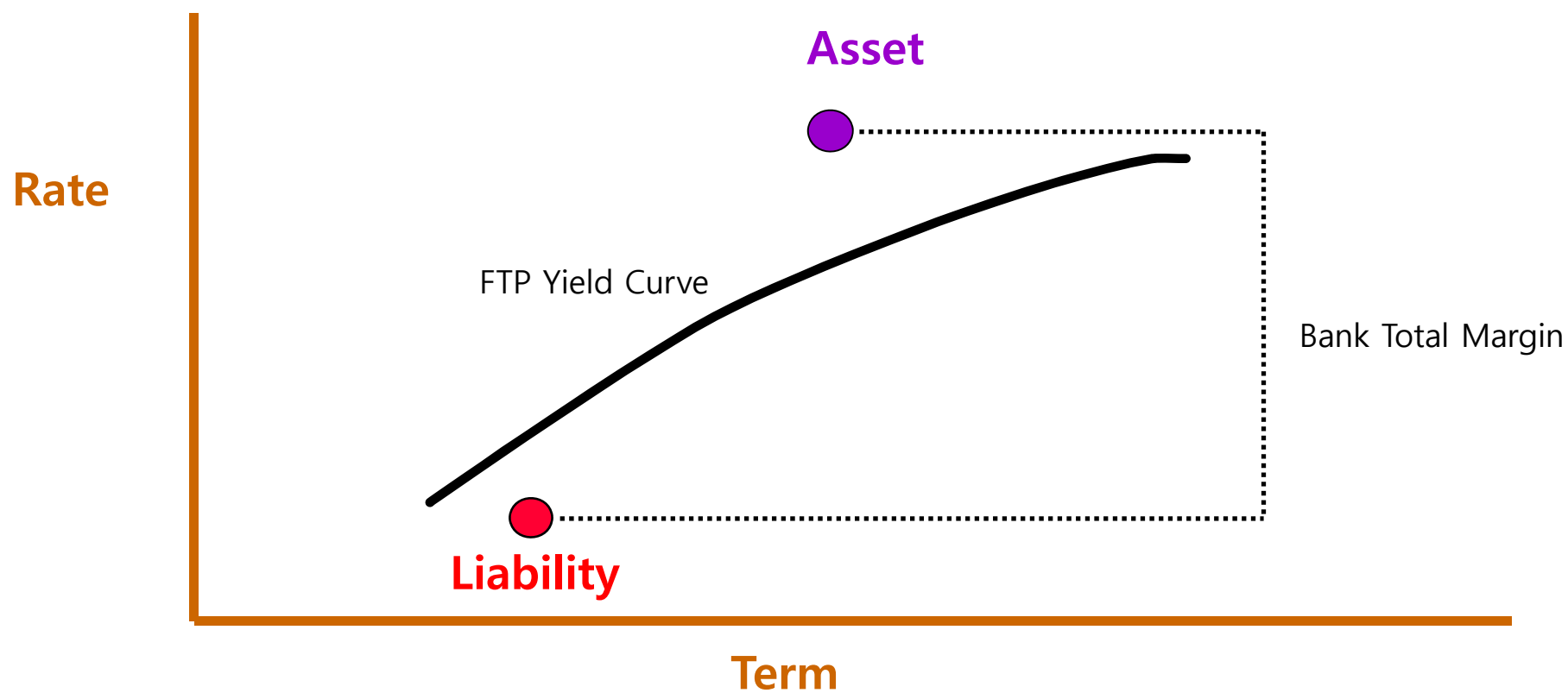
1. Introduction
2. Amain for FTP
3. Amain for PCA
4. Amain for JOB

Amain for FTP - Key Objective

- Key Objectives
 - ✓ Facilitate profitability and pricing management
 - Realistic / Economic Marginal Cost
 - ✓ Consistent measure of organisation, product and customer profitability
 - By Generating Net Interest Margin Report
 - By Separation of Spread (Lending Spread/Funding Spread/Mismatch Spread)
 - ✓ Segregate Interest Rate Risk from business unit
 - Treasury : Risk Management
 - ✓ Facilitate to drive the business unit toward Bankwide strategic direction
 - By incorporating incentive/desincentive into FTP structure

Amain for FTP - Key Objective

❑ FTP Yield Curve & Components of Margin



Amain for FTP - Key Objective

- ❑ Fund Charge/Credit

Fund Charge / Credit Calculation

Transfer Rate * Average Balance * Accrual Basis

7.50%

100,000,000

30 / 365

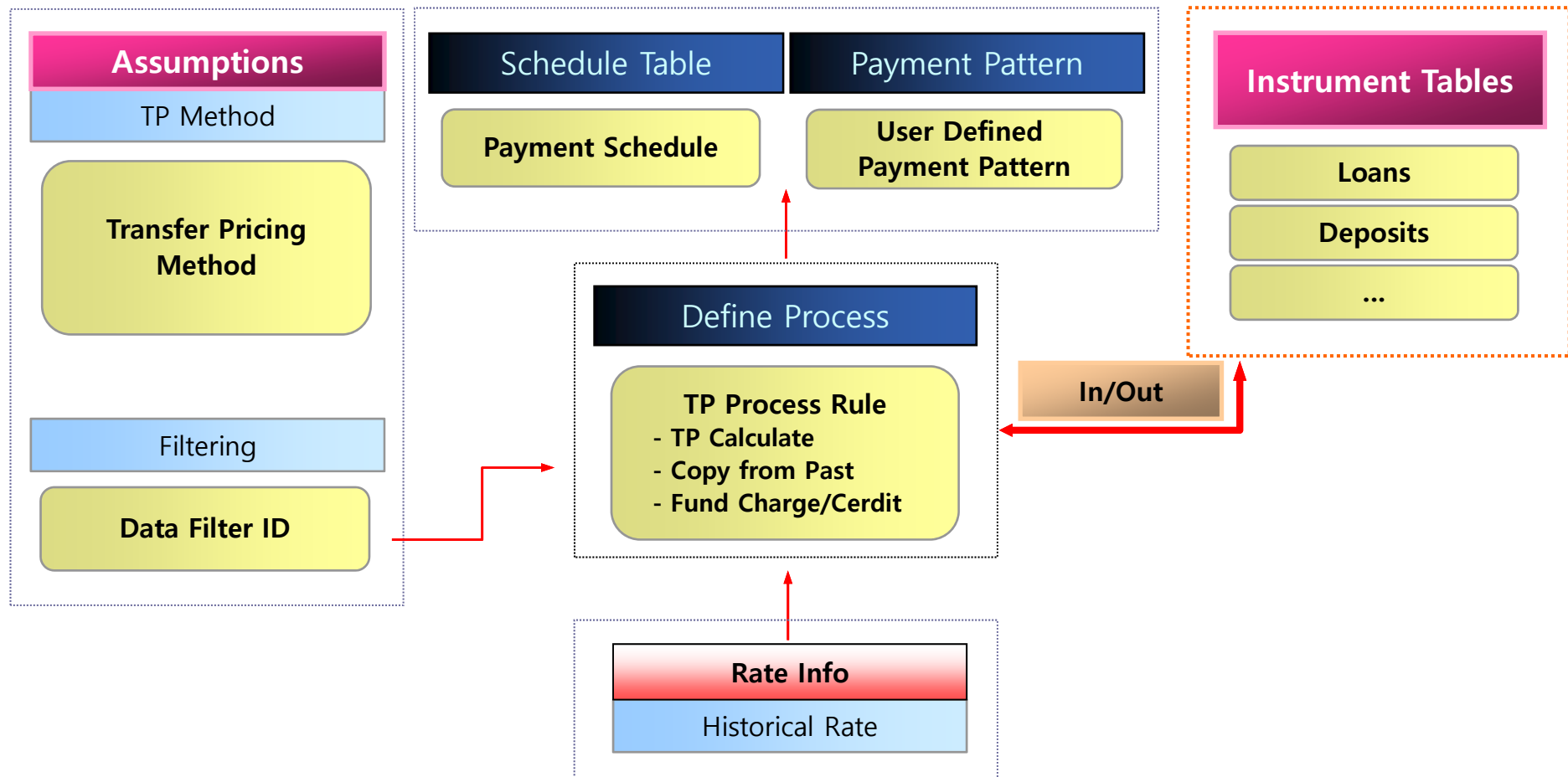
Amain for FTP - Key Objective

❑ Source of Margin

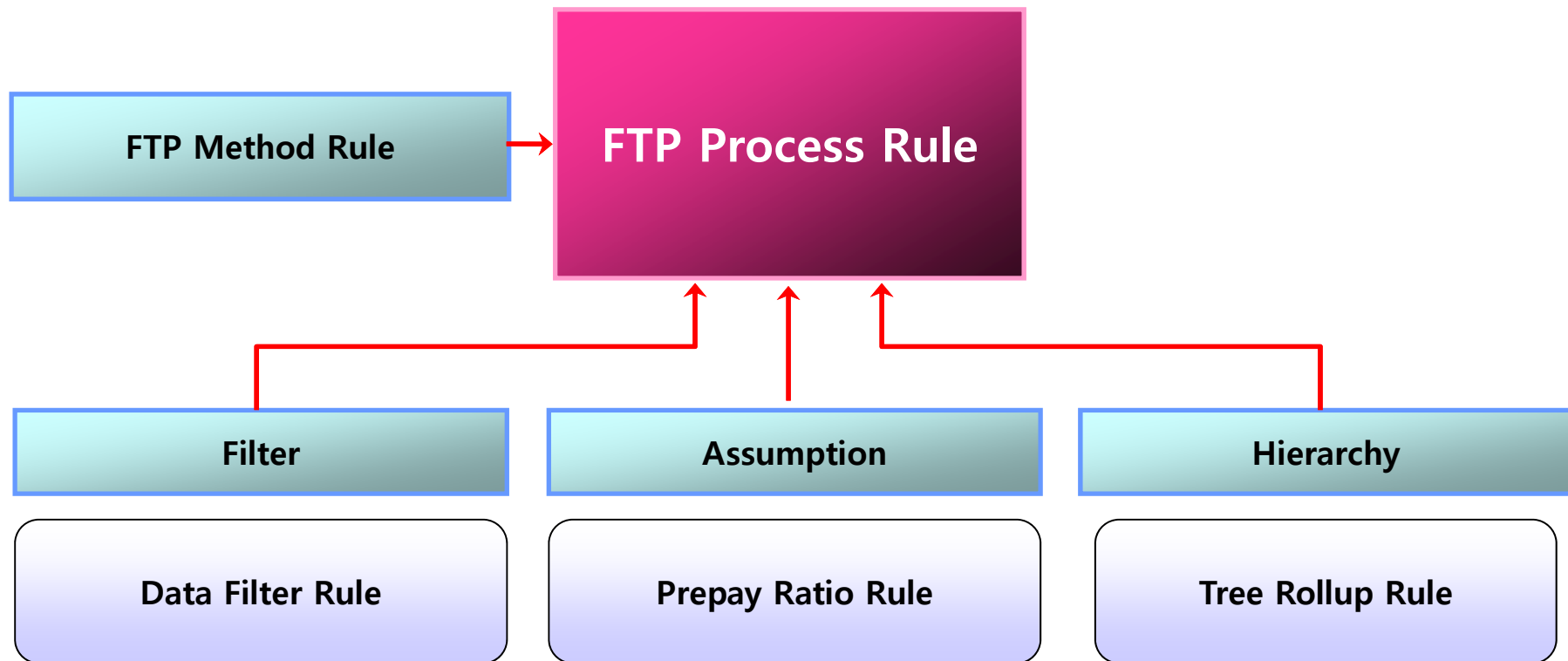
Traditional Income Statement		More Valuable Income Statement	
Interest Revenue	XXX	Interest Revenue	XXX
Interest Expense	XXX	Charge for Funds	XXX
Net Interest Income	XXX	Lending Margin	XXX
Loss Provision	XXX	Value of Funds	XXX
Other Income	XXX	Interest Expense	XXX
Other Expense	XXX	Funding Margin	XXX
Pretax Income	XXX	Rate Risk Margin	XXX
		Net Interest Income	XXX
		Loan Loss Provision	XXX
		Other Income	XXX
		Other Expense	XXX
		Pretax Income	XXX

Amain for FTP – FTP Calculation Flow

❑ FTP Calculation Flow



Amain for FTP – Components of FTP Rule



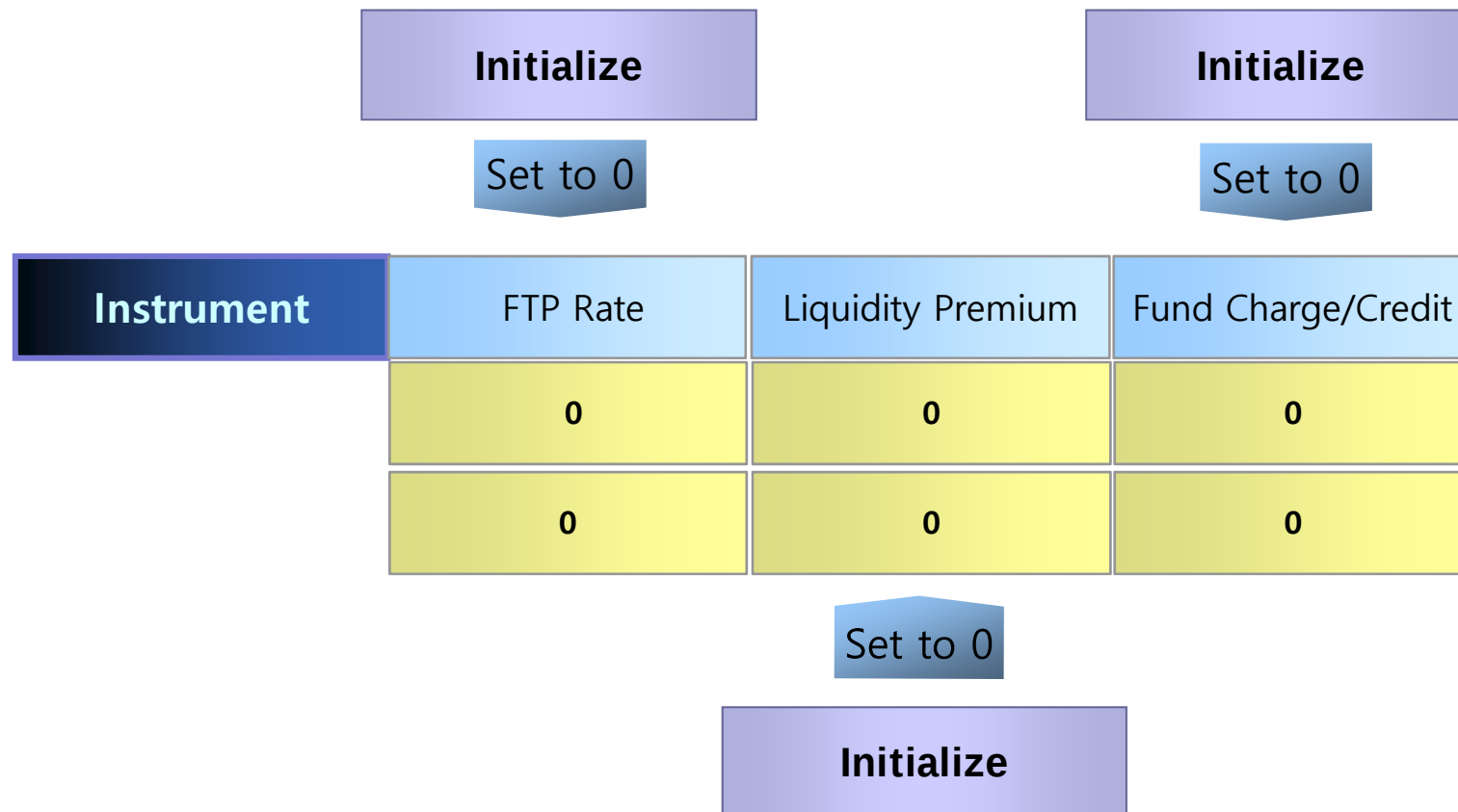
Amain for FTP - Main Functions

❑ Amain provides main functions to calculate FTP Rate as follows.

Initialize	- Functions to initialize all the old information before calculating FTP rate again
Calculate FTP Rate	- Function to calculate FTP rate using various FTP method offered by Amain
Calculate Duration & MV	- Function to calculate Duration and Market Value based on various discount method
Copy FTP from Past	- Function to copy FTP rate from the past for the accounts whose FTP rate is same as before (for example :Fixed rate product.)
Calculate Fund Charge/Credit	- Function to calculate Fund Charge/Credit based on the user's setup - Basic Formula = [average balance * FTP Rate * Accrual Days]
Calculate Breakage Cost	- Function to calculate Breakage Cost - Basic Formula = [Market Value at breakage - Balance at breakage]

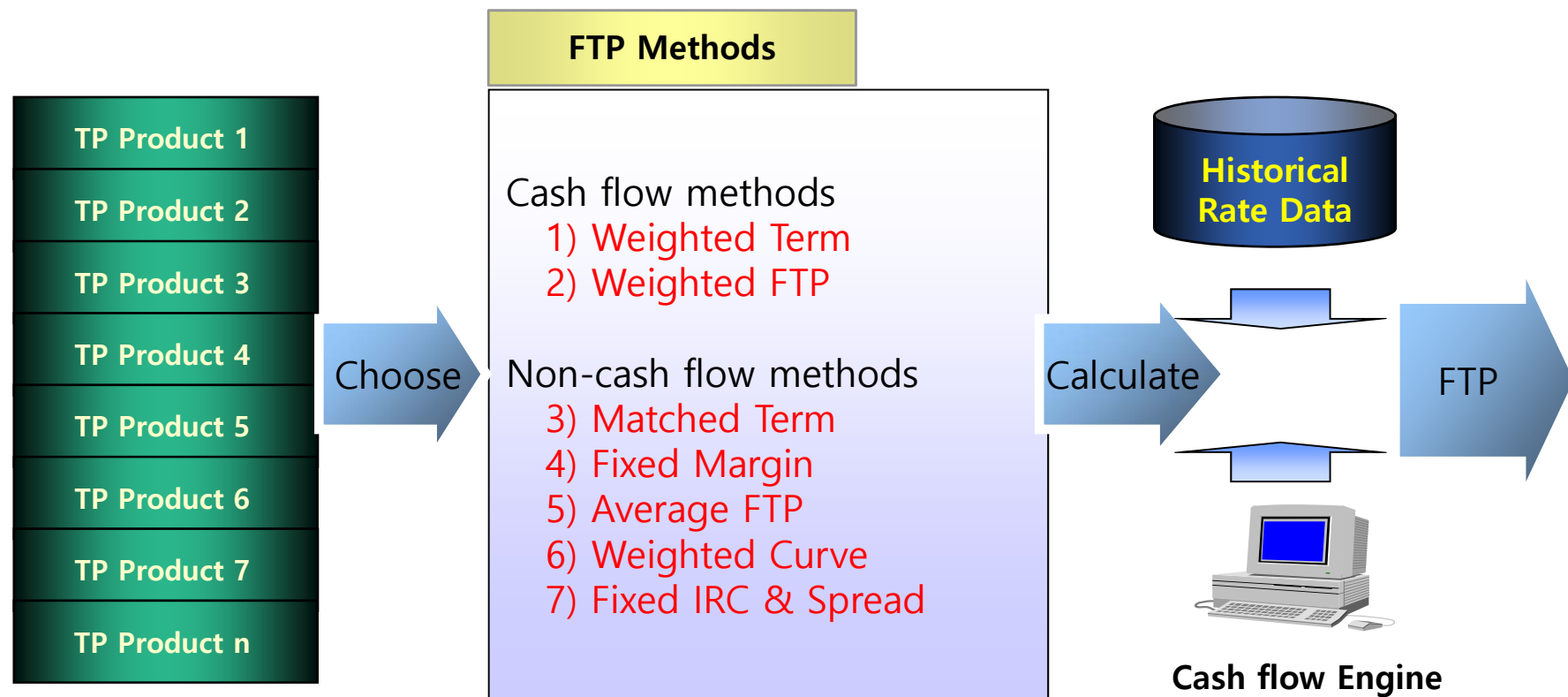
Amain for FTP - FTP Functions

❑ Initialize



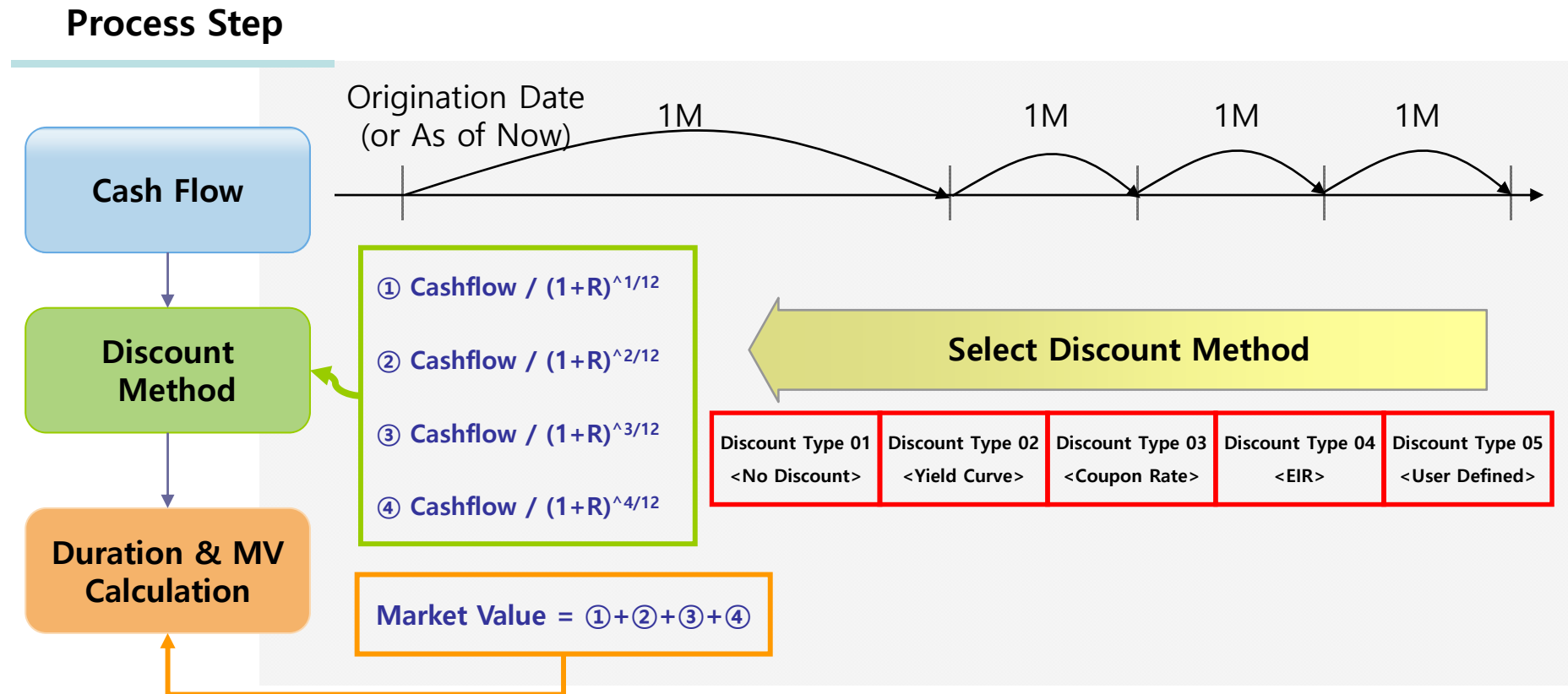
Amain for FTP - FTP Functions

❑ FTP Calculation Method



Amain for FTP - FTP Functions

❑ Discount Method for Duration and MV



Amain for FTP - FTP Functions

❑ Copy from Past

Reference No	Base Date	FTP Rate 1	FTP Rate 2
10001	01-31	7.5000	2.5000
10002	01-31	6.0000	4.0000

Copy

Copy

Reference No	Base Date	FTP Rate 1	FTP Rate 2
10001	02-28	7.5000	2.5000
10002	02-28	6.0000	4.0000
10003	02-28	0.0000	0.0000

1. The condition for Propagation

- same Reference_No
- set Transfer_rate & Matched Spread to 0 before Copy
- Repr_Freq = 0 or Repr Freq <> 0 & Last Repr Date <= Prior Prior Base Date.

Amain for FTP - FTP Functions

- ❑ Calculate Fund Charge/Credit

Fund Charge/Credit

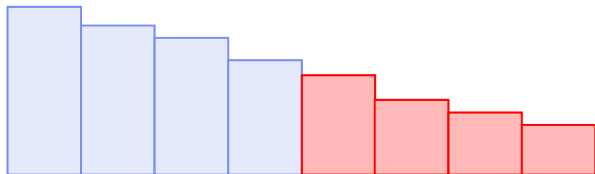
Calculate

Instrument	FTP Rate	Average Balance	Accrual Type	Fund Charge/Credit
	5.0%	100,000	Actual/365	424.65
	6.0%	200,000	30/360	1,000.00

Fund Charge/Credit = FTP Rate * Average Balance * Accrual Basis

Amain for FTP - FTP Functions

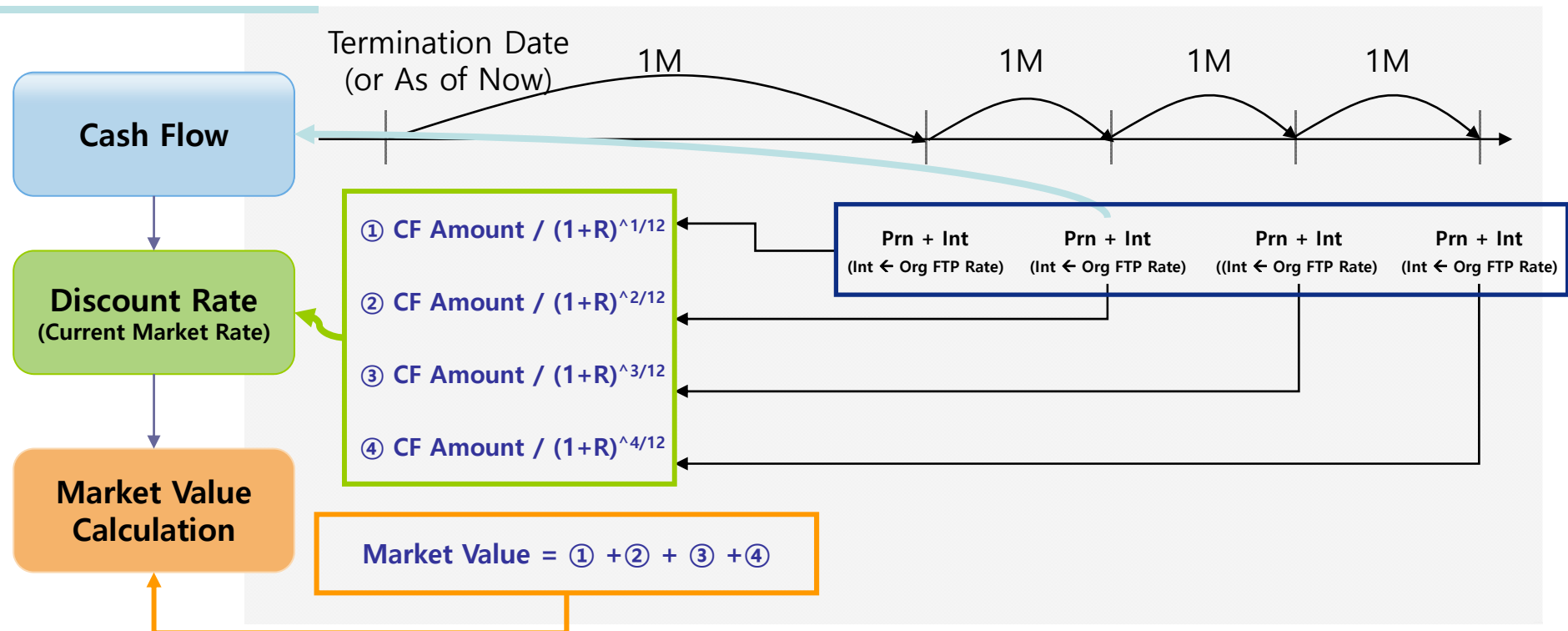
❑ Breakage Cost Calculation



For Assets:

$$\text{Breakage Cost} = \text{Economic Loss} = \text{Market Value} - \text{Book Value}$$

Process Step



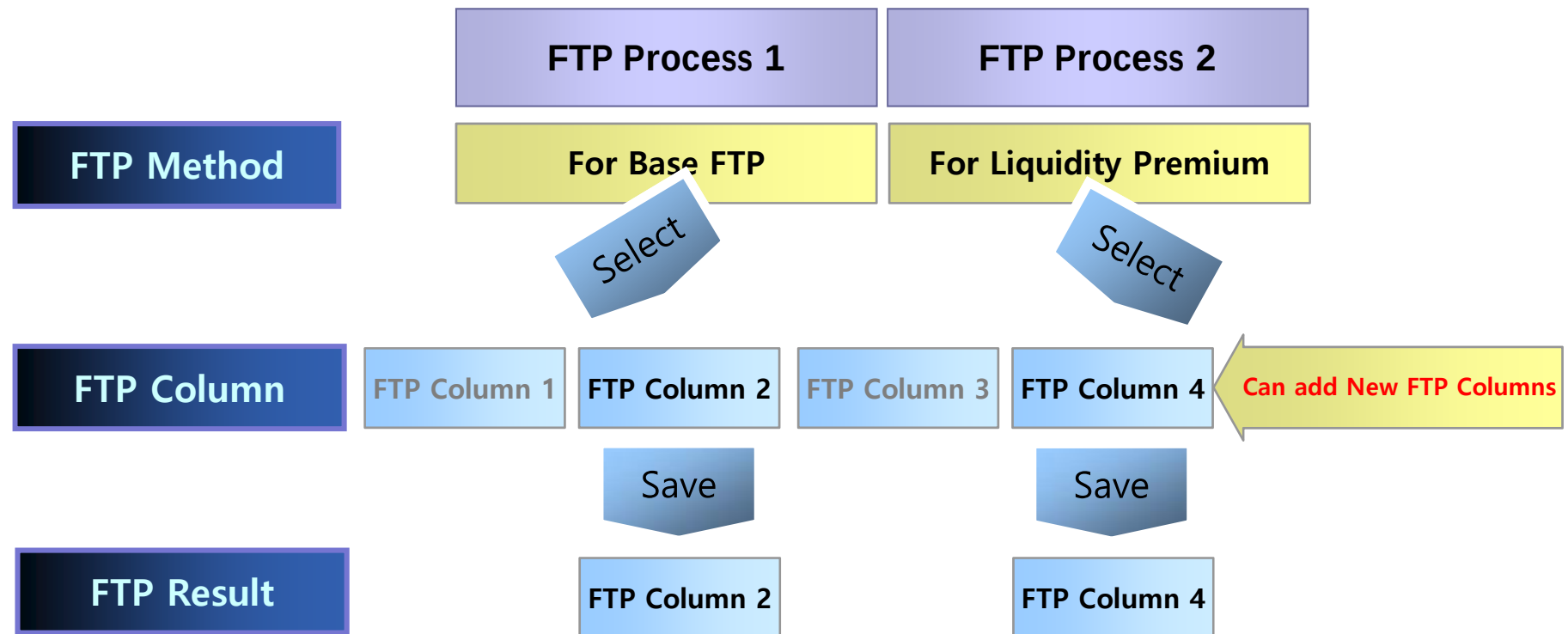
Amain for FTP - Main Options

❑ Amain provides main Options for FTP calculation as follows.

Multiple FTP Columns	- Option to allow user to select target column to save the FTP result.
Early Quotation	- Option to choose Quotation date if contract is made earlier a. origination date b. actual quote date
Early Quotation Forward	- Option to choose FTP calculation logic if contract is made earlier a. origination date/actual date b. normal quotation/forward rate calculation
Process on zero FTP Rate	- Option to calculate FTP rate only for the instruments with zero FTP Rate
Entire / Remaining Period	- Option to choose Period of Cashflow to be included in the FTP calculation a. Cashflow for the entire contract period b. Cashflow for the remaining period
Fixed Rate Mode	- Option to generate Cashflow for entire period as Fixed Account for All instruments
1 Day Early Quotation	- Option to choose the way to quote FTP rate from 2 alternatives a. based on origination/repricing date b. 1 day earlier than the data
Cashflow Log	- Option to save the Cashflow log or not

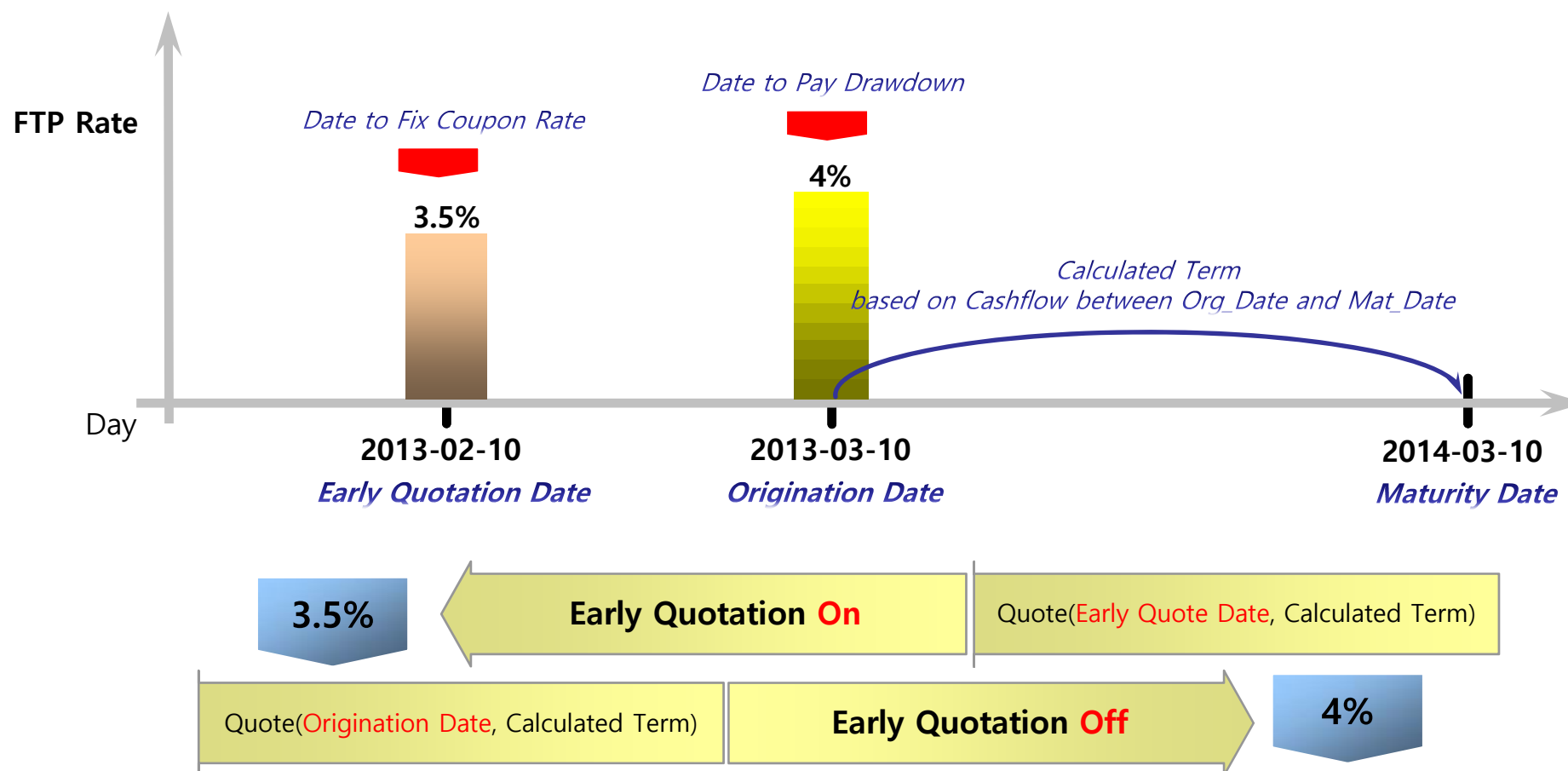
Amain for FTP – Multiple FTP Columns

❑ Multiple FTP Columns



Amain for FTP – Early Quotation Option

- This option can be applied to Cashflow Method and Matched Term Method
 - : Quote FTP Rate based on Early Quotation Date and Term from Cashflow between Origination Date and Maturity Date



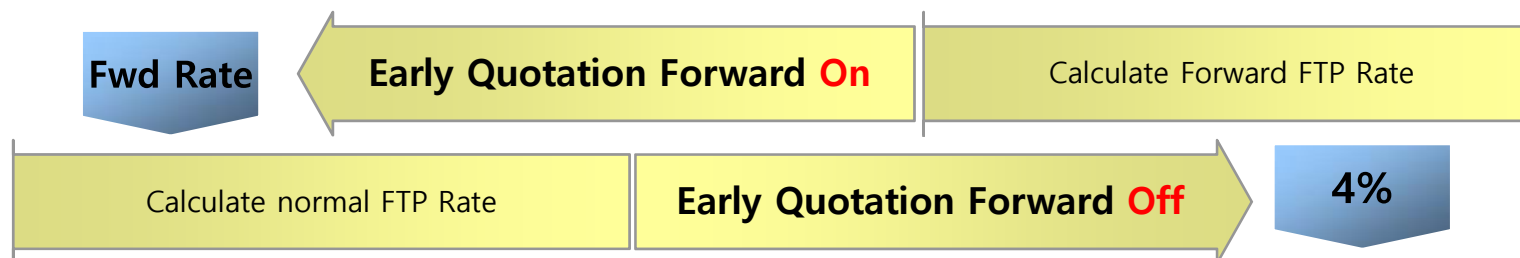
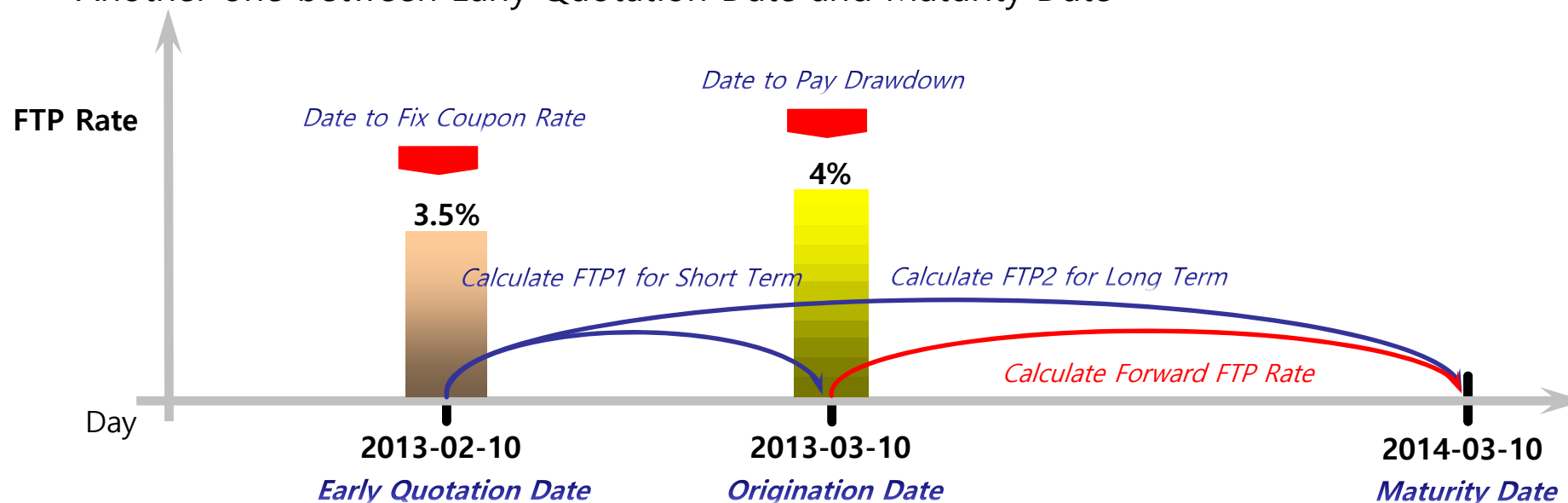
Amain for FTP – Early Quotation Forward Option

- This option can be applied to Cashflow Method and Matched Term Method

: Calculate Forward Rate based on 2 terms

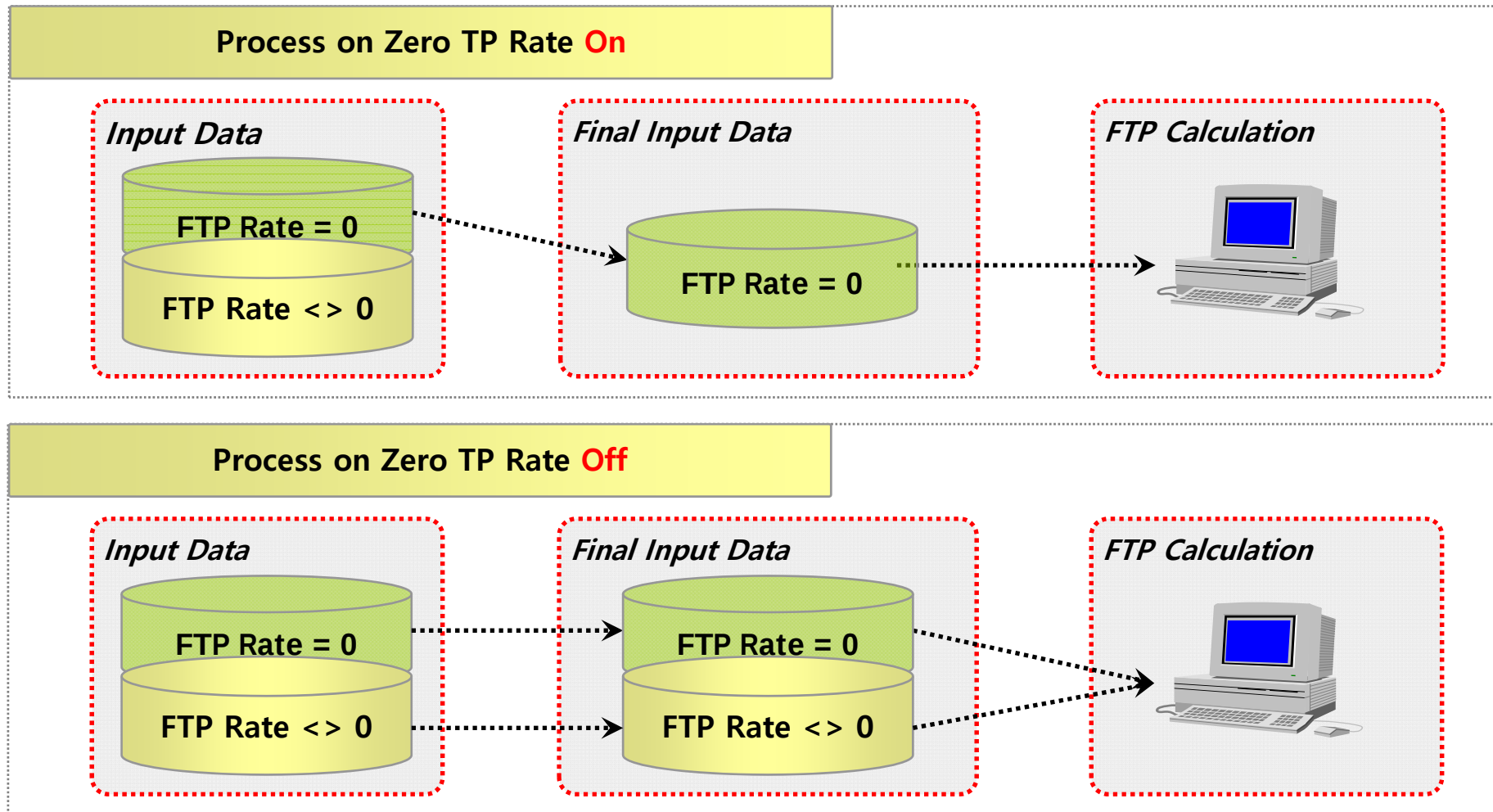
One is between Early Quotation Date and Origination Date

Another one between Early Quotation Date and Maturity Date



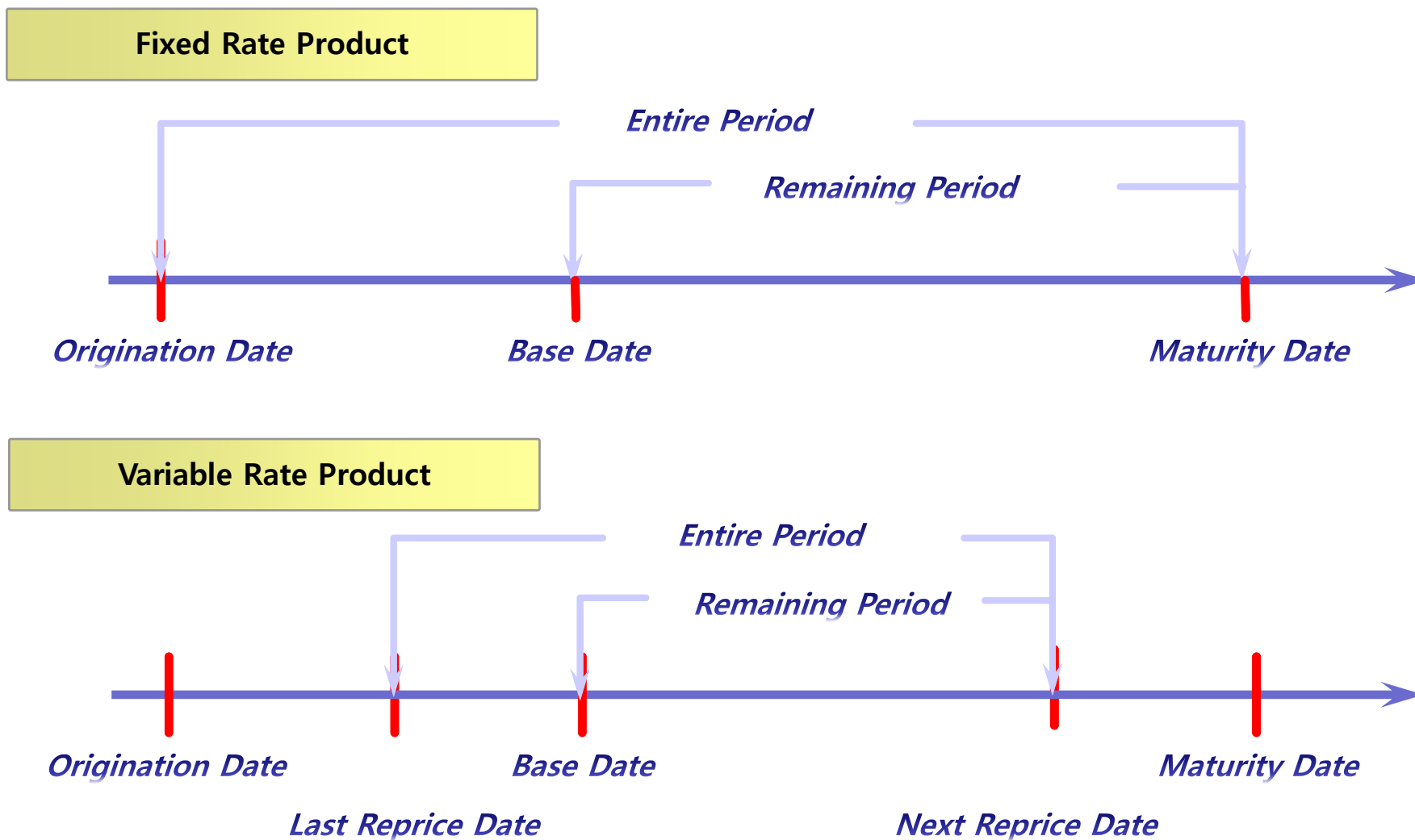
Amain for FTP – Process on Zero FTP Rate Option

❑ Process on Zero TP Rate



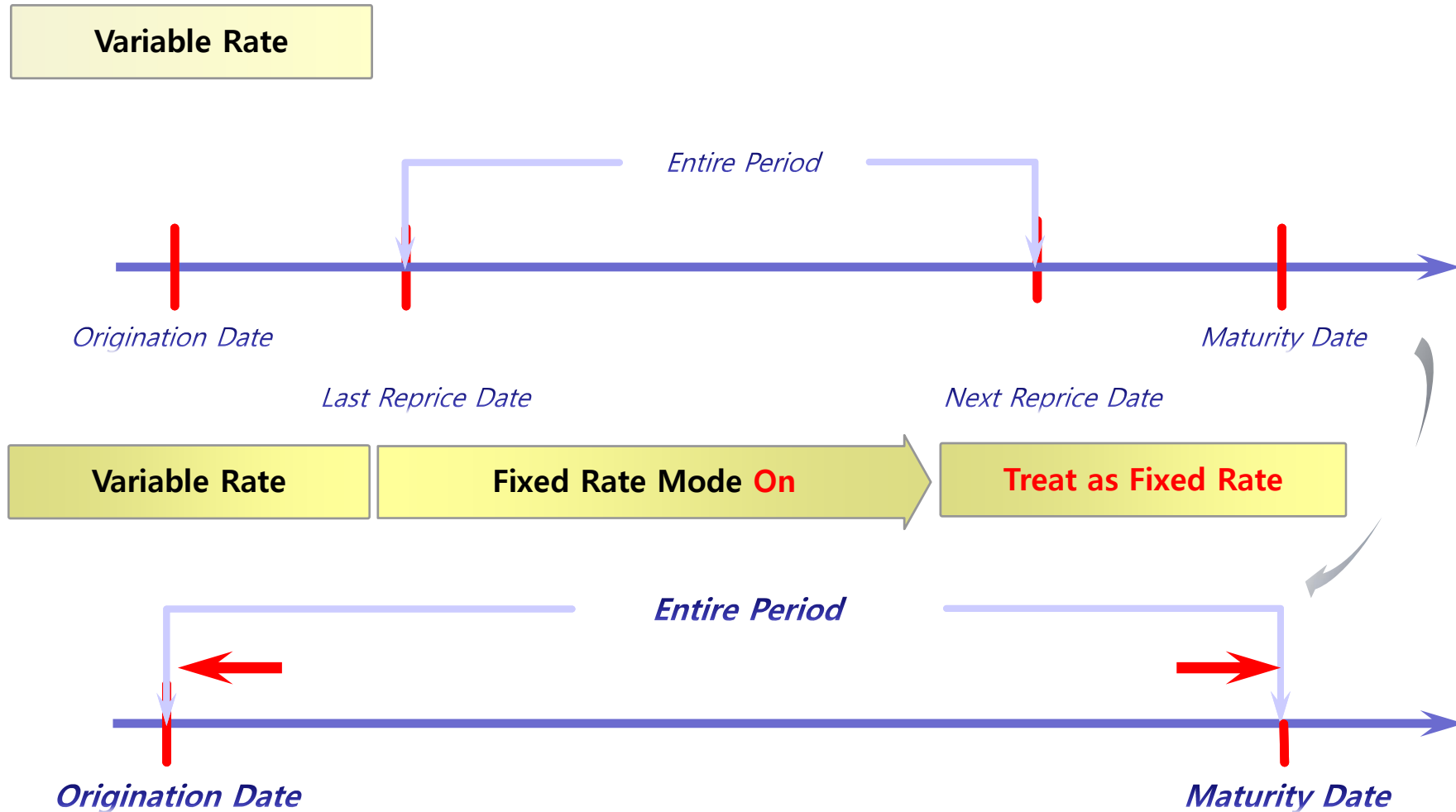
Amain for FTP – Entire / Remaining Period Mode

❑ Entire Period / Remaining Period



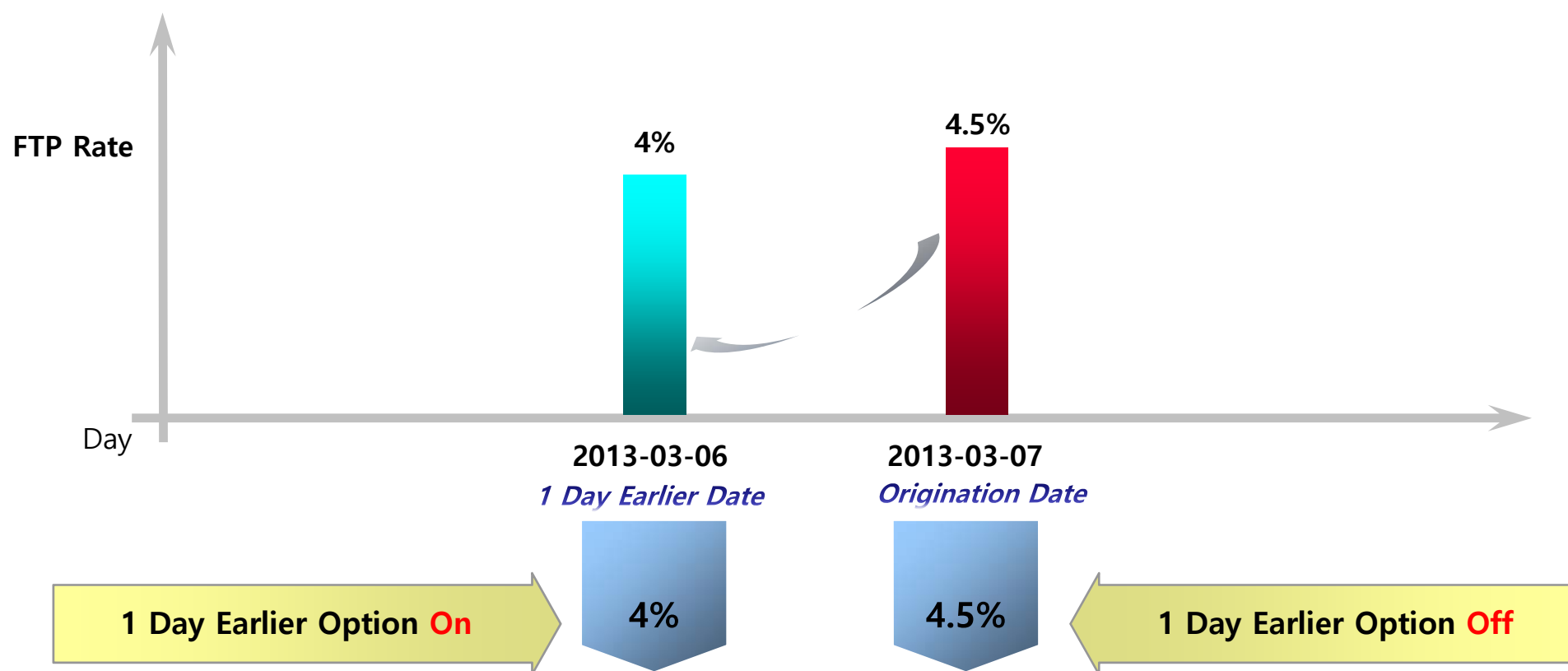
Amain for FTP – Fixed Rate Mode

❑ Fixed Rate Mode



Amain for FTP – 1 Day Earlier Quotation

- ❑ This option can be applied to Cashflow Method and Matched Term Method
: if Today's FTP Rate is defined by Yesterday' Market Rate, 1 Day Earlier option is not required.



Amain for FTP - Main FTP Methods

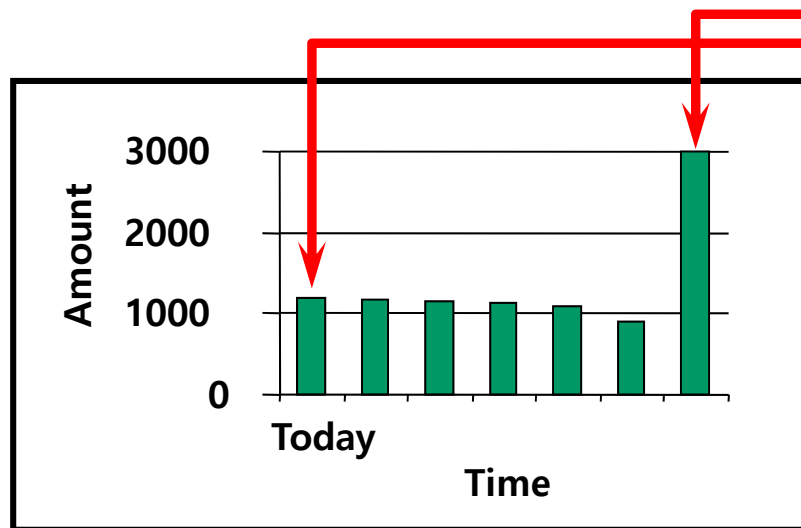
❑ Amain provides several FTP methods to meet user requirements as follows.

Weighted FTP	- FTP Method to quote multiple Rates for each cashflow and weight those Rates by each cashflow's term and market value
Weighted Term	- FTP Method to quote a Rate based on the duration generated from each cashflow
Matched Term	- FTP Method to quote a Rate based on the contract term or repricing term
Fixed Margin	- FTP Method to give fixed margin for each product
Average FTP	- FTP Method to calculate average of Rates based on specific Yield curve and specific period
Weighted Curve	- FTP Method to weight Rates on multiple term points on specific Yield curve by specific weight ratio
Fixed IRC & Spread	- FTP Method to quote a Rate on specific Yield curve and term and then put the spread on it

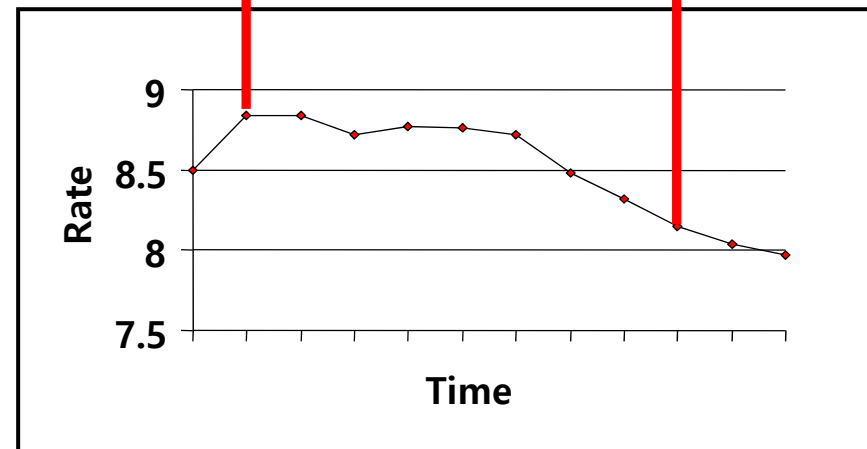
Amain for FTP - FTP Method

❑ Cash Flow - Weighted FTP

Associate each FTP Rate to each Cash Flow



Discounted Cash Flow for Loan



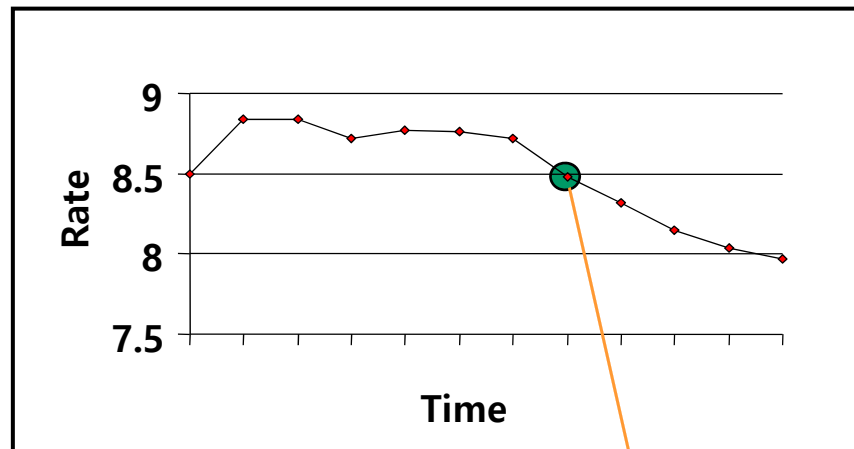
FTP Yield Curve

FTP Rate = 8.2314%

Weight FTP Rates by (Term * Present Value)

Amain for FTP - FTP Method

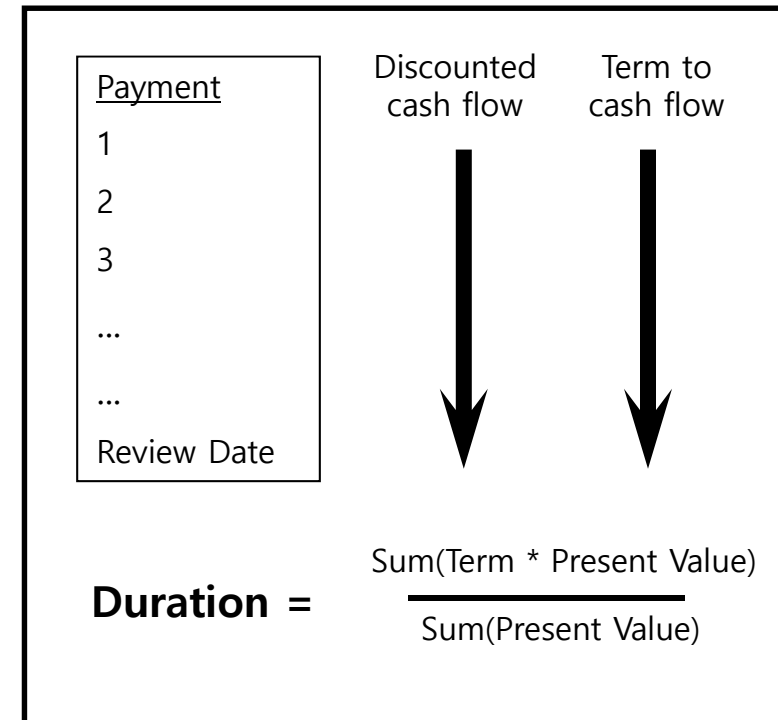
❑ Cash Flow – Weighted Term



FTP Yield Curve

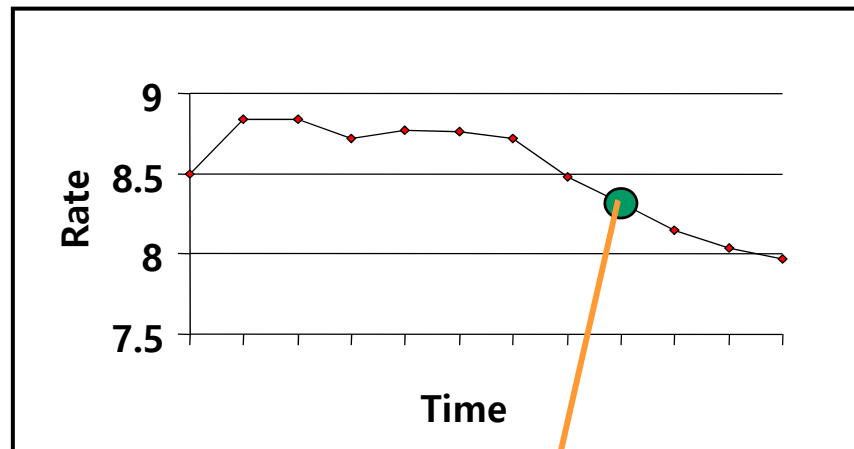
Duration = 45.38 Mons

FTP Rate = 8.2785%



Amain for FTP - FTP Method

❑ Non Cashflow - Matched Term



FTP Yield Curve

FTP Rate = 8.30%

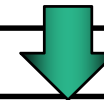
Adjustable Loan

Assumption :

As Of Date : 30/06/01

Last Reprice Date : 01/06/01

Next Reprice Date : 01/07/01

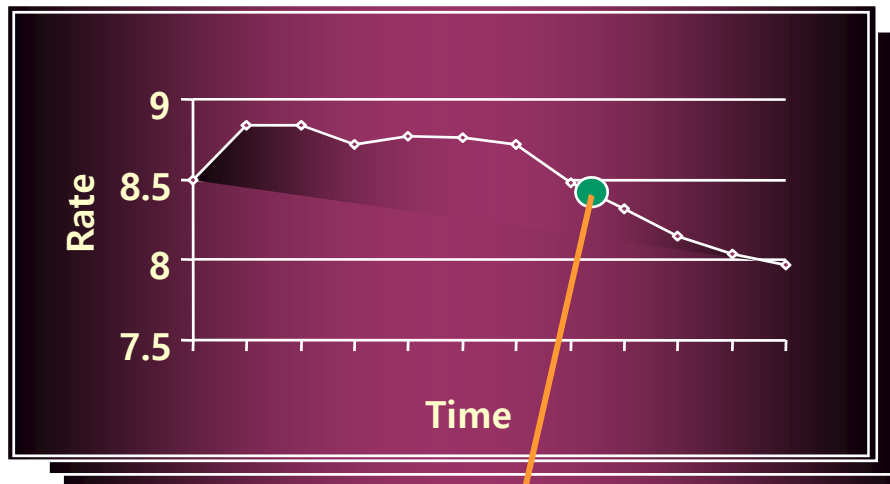


Reprice Term : 30 Days

Amain for FTP - FTP Method

- ❑ Non Cashflow – Average FTP

Rate Period : 31/12/00 ~ 30/06/01



FTP Yield Curves

FTP Rate = 8.52%

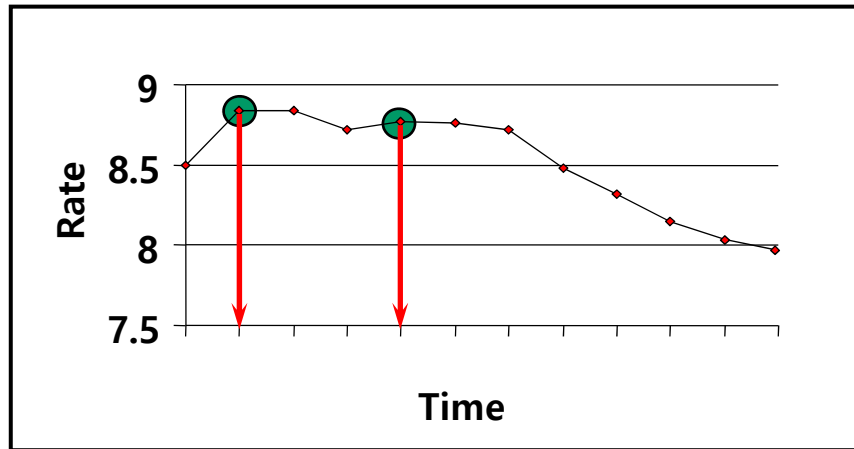
Check Account

Assumption :

Use 6 Month Moving Average
Of the 1 Year Rate

Amain for FTP - FTP Method

❑ Non Cashflow – Weighted Curve



FTP Yield Curve

Credit Cards – total \$2.5 million



Historically :

80% or \$2.0M at 30 Day

20% or \$0.5M at 12 Month

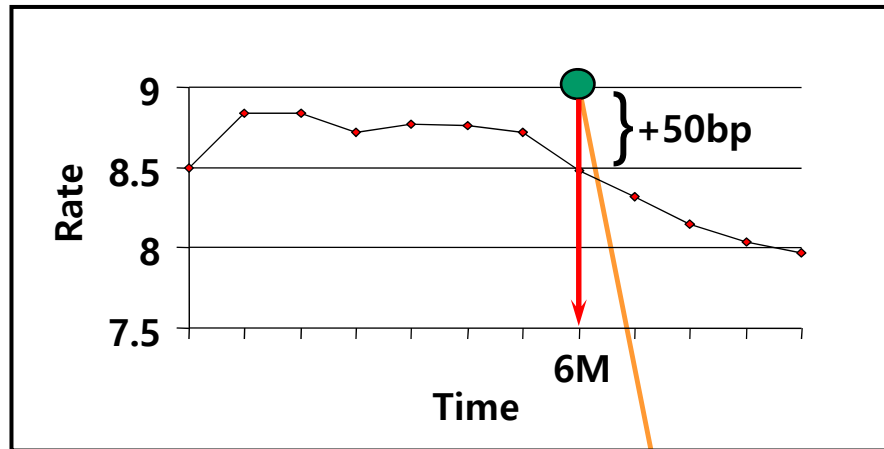
\$2.0 Million at : 8.53%

\$0.5 Million at : 8.00%

FTP Rate = 8.42 %

Amain for FTP - FTP Method

❑ Non Cashflow – Fixed IRC & Spread



FTP Yield Curve

FTP Rate = 8.99%

Savings Account

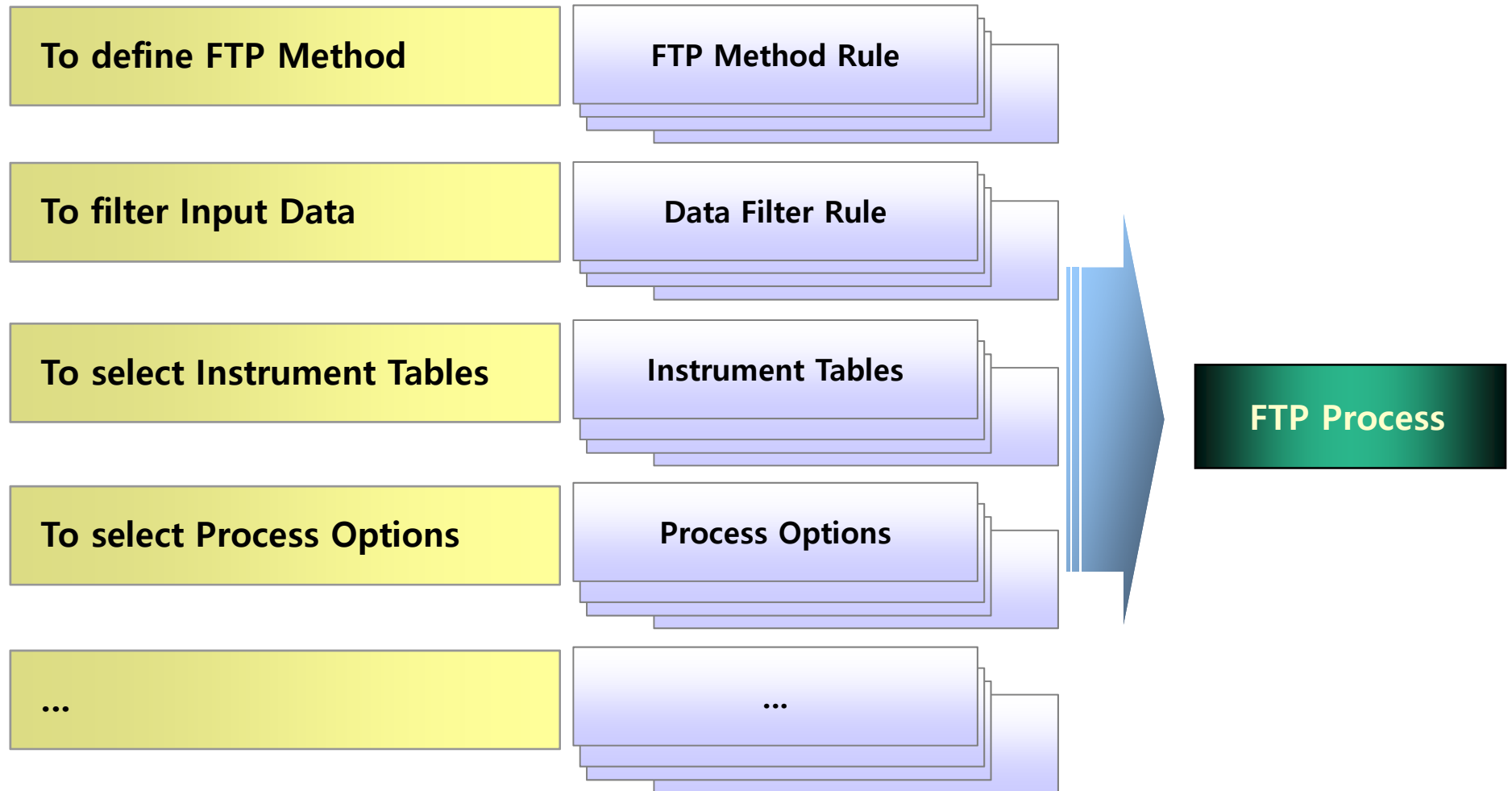
Originated 30/06/01



Assumption :

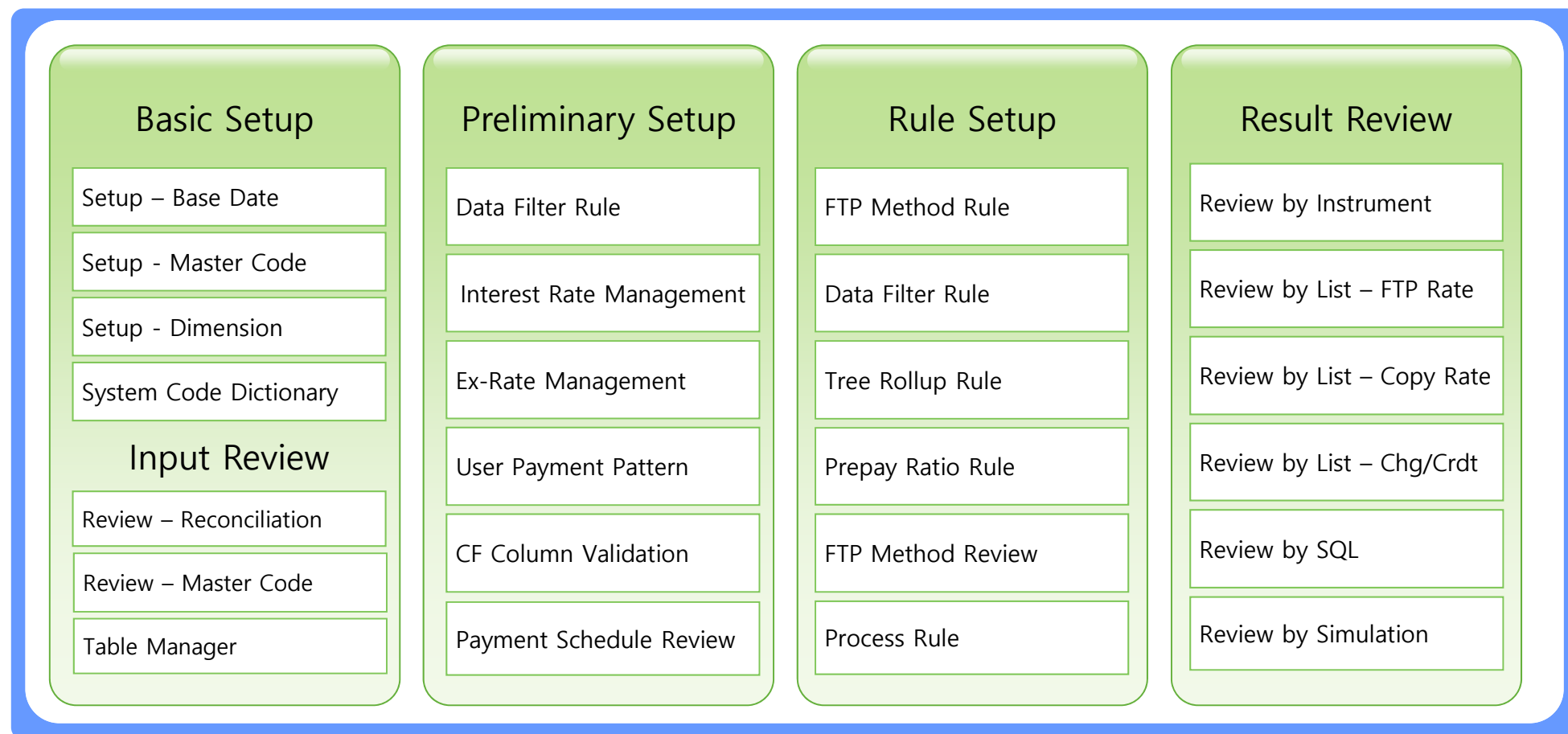
+50bp over the 6 Month Rate
At the Origination Date

Amain for FTP - Defining FTP Process



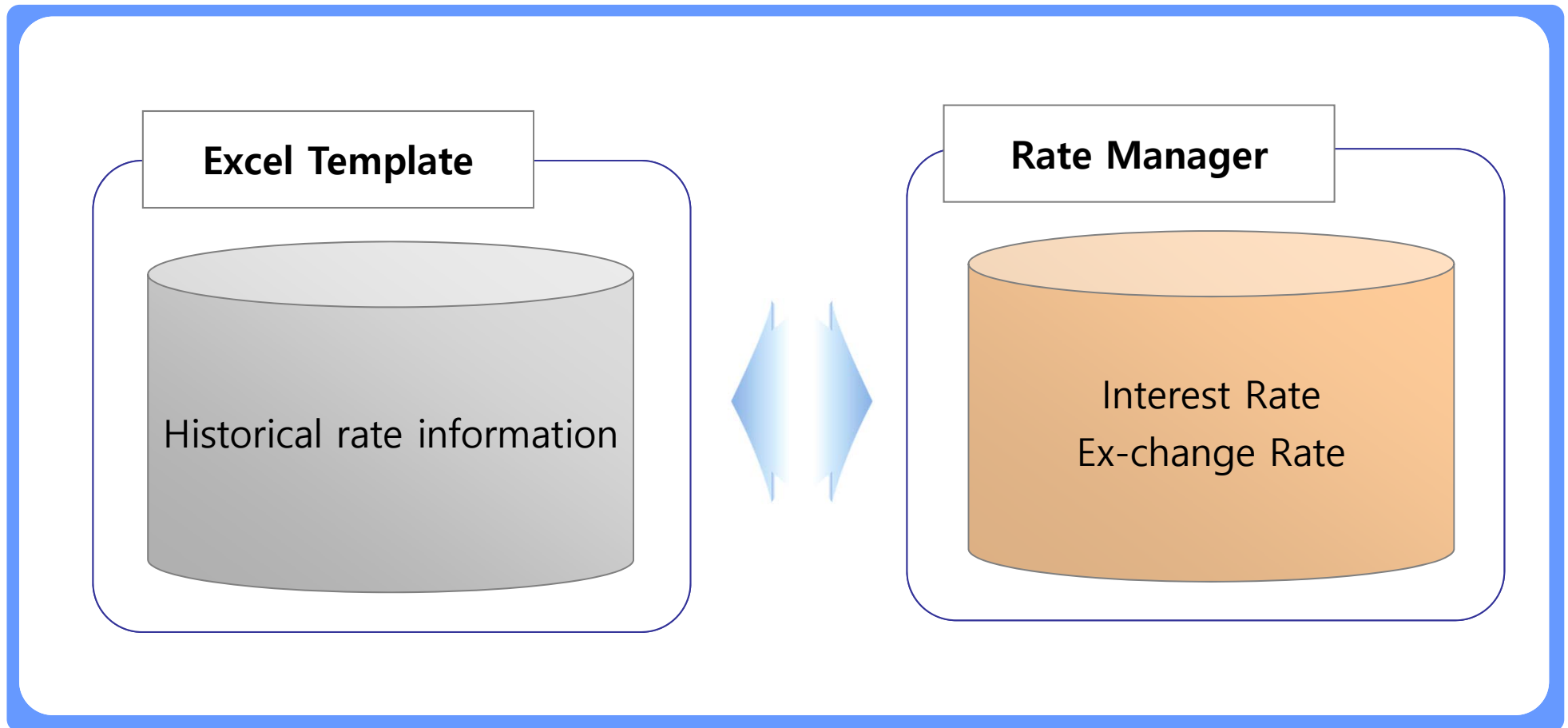
Amain for FTP – Menu Summary

❑ There are more than 25 menus in Amain for FTP as follows.



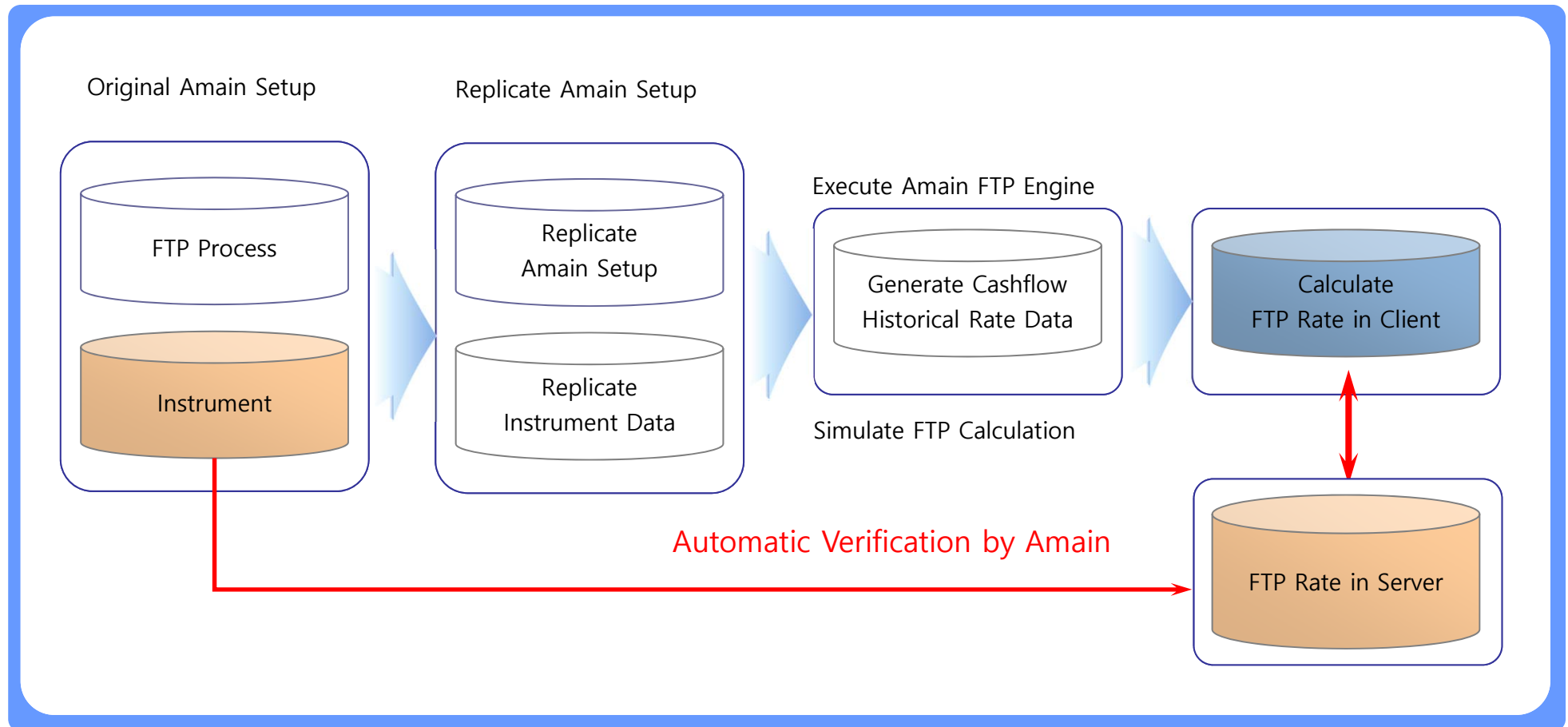
Amain for FTP - Upload Amain setup from Excel

- ❑ Historical Interest rates and Ex-change rates need to be loaded into related tables before Amain processing. Amain allows users to upload/download these information through Excel files.



Amain for FTP – FTP Rate Simulation in case of no Cashflow Log

- ❑ By providing a function to simulate FTP calculation logic in conjunction with Cashflow from FTP engine, User can compare the results from Amain Server and Amain Client to verify the FTP Result in case that there is no cashflow log.



Amain for FTP – FTP Rate Verification with Cashflow Log

- ❑ Amain for FTP shows all the information related to the target account such as main instrument columns and related Cashflow and Yield Curve information. Using these information User can explain or understand where the FTP rates come from.

Example

Term	Term(Day)	Int Rate
1D	1.00	6.0000
1M	30.42	6.5000
3M	91.25	7.0000
6M	182.50	7.5000
1Y	365.00	8.0000
3Y	1,095.00	8.5000
5Y	1,825.00	9.0000



Agenda

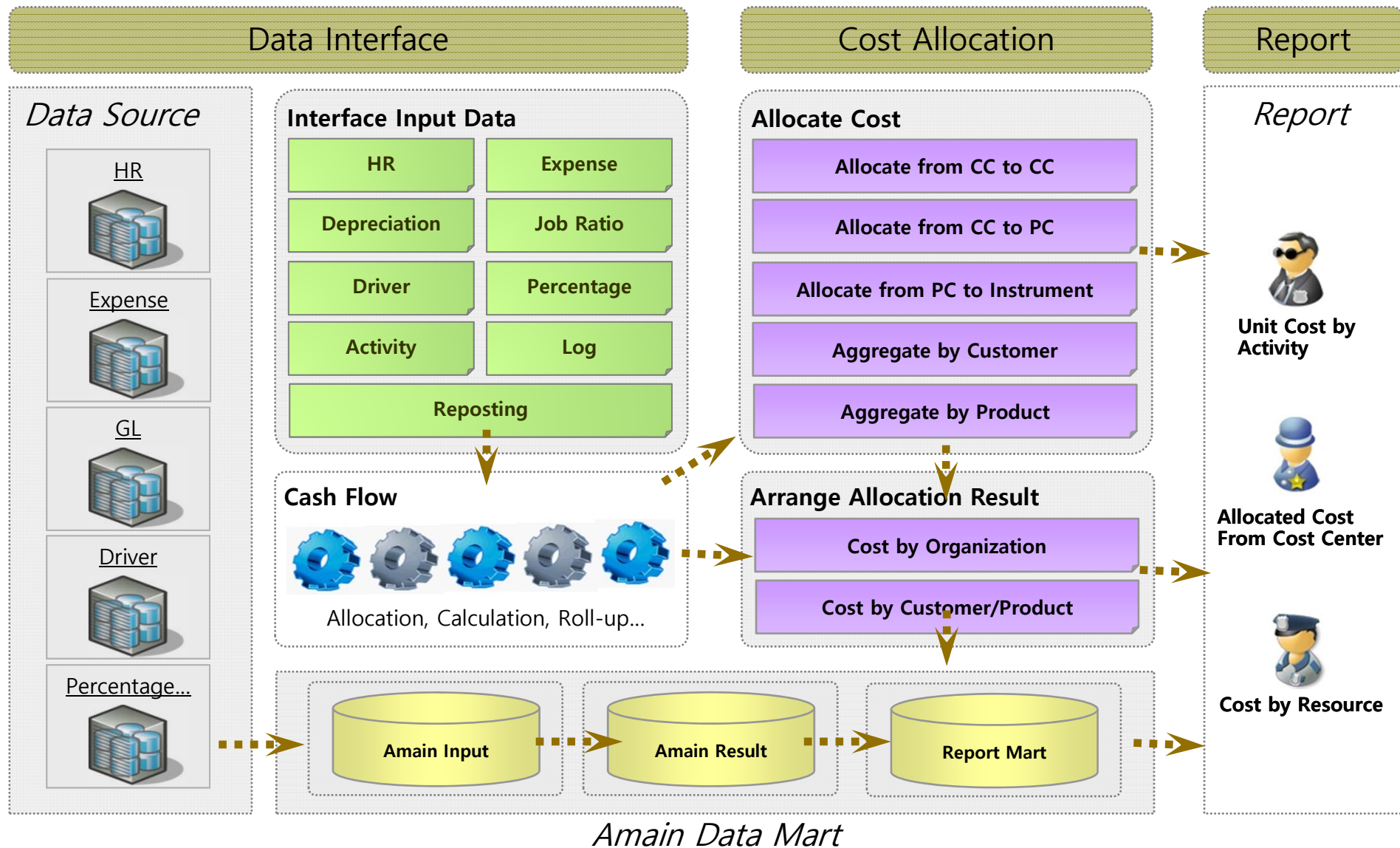
I. Amain for EPM

1. Introduction
2. Amain for FTP
3. Amain for PCA
4. Amain for JOB

- **Key Objectives**

- ✓ Provide useful information for decision making on cost
 - Cost reduction, Process improvement, Resource utilization, Branch Efficiency
 - Special cost would be adjusted to make it understandable (ex. Special Bonus)
- ✓ Go-through the cost items in detail to find reasonable allocation logic
 - Categorize the cost items by checking the nature of cost
 - Identify the who is the user and what is the relationship between cost and user
 - Check the nature of cost items to find proper drivers and target of allocation
- ✓ Drive to change the indirect cost to direct cost if it is traceable
 - If a indirect cost is traceable to know who is the user, then It could be direct cost.

Amain for PCA – Profit & Cost Analysis System Structure



Amain for PCA – Components of Allocation Rule

Source
(What Amount)

Driver
(Which Driver)

Sender
(From)

Receiver (How)
(To)

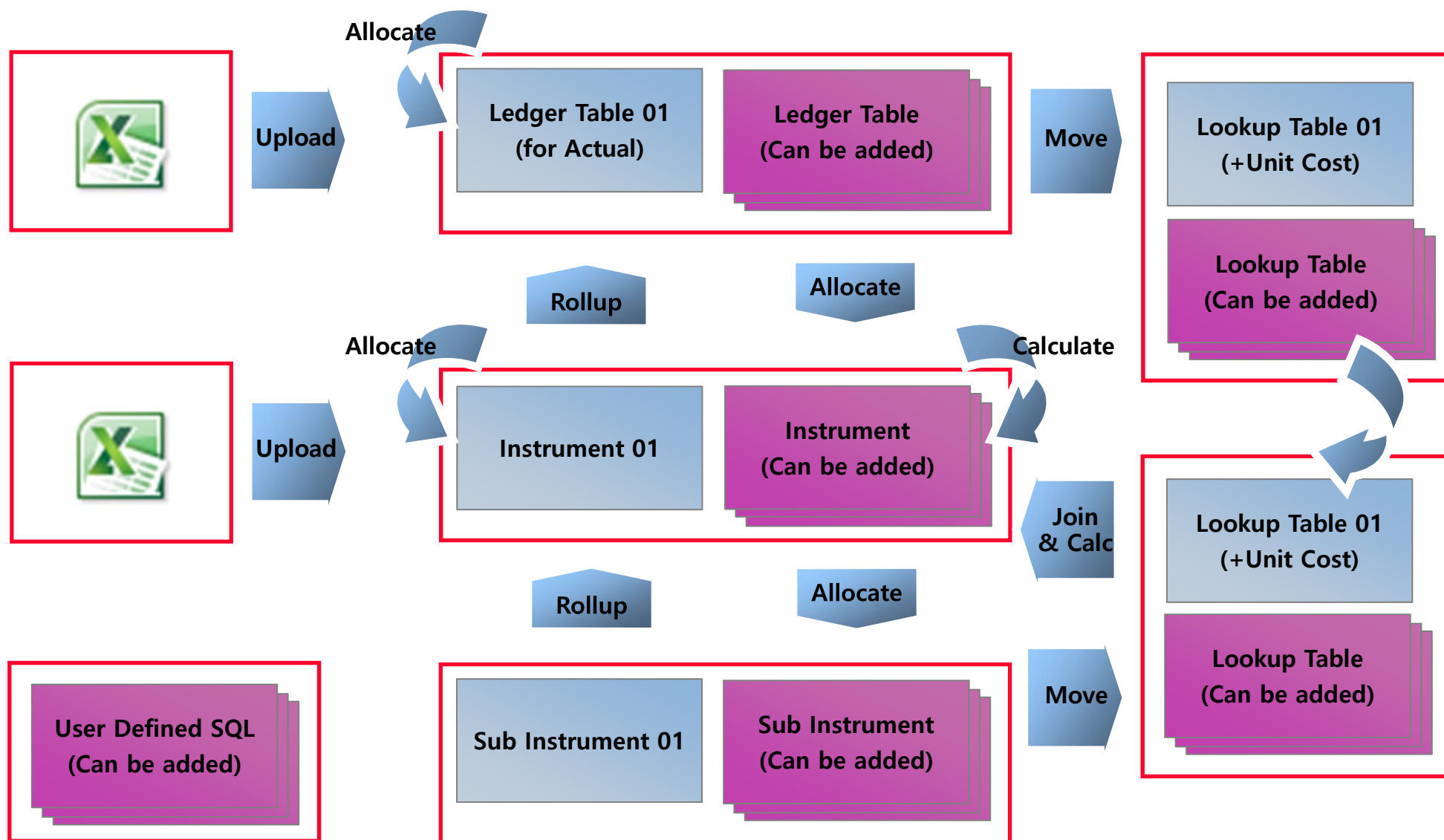
Amain for PCA – Dimension Design

- ❑ There are 11 seeded dimensions in Amain system for Allocations.
- ❑ Dimension can be added/removed based on user requirements
 - Dimensions will be used for Allocation process and Reports.

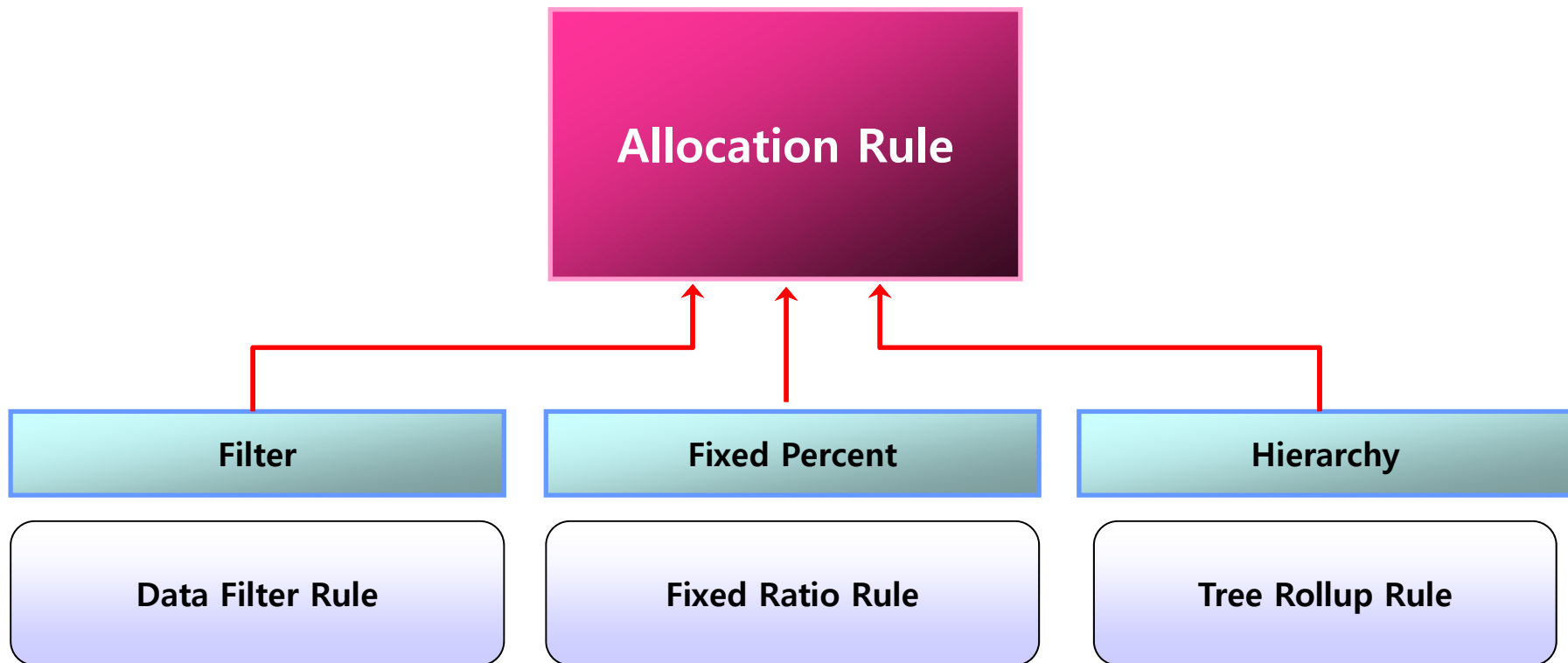
Dimension	Desc
DIM_CLASS	Data Class
DIM_ORG	Org Unit
DIM_SEG	Segment
DIM_PL	Profit & Loss (GL)
DIM_BS	Balance Sheet (GL)
DIM_PROD	Product

Dimension	Desc
DIM_ACT	Activity
DIM_DRV	Driver
DIM_SRC_ORG	Source org Unit
DIM_MID_ORG	Medium Org Unit
DIM_WAVE	(For Internal Use)

Amain for PCA – Amain Allocation Function Map



Amain for PCA – Components of Allocation Rule



Amain for PCA - Main Allocation Types

❑ Amain provides main allocation types to meet user requirements as follows.

Excel → Ledger Table	- Upload Excel Data to ledger table
Instrument → Ledger Table	- Aggregate data from instrument to ledger table
Ledger → Ledger Table : Expense Shift	- Shift expense from A to B in ledger table
Ledger → Ledger Table : Fixed Percent Allocation	- Allocate from ledger to ledger table based on pre-defined fixed percent
Ledger → Ledger Table : Proportional Percentage Allocation	- Allocate from ledger to ledger table based on driver data (% of Distr = % of Driver / % of Distr Leaf = Join with Driver)
Ledger → Ledger Table : Calculate Unit Cost	- Calculate unit cost based on the operation of (cost = expense / frequency)
Ledger → Lookup Table	- Move data from ledger table to lookup table (ex : unit cost table)

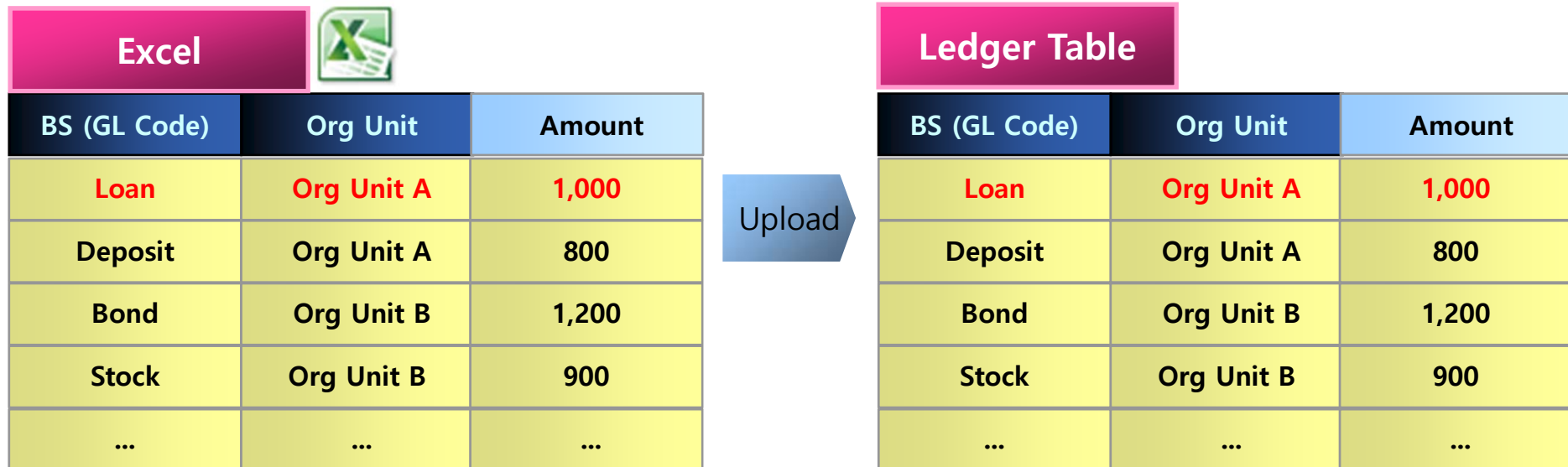
Amain for PCA - Main Allocation Types

❑ Amain provides main allocation types to meet user requirements as follows.

Ledger → Instrument	- Allocate data from ledger to instrument table
Instrument by Lookup	- Update instrument by join with lookup table (ex : cost = frequency * unit cost from lookup table)
Instrument -> Instrument : Allocation	- Allocate data from instrument to instrument table (ex : fee by customer → each instrument)
Instrument -> Instrument : Calculation	- Update instrument by formula (ex : total fee = fee 01 + fee 02 + fee 03)
Instrument -> Instrument : Aggregation	- Aggregate data from instrument to instrument table (ex : cost by instrument & activity → cost by instrument)
Any SQL Statement	- SQL defined for any process to meet user requirements

Amain for PCA – Allocation Type

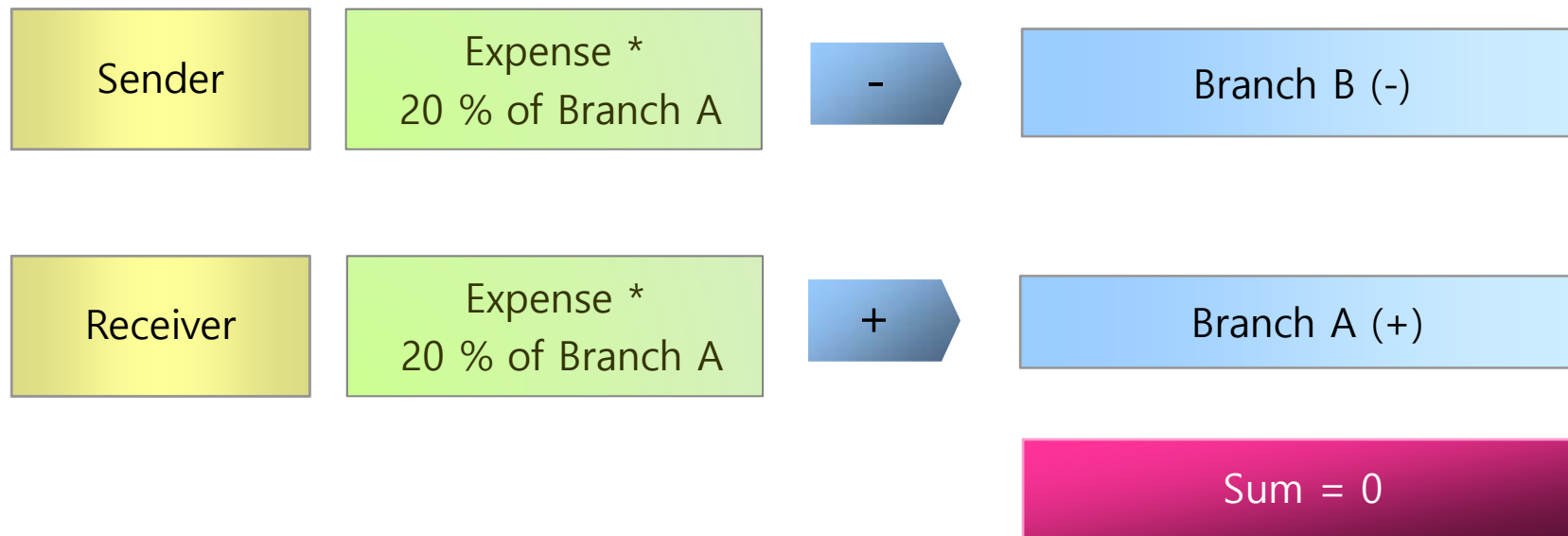
❑ Excel to Ledger Table : Data Upload



- Example:
 - Load external driver to Ledger Table

Amain for PCA – Allocation Type

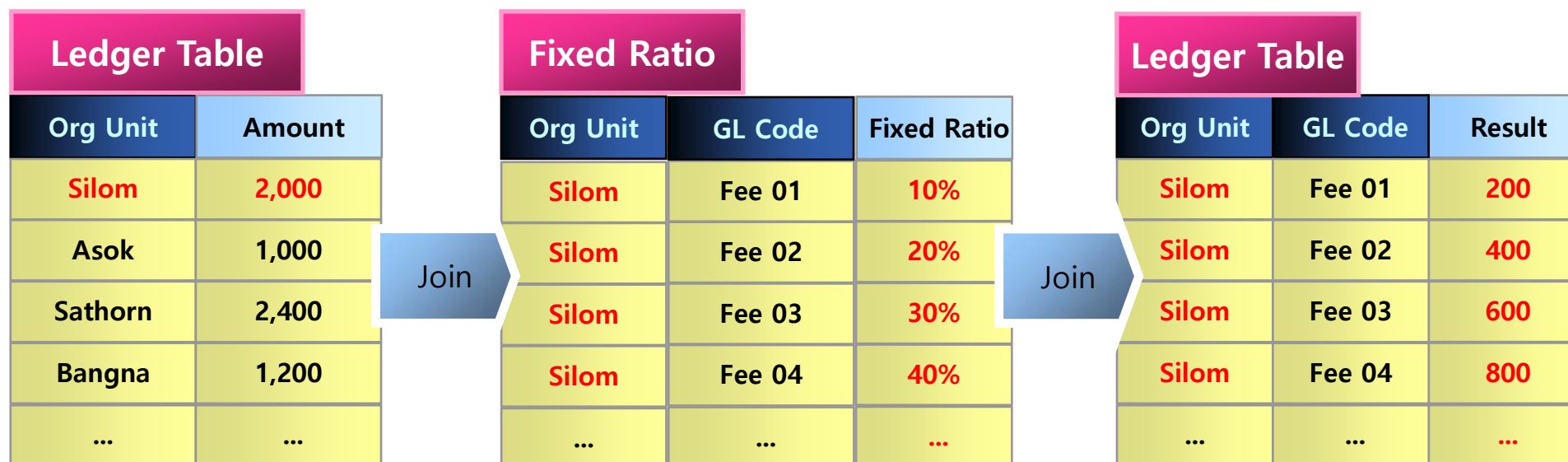
❑ Ledger to Ledger Table : Expense Shift



- Example:
 - Shift (Expense * 20%) from Branch A to Branch B

Amain for PCA – Allocation Type

❑ Ledger to Ledger Table : Allocation – Fixed Ratio



• Example :

- Allocate Treasury expense: 60% to Acquisition, 40% to Service
- Allocate Retail Collection expense to Consumer Collection Dept 1-4 equally

Amain for PCA – Allocation Type

❑ Ledger to Ledger Table : Allocation – Fixed Ratio

* Source Dimension [0~3]

Dim 01	Dim 02	Dim 03
O	O	O
O	O	O
O	O	-
O	O	-
O	-	-
O	-	-
-	-	-
-	-	-



* Interim Dimension [0~1]

Dim
O
-
O
-
O
-
O
-



* Target Dimension [1]

Dim
O
O
O
O
O
O
O
O

- There are 8 kinds of Pattern when setup Fixed Ratio Rule
- Max Source Dimension [3], Max Interim Dimension [1], Max Target Dimension [1]
- Interim Dimension will be used for 2 level allocation in a single allocation process

Amain for PCA – Allocation Type

❑ Ledger to Ledger Table : Allocation by Proportional Percentage(1) - % of Driver

Source Item	Org Unit	Product	Expense	
	IT Dept	-	100	
	General Dept	-	200	
Driver Item	Org Unit	Product	End Bal	Expense * Ratio
	Branch A	-	40	$300 * 100 / (100+80)$
		-	60	
	Branch B	-	30	$300 * 80 / (100+80)$
		-	50	
	% of Driver			

Amain for PCA – Allocation Type

❑ Ledger to Ledger Table : Allocation by Proportional Percentage(2) - % of Driver

Source Item	Org Unit	Product	Expense	
	IT Dept	-	100	
	General Dept	-	200	
Driver Item	Org Unit	Product	End Bal	Expense * Ratio
	Branch A	Product 1	40	$300 * 40 / (180)$
		Product 2	60	$300 * 60 / (180)$
	Branch B	Product 1	30	$300 * 30 / (180)$
		Product 2	50	$300 * 50 / (180)$
	% of Driver	% of Driver		

Amain for PCA – Allocation Type

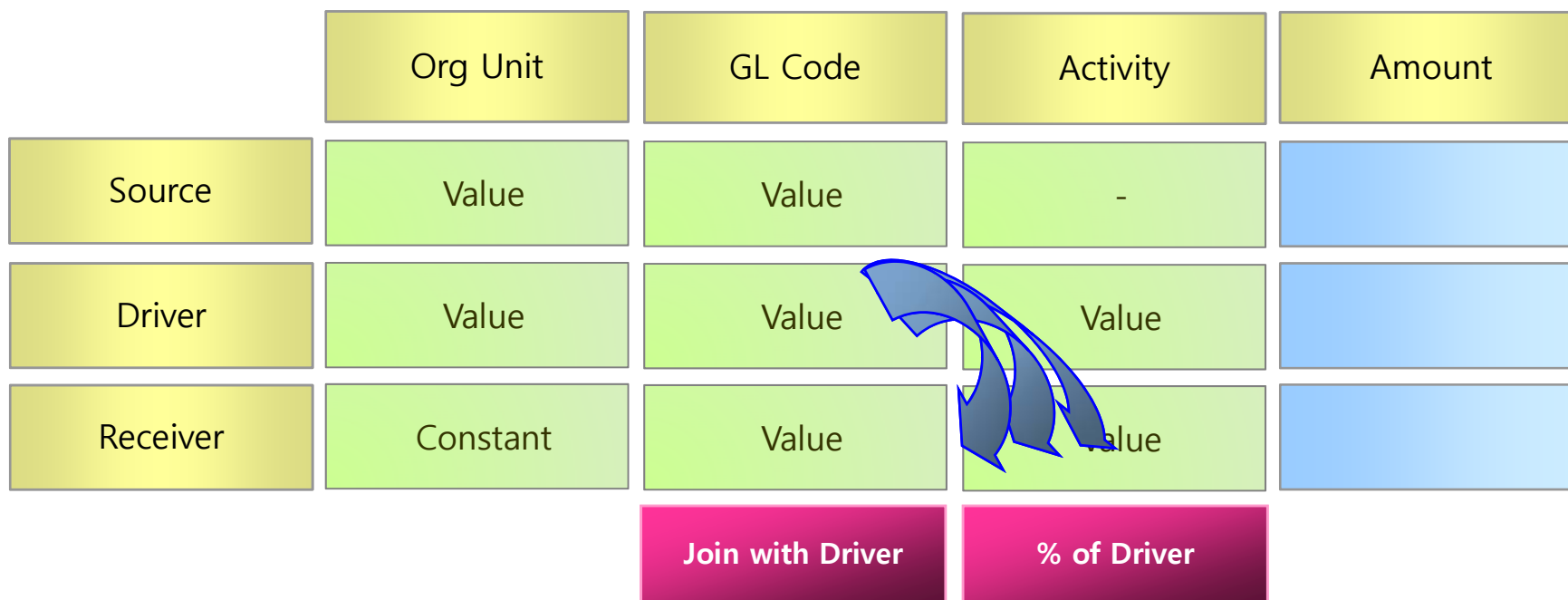
❑ Ledger to Ledger Table : Allocation by Proportional Percentage(3) – Join with Driver

Source Item	Org Unit	Product	Expense
	Branch A	-	100
	Branch B	-	200

Driver Item	Org Unit	Product	End Bal	Expense * Ratio
	Branch A	Product 1	40	$100 * 40 / (40+60)$
		Product 2	60	$100 * 60 / (40+60)$
	Branch B	Product 1	30	$200 * 30 / (30+50)$
		Product 2	50	$200 * 50 / (30+50)$
	Join with Driver		% of Driver	

Amain for PCA – Allocation Type

❑ Ledger to Ledger Table : Allocation by Proportional Percentage – How to define Allocation Rule



- If you can simulate your allocation rule using above picture, then you can get to know how to define allocation rule.
- The starting point of arrow will be <Join with Driver>, the ending point of arrow will be <% of Driver>

Amain for PCA – Allocation Type

❑ Ledger to Ledger Table : Group Operation

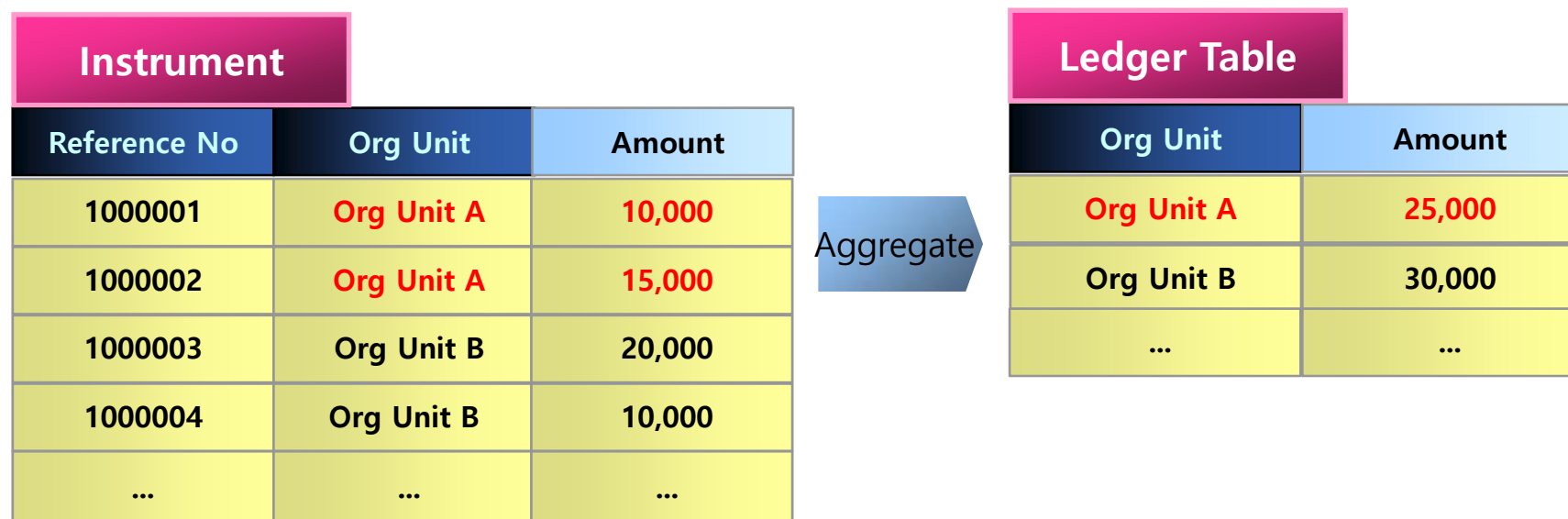
Ledger Table			Ledger Table			Ledger Table		
Activity	Org Unit	Expense	Activity	Org Unit	Frequency	Activity	Org Unit	Unit Cost
Activity A	Silom	1,000	Activity A	Silom	100	Activity A	Silom	10
Activity B	Silom	800	Activity B	Silom	40	Activity B	Silom	20
Activity A	Asok	1,200	Activity A	Asok	100	Activity A	Asok	12
Activity B	Asok	900	Activity B	Asok	30	Activity B	Asok	30
...	...	...	...	...	...	...	...	...

- Example :

- Calculate Unit cost by operation of (unit cost = expense / frequency)
- Group Operation : *, / , +, -

Amain for PCA – Allocation Type

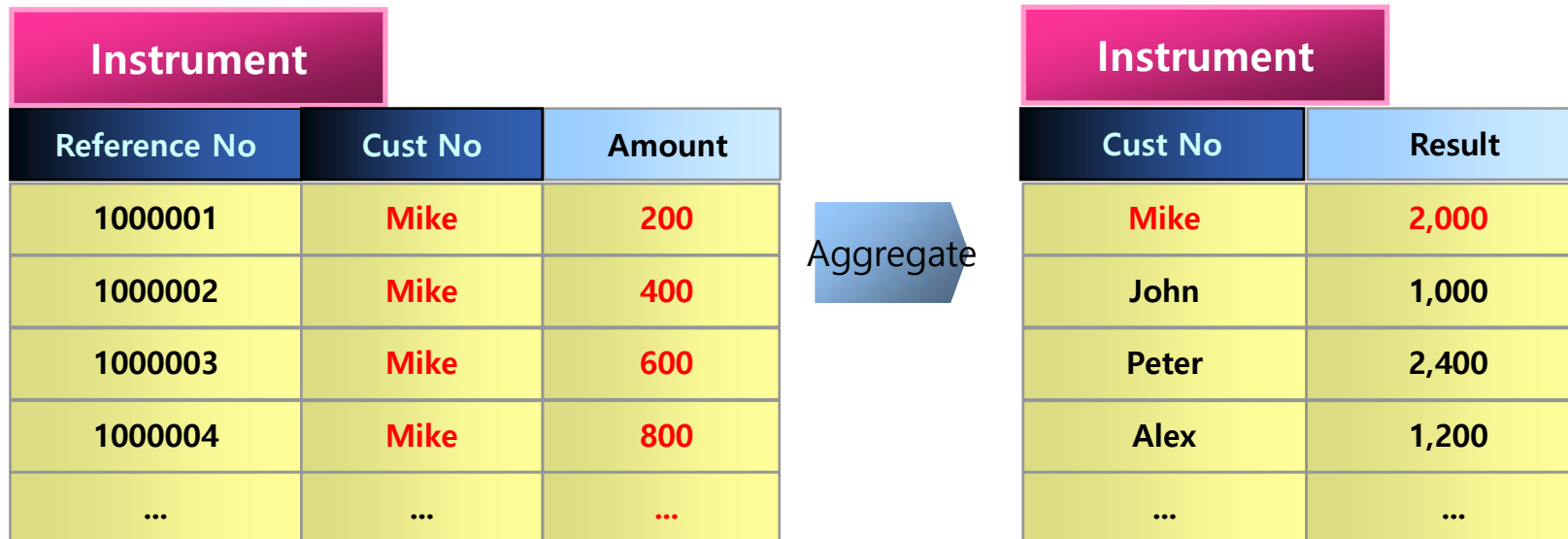
- ❑ Data by Aggregation : Aggregate from Instrument to Ledger Table



- Example :
 - Aggregate driver amount from instrument and post to Ledger table to use in further allocation.
 - Summarize Fee (Allocation + TXN fee) from instrument to Ledger table.

Amain for PCA – Allocation Type

- ❑ Data by Aggregation : Aggregate from Instrument to Instrument Table



- Example :
 - Update Instrument table by aggregating amount from another Instrument table by any dimension.

Amain for PCA – Allocation Type

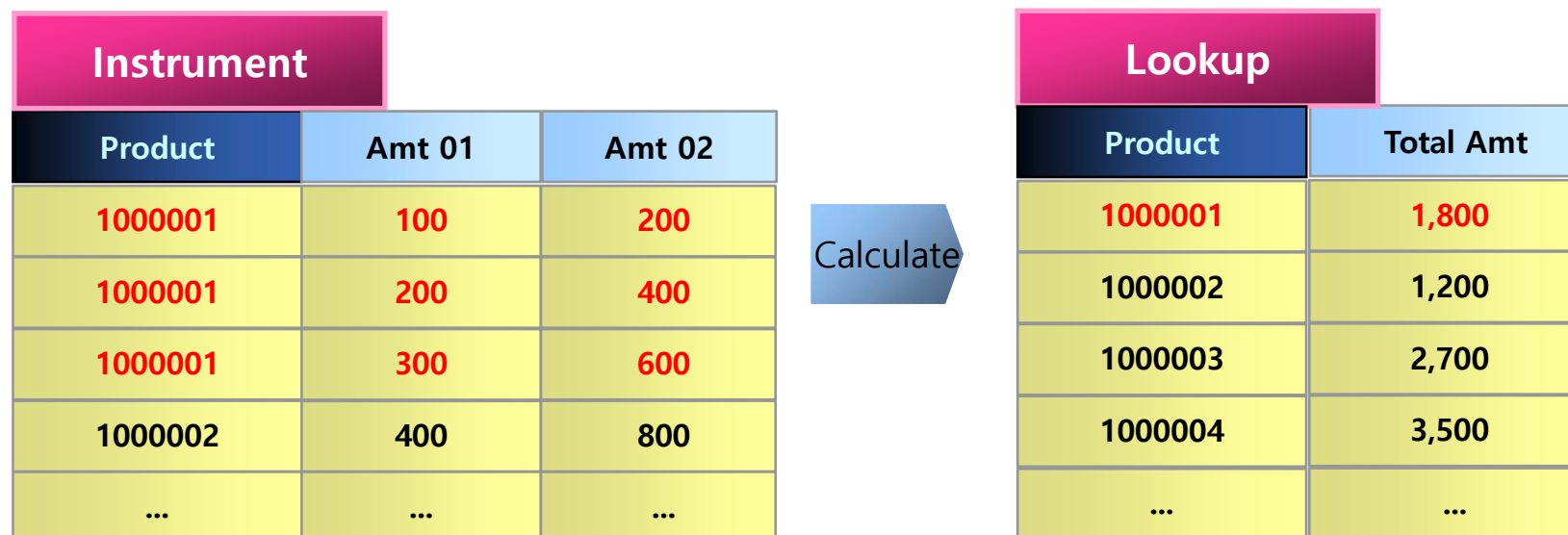
- ❑ Data by Aggregation : Aggregate/Calculate from Instrument to Instrument Table

Instrument					Instrument	
Reference No	Fee 01	Fee 02			Reference No	Total Fee
1000001	100	200	Calculate		1000001	300 (=100+200)
1000002	200	400			1000002	600
1000003	300	600			1000003	900
1000004	400	800			1000004	1,200
...	...	...			...	...

- Example :
 - Update Instrument table by operation (*, /, +, -) on multiple columns in Instrument table.

Amain for PCA – Allocation Type

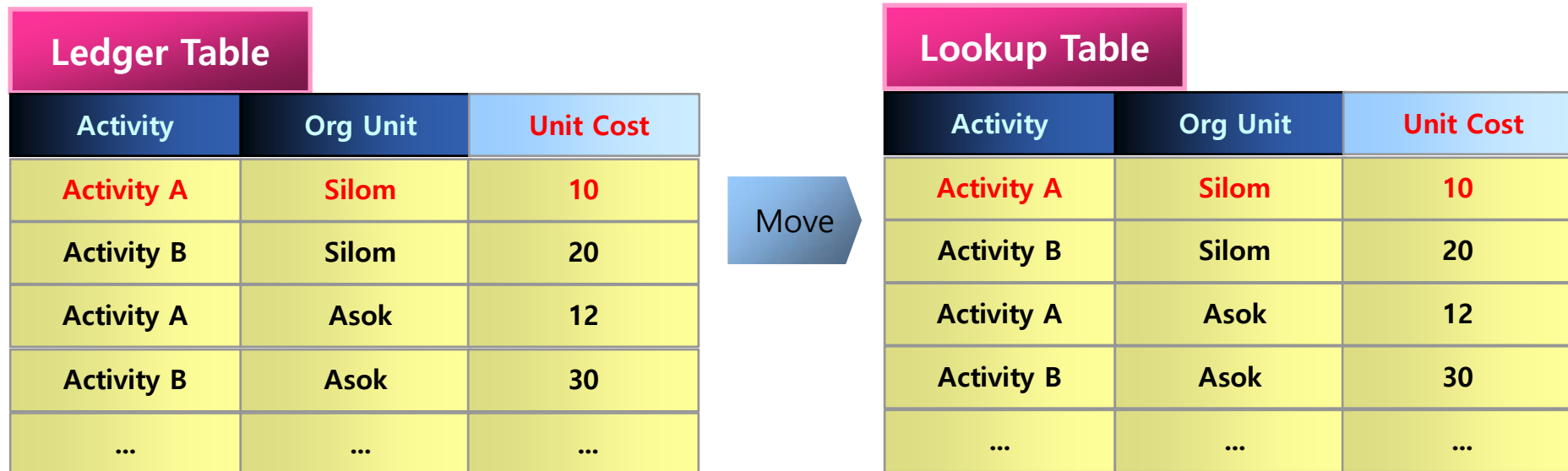
- ❑ Data by Aggregation : Aggregate/Calculate from Instrument to Lookup Table



- Example :
 - Insert data to Lookup table by operation (*, /, +, -) or group function on multiple columns in Instrument table.

Amain for PCA – Allocation Type

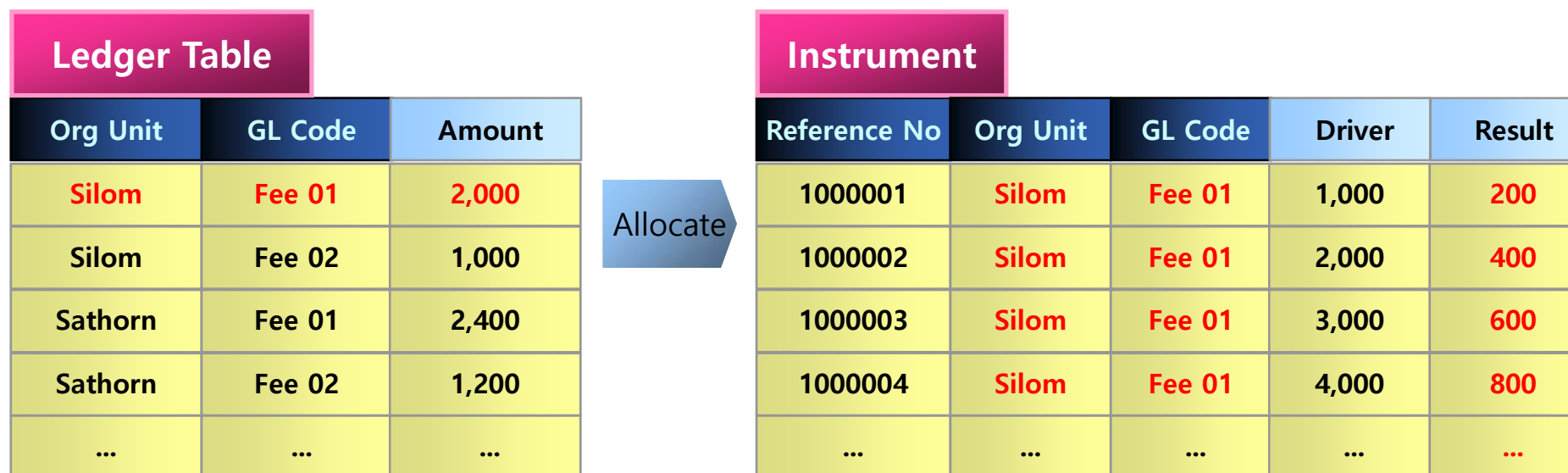
- ❑ Data by Aggregation : Move from Ledger to Lookup Table



- Example :
 - Move Unit Cost from Ledger table to Unit Cost table

Amain for PCA – Allocation Type

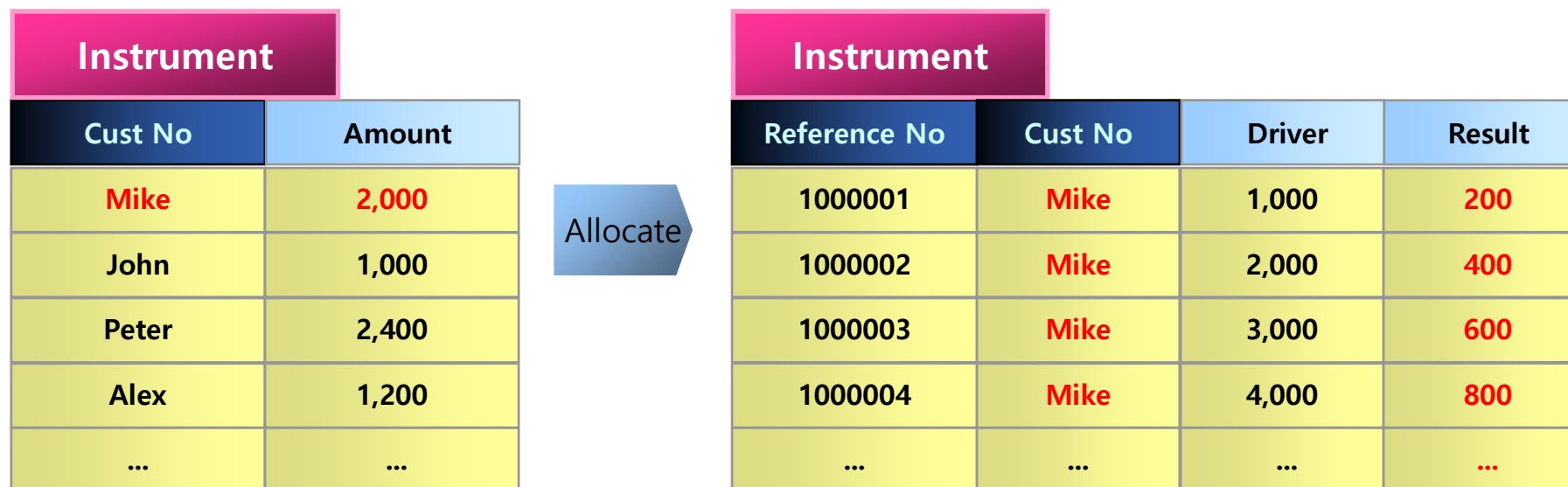
- ❑ Data by Allocation : Allocate from Ledger to Instrument Table



- Example :
 - Allocate Fee amount from Ledger table to Instrument table.

Amain for PCA – Allocation Type

- ❑ Data by Allocation : Allocate from Instrument to Instrument Table



- Example :
 - Allocate Fee by customer to each Instruments under same customer.

Amain for PCA – Allocation Type

❑ Data by Lookup : Update Instrument by Lookup Table

Instrument						
Org_Year	Maturity	Liquidity Prem	Activity	Org Unit	Activity Freq	Activity Cost
2012	3Y	0.5%	Activity A	Silom	7	70 (=7*10)
2013	5Y	0.2%	Activity B	Silom	5	100 (=5*20)

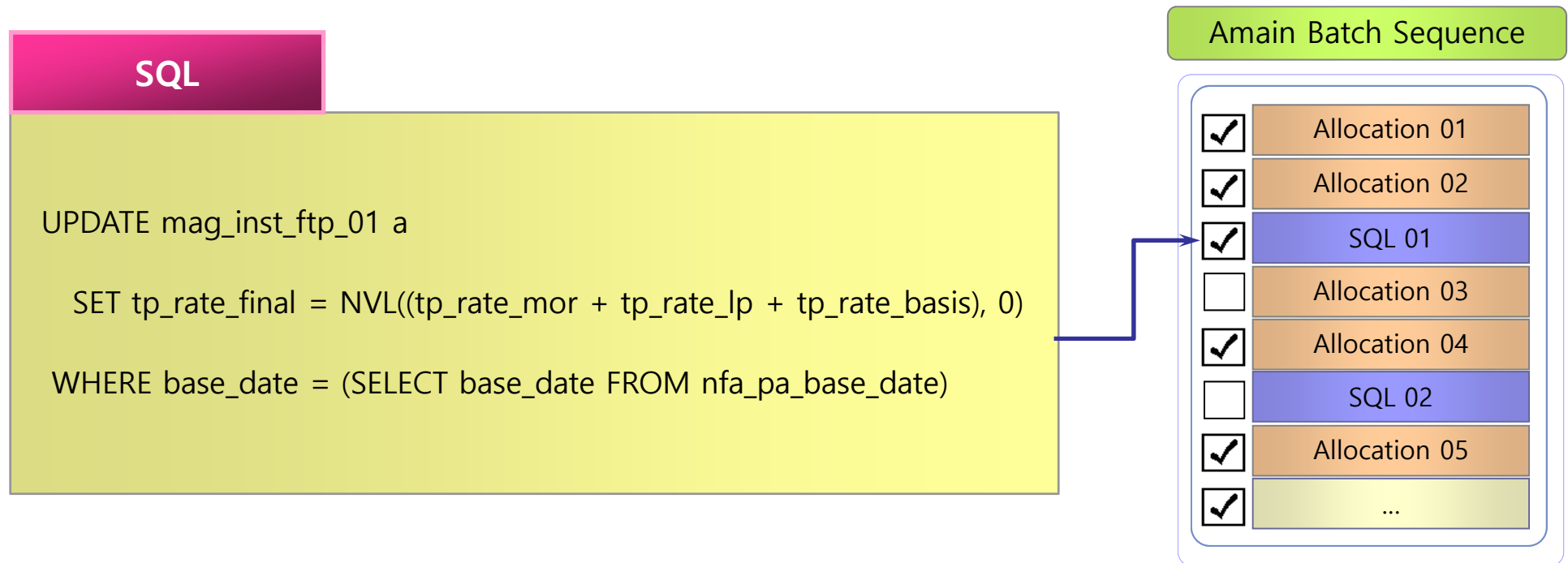
Liq Prem			Lookup
Org_Year	Maturity	Return Value	
2012	3Y	0.5%	
2013	5Y	0.2%	

Unit Cost			Lookup
Activity	Org Unit	Return Value	
Activity A	Silom	10	
Activity B	Silom	20	

- Example :
 - Update multiple columns in Instrument table by joining with multiple lookup tables in a single allocation rule.

Amain for PCA – Allocation Type

- ❑ Any SQL Statement



- Any SQL can be a Amain process which means it can be executed in Amain batch sequence with another Allocations or Processes.
- Any Hint or tuning approach can be applied to SQL Statement.

Amain for PCA – Sub Component : Fixed Ratio Rule

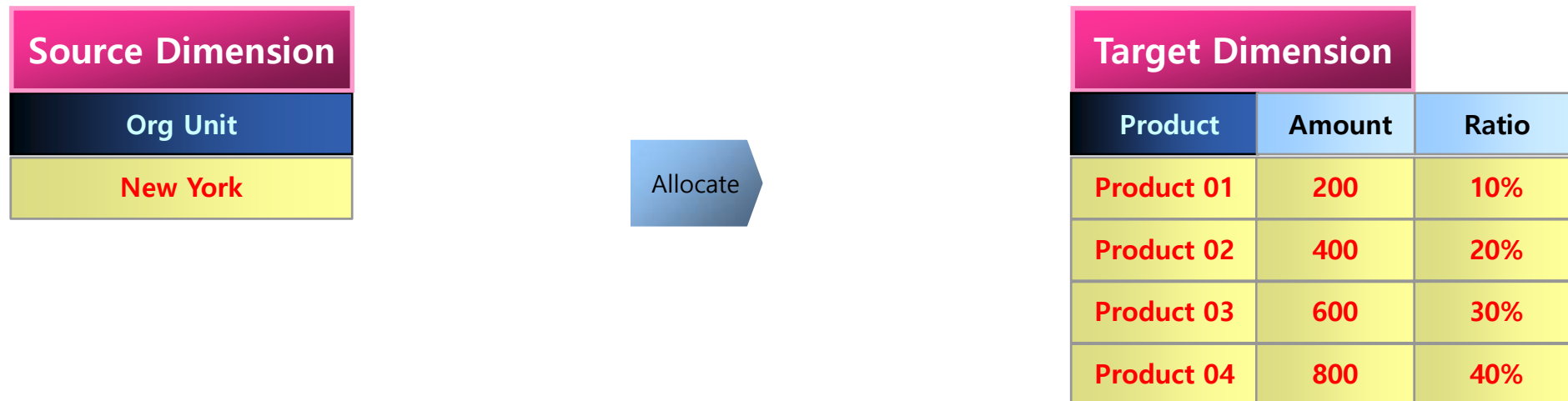
- ❑ Fixed Ratio Rule without [Convert to Ratio] Option



- Number of Source Dimension : [0 ~ 3] dimensions.
- Number of Interim Dimension : [0 ~ 1] dimension.
- Number of Target Dimension : [1] dimension.

Amain for PCA – Sub Component : Fixed Ratio Rule

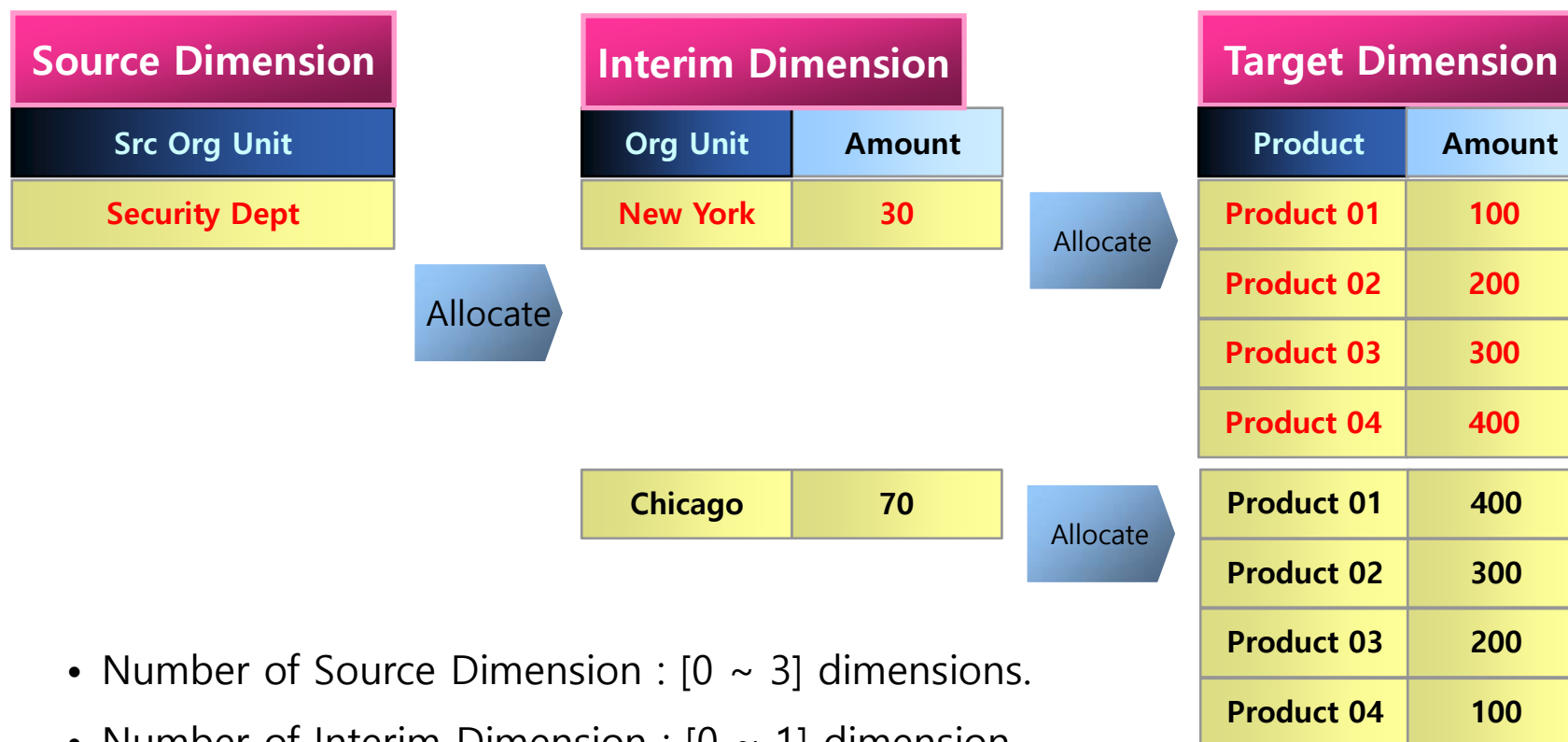
- ❑ Fixed Ratio Rule with [Convert to Ratio] Option



- Number of Source Dimension : [0 ~ 3] dimensions.
- Number of Interim Dimension : [0 ~ 1] dimension.
- Number of Target Dimension : [1] dimension.

Amain for PCA – Sub Component : Fixed Ratio Rule

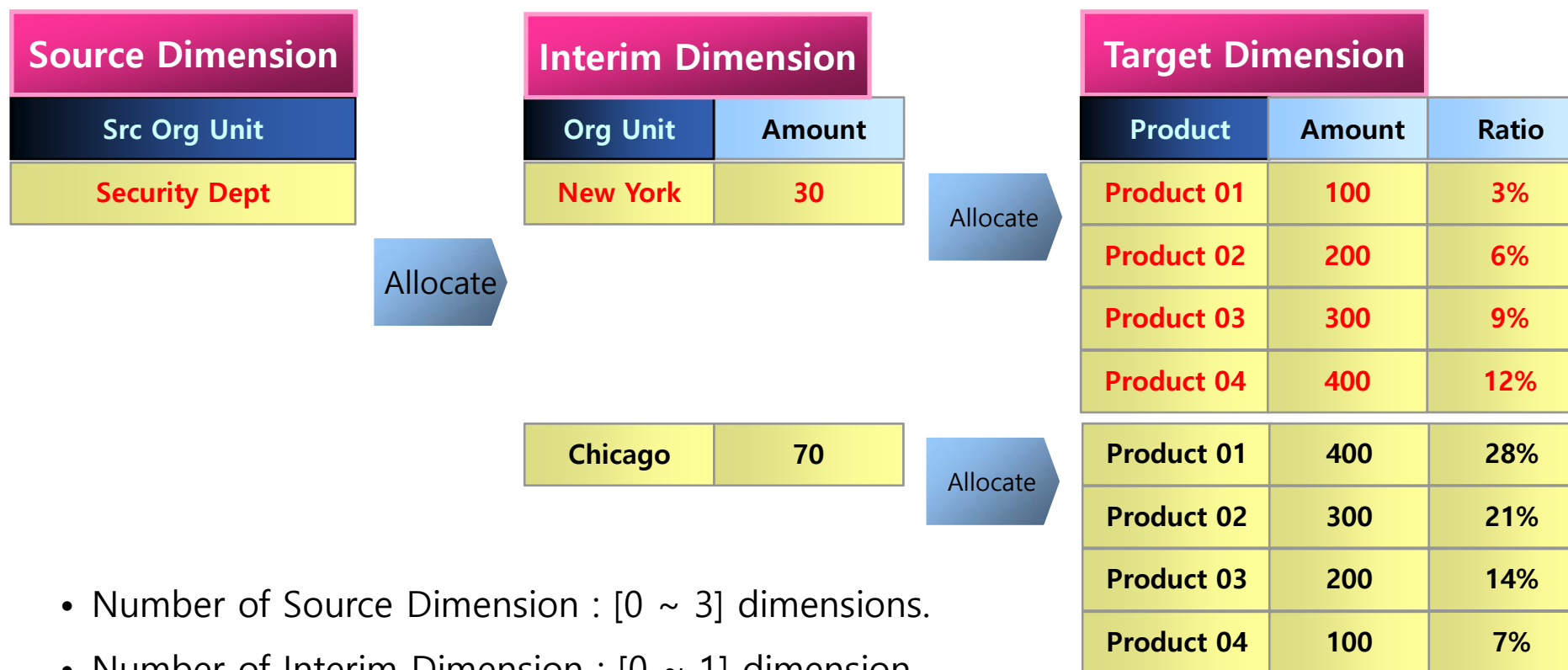
❑ Fixed Ratio Rule with Interim Dimension



- Number of Source Dimension : [0 ~ 3] dimensions.
- Number of Interim Dimension : [0 ~ 1] dimension.
- Number of Target Dimension : [1] dimension.

Amain for PCA – Sub Component : Fixed Ratio Rule

- ❑ Fixed Ratio Rule with Interim Dimension & [Convert to Ratio] Option



- Number of Source Dimension : [0 ~ 3] dimensions.
- Number of Interim Dimension : [0 ~ 1] dimension.
- Number of Target Dimension : [1] dimension.

Amain for PCA – Sub Component : Tree Rollup (OFSA A)

Description

- ❑ Managing Hierarchy is one of the painful setup in OFSA because there are hundreds of Node Values in each Hierarchy, it takes long time and easy to make mistakes.
- ❑ Even worse OFSAA is more difficult to manage Hierarchy than OFSA 4.5 for some reasons as below
 - Every Node Values must be registered in Leaf Setup (usually number of Nodes are more than 100)
 - Need to give unique Node Name to every Node even though the Nodes are in different level.

Leaf Setup

Node A

Node B

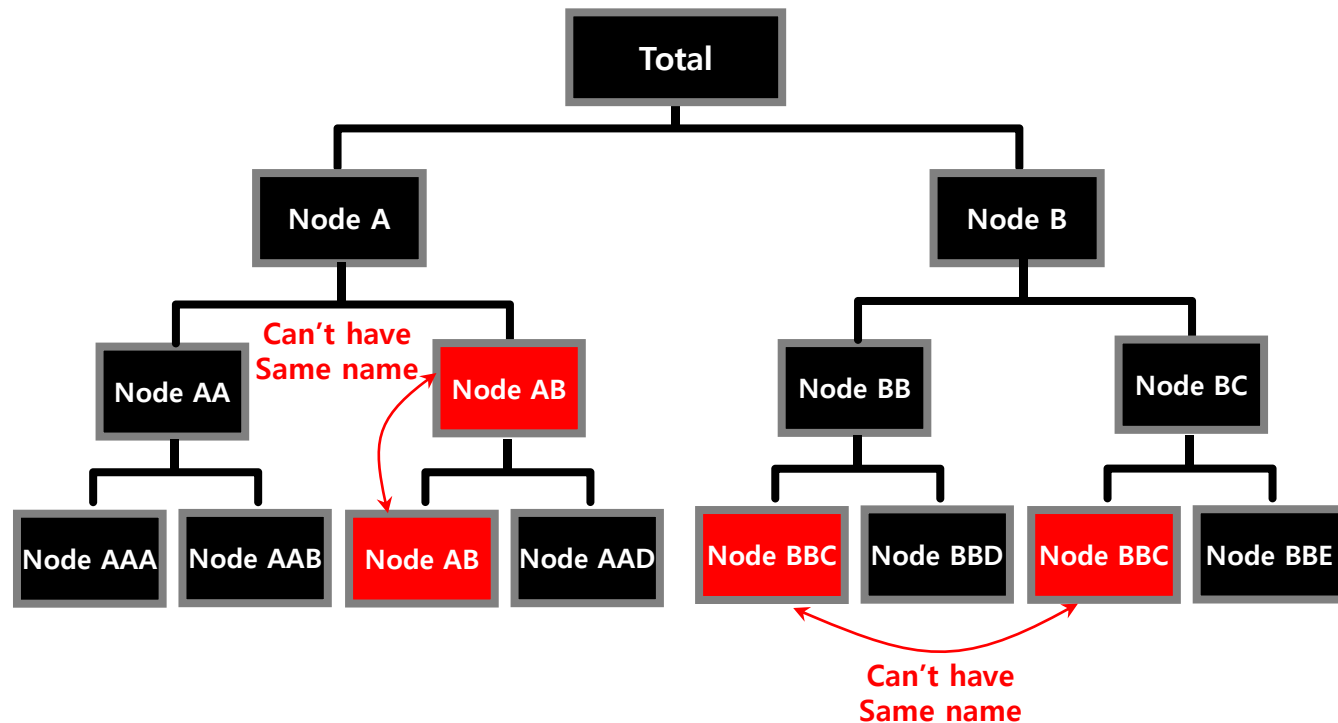
Node AA

Node AB

Node BB

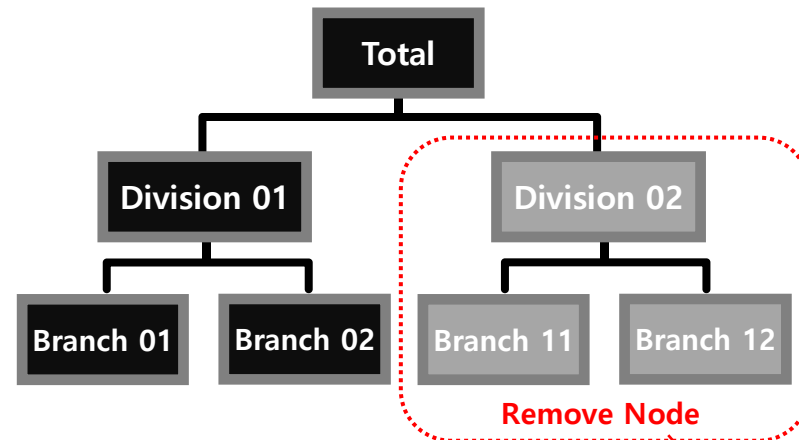
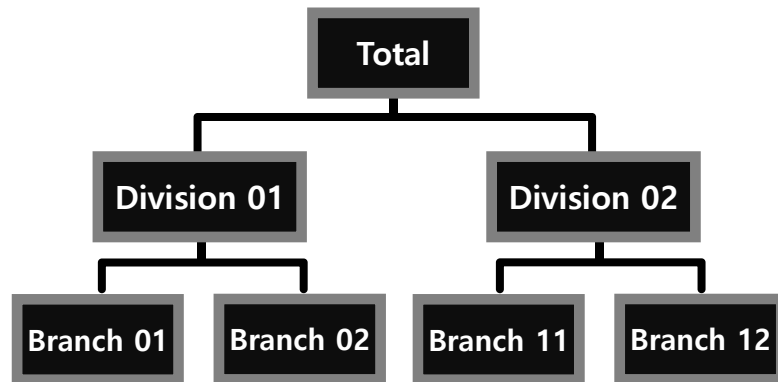
Node BC

Node ...

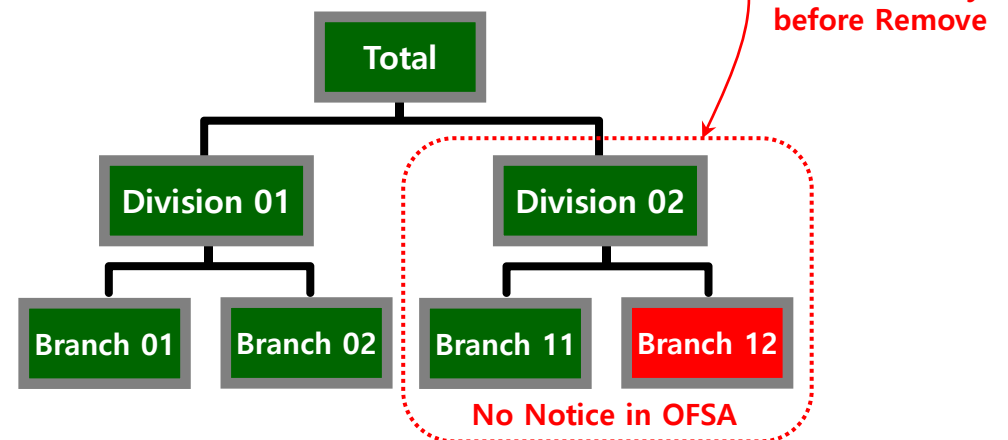
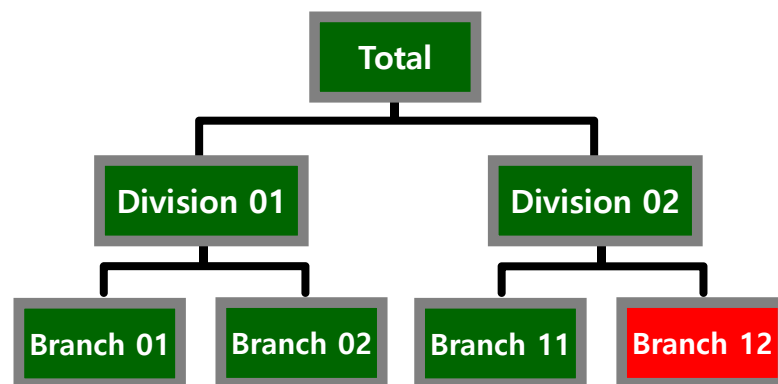


Amain for PCA – Sub Component : Tree Rollup and Tree Filter

Tree Rollup

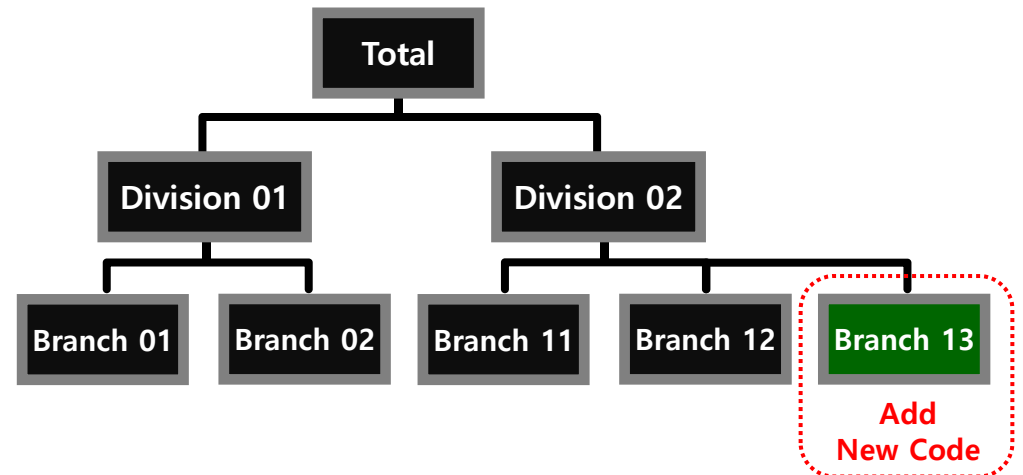
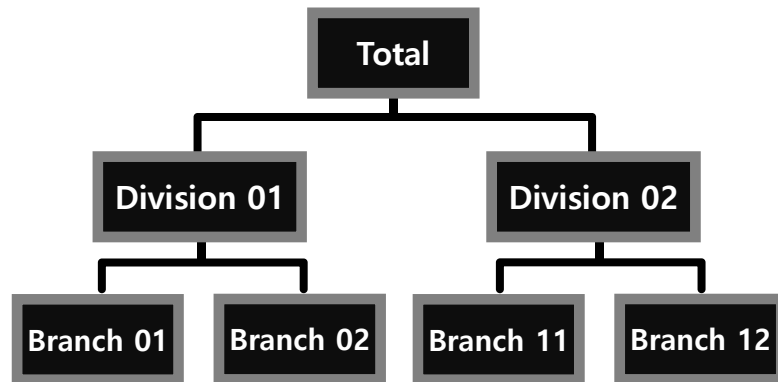


Tree Filter

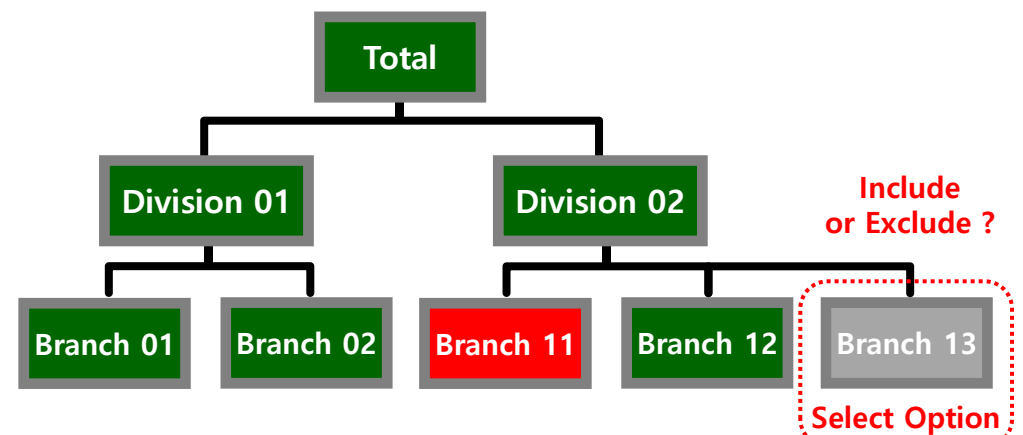
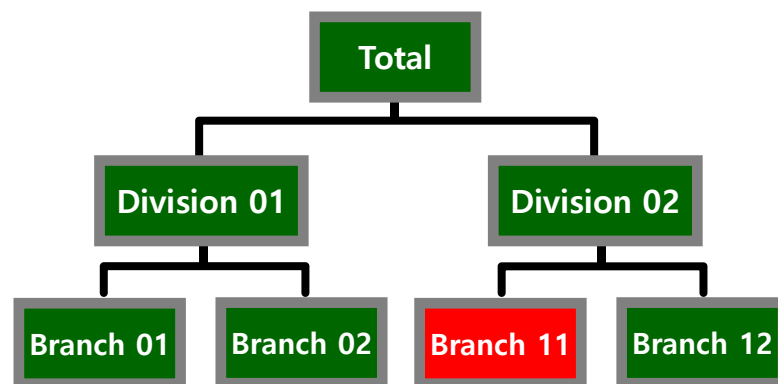


Amain for PCA – Sub Component : Tree Rollup and Tree Filter

Tree Rollup



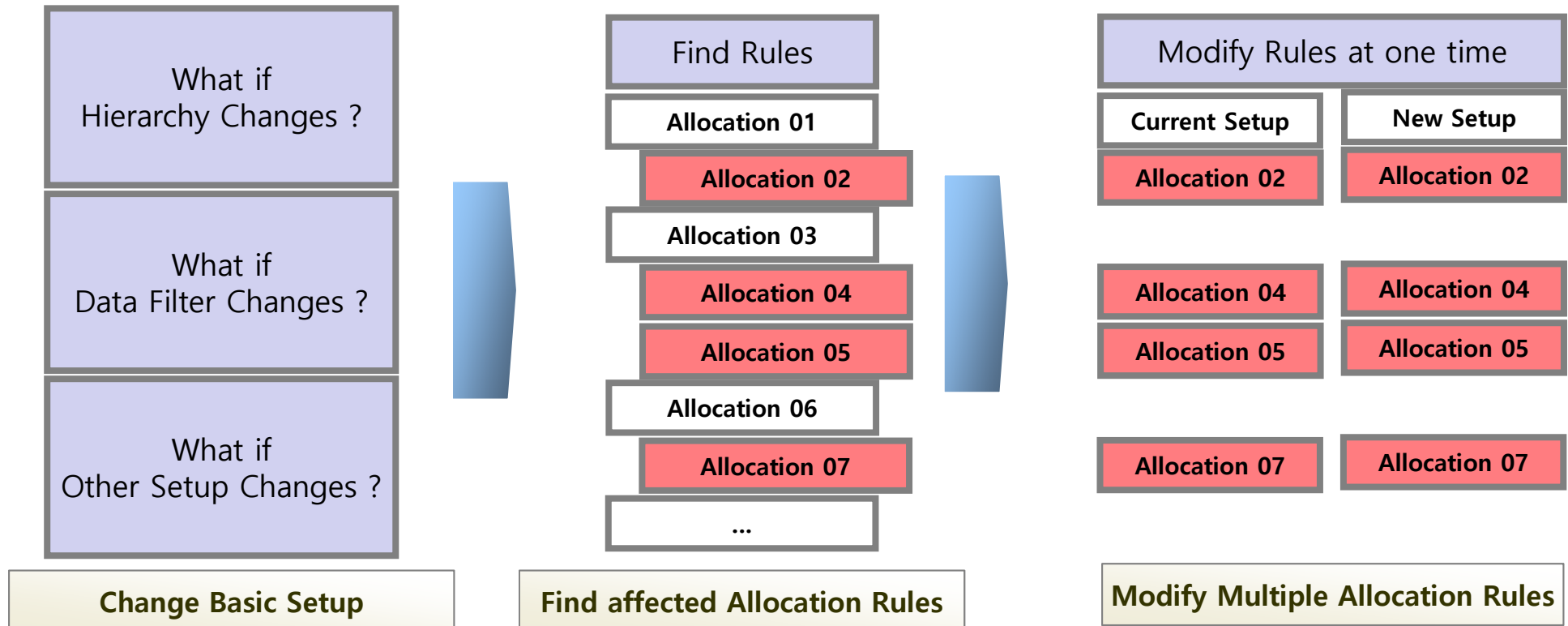
Tree Filter



Amain for PCA – Multi Setup Analyzer

Description

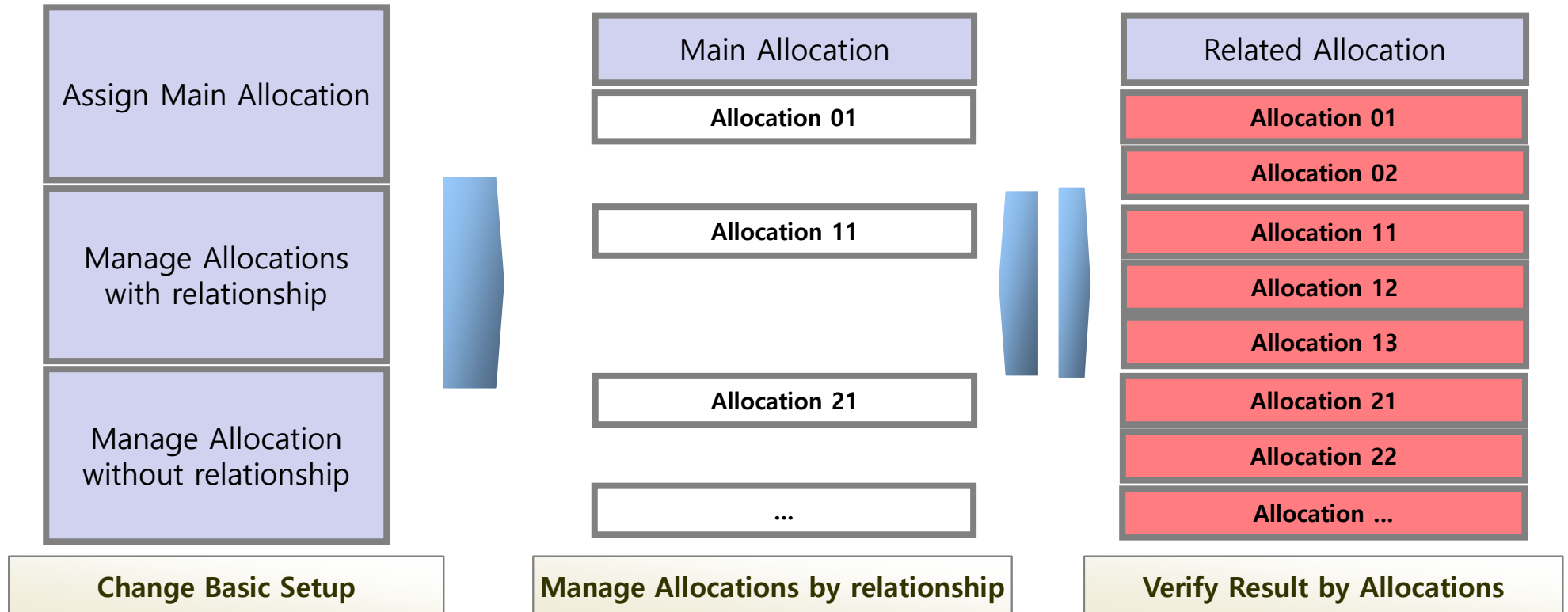
- ❑ It is difficult to maintain allocation rules with dependencies with Hierarchy or Data filter because allocation rules should be updated whenever these components change.
- ❑ Amain can find affected allocation rules in the case of sub components change and help modify those allocation rules at one time.



Amain for PCA – Relationship between Allocations

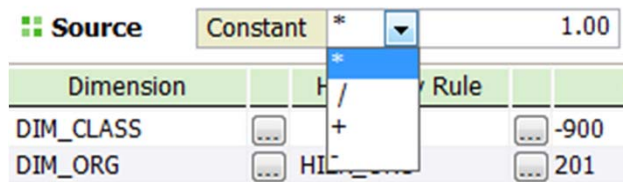
Description

- ❑ It is basic demands to verify result by each allocations to make sure the output is correct.
- ❑ And it would be good if we can manage allocations with relationship among themselves.
- ❑ Amain provide 2 functions to satisfy user request by assigning relationship between allocations and verifying the result by each allocation level.



Amain for PCA – Other Functions

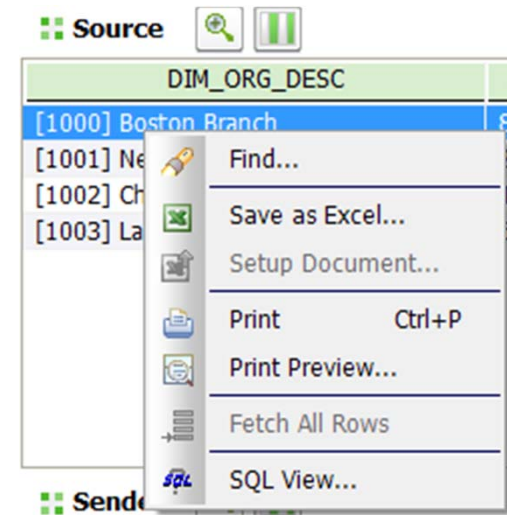
- ❑ Add Constant and 4 kind of Operator (+, -, *, /) in allocation process
- ❑ Guide User by showing related information when defining expression
- ❑ Show SQL statement to verify the result for Ledger to Ledger Allocation



Add Constant & Operator



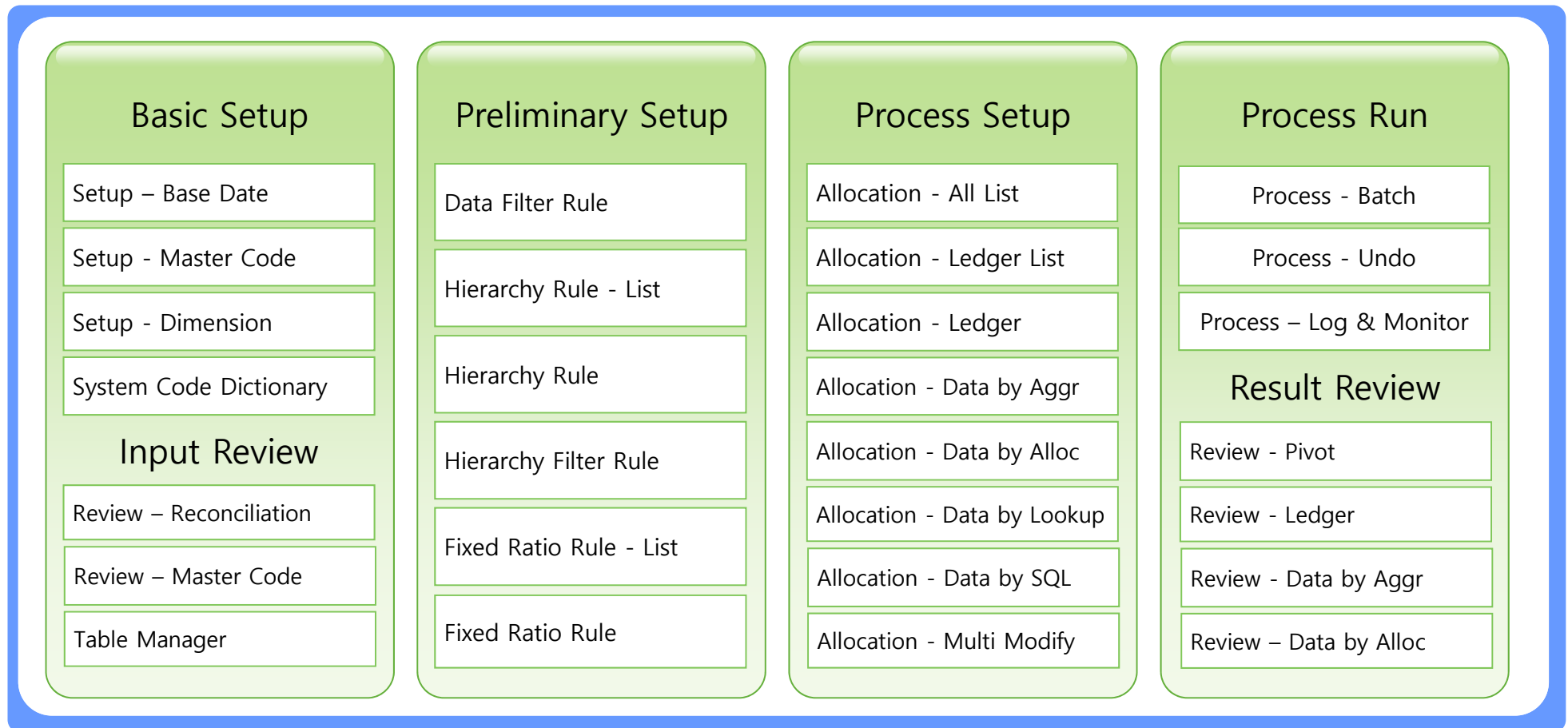
Guide for expression



Show SQL statement

Amain for PCA – Menu Summary

❑ There are 32 menus in Amain for PCA as follows.



Amain for PCA - Function Summary

- ❑ Amain for PCA helps you to Allocate Cost by providing functions for Allocation rule setup, Setup review, Undo Job, Result Review and Uploading setup from Excel.

- Allocation rule setup
- Allocation review by Rule
- Upload Amain setup from excel
- Allocation rule setup review
- Allocation review by Pivot
- Undo Job

Amain Process Flow

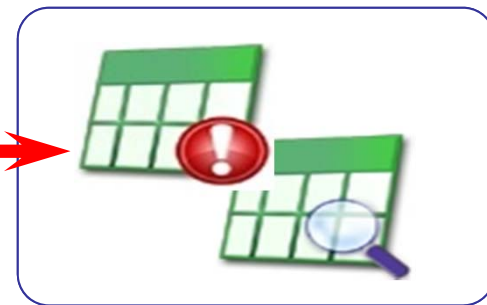
Input Data Validation



Amain Setup Verification

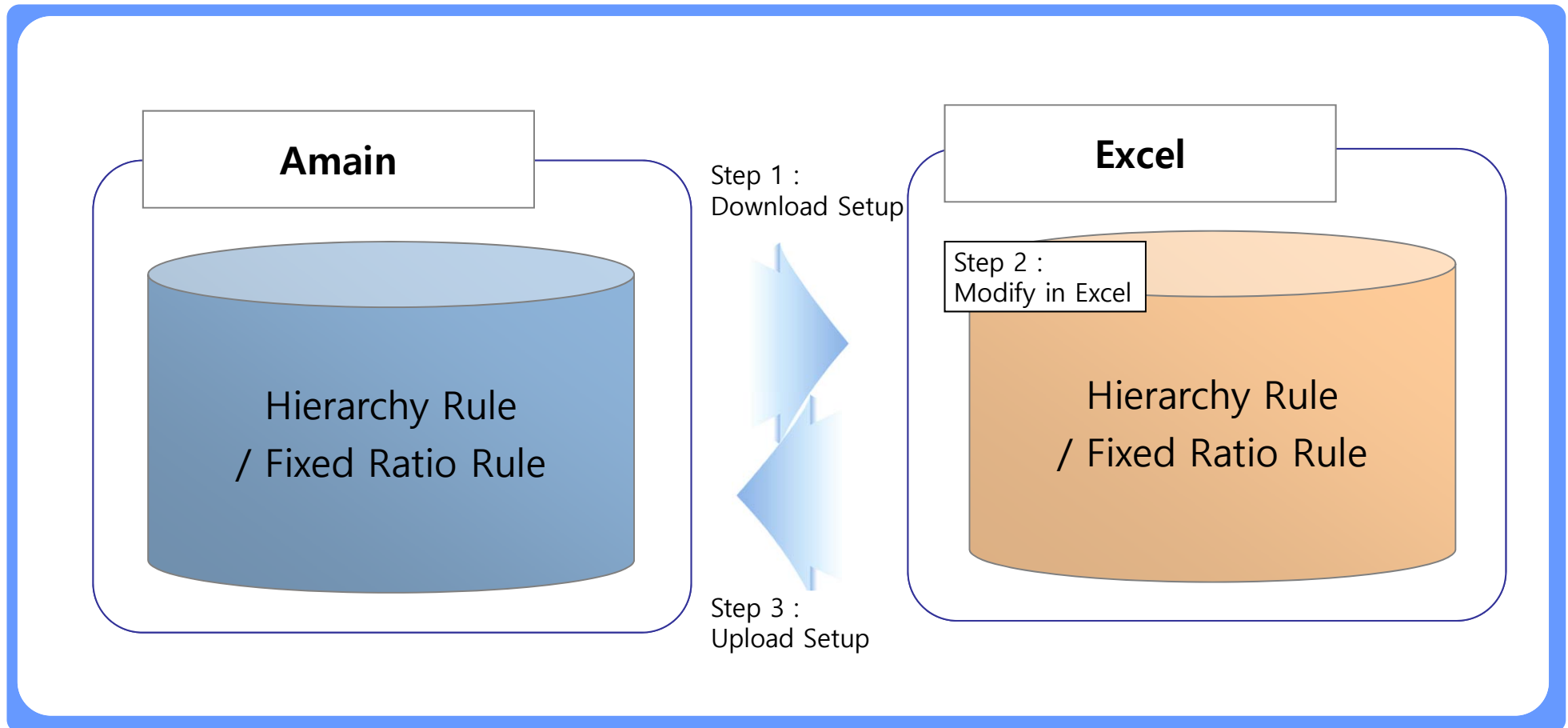


Upload required information



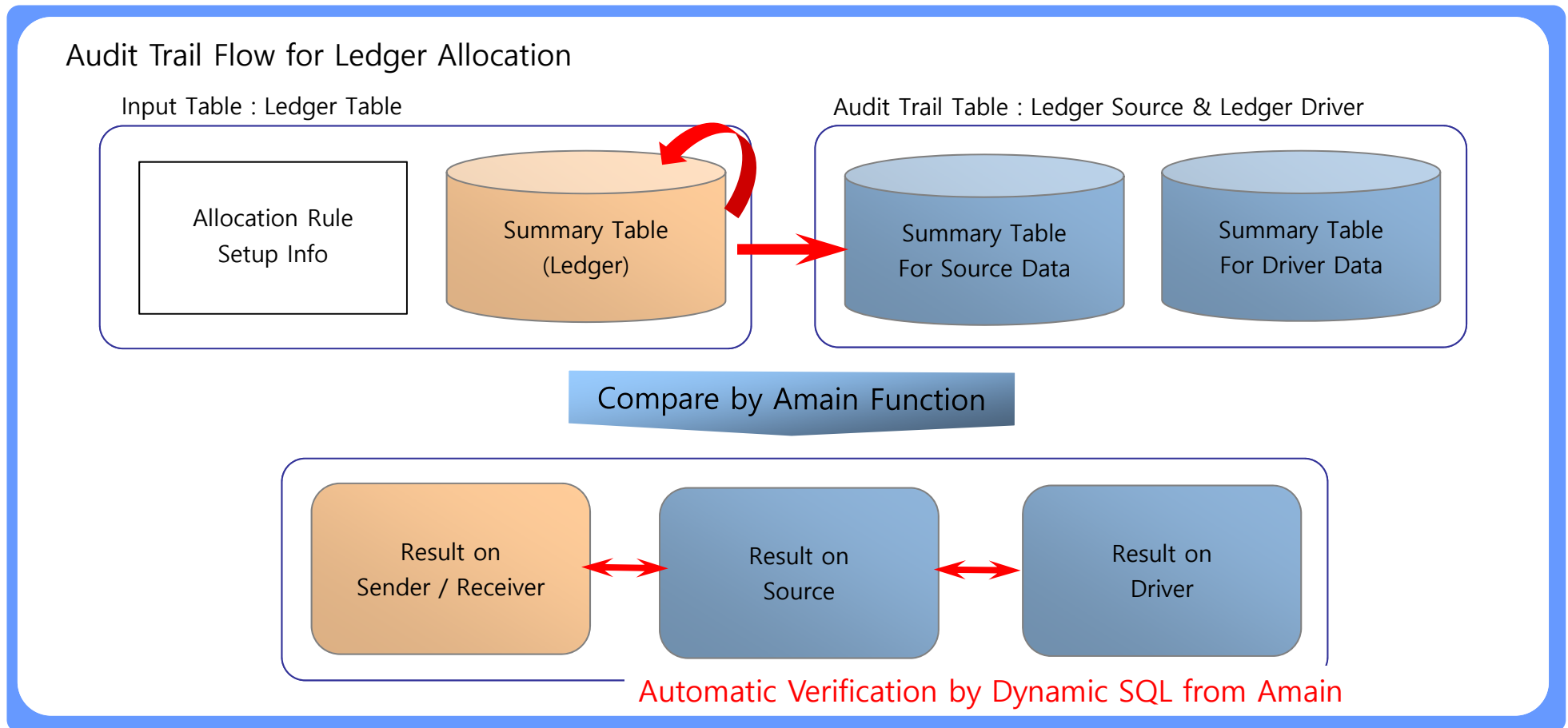
Amain for PCA – User Setup in Excel

- ❑ Generally One of the painful job is managing Setup for Hierarchy and Fixed Ratio. Usually it takes long time and tends to make mistakes because there are more than a few hundreds of nodes and master codes for hierarchy. So we build up a function for User Setup in Excel.



Amain for PCA - Result Verification – Ledger Allocation

- ❑ User can see/compare the data from each components such as Source, Driver, Sender and Receiver only with mouse click.



Amain for PCA - Result Verification – Ledger Allocation

- ❑ With a function to review and compare results in each components such as Source, Driver, Sender and Receiver, Users can check the result more easily.

Example

Source / Sender			
Source			
DIM_ORG_DESC	Amount	Amount_Comp	Amount_Diff
[1001] New York Branch	5,538,461.53	-5,538,461.53	0.00
[1002] Chicago Branch	7,384,615.38	-7,384,615.38	0.00
[1003] Las Vegas Branch	11,076,923.07	-11,076,923.07	0.00

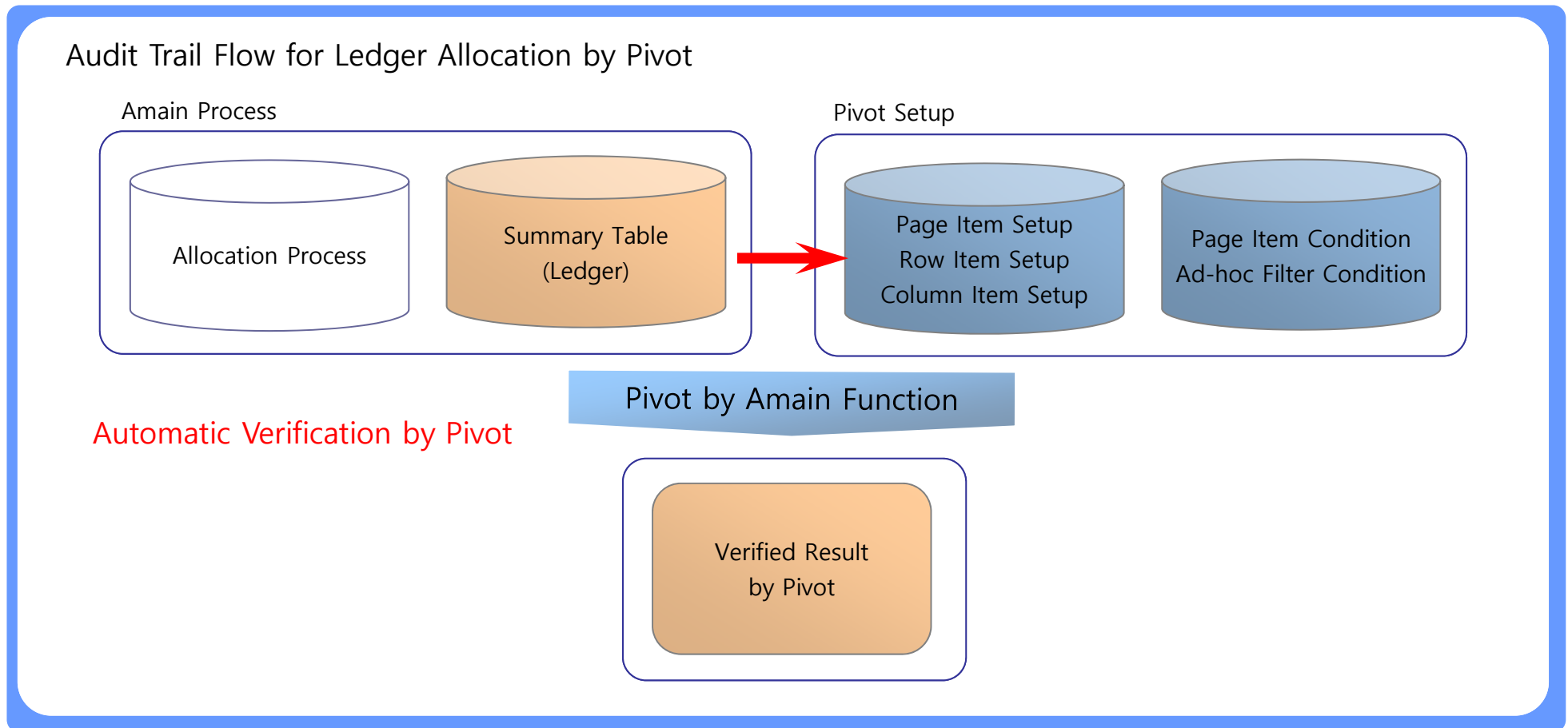
Sender			
DIM_ORG_DESC	Amount	Amount_Comp	
[1001] New York Branch	-5,538,461.53	5,538,461.53	
[1002] Chicago Branch	-7,384,615.38	7,384,615.38	
[1003] Las Vegas Branch	-11,076,923.07	11,076,923.07	

Driver / Receiver					
Driver					
DIM_ORG_DESC	DIM_BS_DESC	DIM_PROD_DESC	Amount	Amount_Comp	Ratio
[1001] New York Branch	[10010] Long-Term Loan	[10010] Long-Term Loan	300,000.00	1,384,615.39	21.666667
[1001] New York Branch	[10020] Commercial Loan	[10020] Commercial Loan	500,000.00	2,307,692.32	41.666667
[1001] New York Branch	[10030] Note Discounted	[10030] Note Discounted	400,000.00	1,846,153.84	33.333333
[1002] Chicago Branch	[10010] Long-Term Loan	[10010] Long-Term Loan	500,000.00	2,307,692.31	31.250000
[1002] Chicago Branch	[10020] Commercial Loan	[10020] Commercial Loan	600,000.00	2,769,230.79	37.500000
[1002] Chicago Branch	[10030] Note Discounted	[10030] Note Discounted	500,000.00	2,307,692.31	31.250000
[1003] Las Vegas Branch	[10010] Long-Term Loan	[10010] Long-Term Loan	700,000.00	3,230,769.21	29.166667
[1003] Las Vegas Branch	[10020] Commercial Loan	[10020] Commercial Loan	800,000.00	3,692,307.69	33.333333
[1003] Las Vegas Branch	[10030] Note Discounted	[10030] Note Discounted	900,000.00	4,153,846.16	37.500000

Receiver						
DIM_ORG_DESC	DIM_PROD_DESC	Amount	Amount_Comp	Ratio(%)	Ratio(%)_Comp	Ratio(%)_Diff
New York Branch	[10010] Long-Term Loan	1,384,615.39	300,000.00	25.000000	25.000000	0.000000
New York Branch	[10020] Commercial Loan	2,307,692.32	500,000.00	41.666667	41.666667	0.000000
New York Branch	[10030] Note Discounted	1,846,153.84	400,000.00	33.333333	33.333333	-0.000000
Chicago Branch	[10010] Long-Term Loan	2,307,692.31	500,000.00	31.250000	31.250000	-0.000000
Chicago Branch	[10020] Commercial Loan	2,769,230.79	600,000.00	37.500000	37.500000	0.000000
Chicago Branch	[10030] Note Discounted	2,307,692.31	500,000.00	31.250000	31.250000	-0.000000
Las Vegas Branch	[10010] Long-Term Loan	3,230,769.21	700,000.00	29.166667	29.166667	-0.000000
Las Vegas Branch	[10020] Commercial Loan	3,692,307.69	800,000.00	33.333333	33.333333	0.000000
Las Vegas Branch	[10030] Note Discounted	4,153,846.16	900,000.00	37.500000	37.500000	0.000000

Amain for PCA - Result Verification – by Pivot

- ❑ User can manipulate the result in various ways by setting Page Item, Row Item and Column Item as he wants. It is quite useful function to verify the result even though he is not good at SQL or Database.



Amain for PCA - Result Verification – by Pivot

- ❑ With a function to review result using Pivot function similar to excel, User can check the result in many points of view with great convenience.

Result Review Setup

Base Date: 2013-06-30

Selection Criteria

Column Name	COA Code	COA De
DIM_ORG	1002	Chicago Branch

Ad-hoc Condition Column

Table Name: MAG_LDGR_DEMO
Amount Column: CUR_AMT

Column List

Column Name	Description
DIM_BS	Dimension for Balance Sheet Code
DIM_PROD	Dimension for Product
DIM_ACT	Dimension for Activity
DIM_DRV	Dimension for Driver
DIM_CHANNEL	Dimension for Channel
DIM_TP	Dimension for FTP Product
DIM_WAVE	Dimension for Wave for Audit
DIM_CUST_GRP	Dimension for Customer Group
DIM_ALM	Dimension for ALM Product

Page Item

Column Name	Description
DIM_ORG	Dimension for Org Unit

Row Item

Column Name	Description
DIM_SRC_ORG	Dimension for Source Org Unit
DIM_PL	Dimension for Profit/Loss Code
RULE_NO	Allocation Rule Number

Column Item

Column Name	Description
DIM_CLASS	Dimension for Data Class

Result

DIM_SRC_ORG	DIM_SRC_ORG_DESC	DIM_PL	
1001	New York Branch	3001	Salara
1001	New York Branch	3001	Salara
1003	Las Vegas Branch	3001	Salara
1003	Las Vegas Branch	3001	Salara
2001	General Affairs Dept	3001	Salara
2001	General Affairs Dept	3001	Salara
2001	General Affairs Dept	3002	Elect
2001	General Affairs Dept	3002	Elect
2001	General Affairs Dept	3003	Adve
2002	IT System Dept	3001	Salara
2002	IT System Dept	3001	Salara
2002	IT System Dept	3002	Elect
2002	IT System Dept	3002	Elect
2002	IT System Dept	3002	Elect

Example

Amain for PCA - Result Verification – Data by Aggregation

- ❑ With a function to compare the data between before aggregation and after aggregation, User can see any difference between them easily.

Example

Setup Info **Result Review**

Rule No: 301089 01_Inst->Ledger Agg
Rule Desc: Aggregate No of Acct from Instrument to Ledger

Table Information

Source Type: ☒ Instrument ☐ Ledger
Source Table: MAG_INST_PA_01
Source Filter:

Mapping Information

Target Key Mapping

Source Column	Target Column
BASE_DATE	BASE_DATE
DIM_ORG	DIM_ORG
DIM_BS	DIM_BS
DIM_PROD	DIM_PROD

Relation Mapping

Source Column	Target Column
[9001] Driver	DIM_CLASS
[1003] No of Account	DIM_DRV
SUM(REFERENCE_SEQ)	☒ CUR_AMT

Ad-hoc Condition

Result Review

Dim Org Desc	Dim Bs Desc	Dim Prod Desc	Cur Amt_Source	Cur Amt_Target	Cur Amt_Diff
[1002] Chicago Branch	[20030] Demand Deposit	[20030] Demand Deposit	2.00	2.00	0.00
[1001] New York Branch	[10040] Prime Loan	[10040] Prime Loan	2.00	2.00	0.00
[1002] Chicago Branch	[10010] Long-Term Loan	[10010] Long-Term Loan	3.00	3.00	0.00
[1003] Las Vegas Branch	[20020] Installment Deposit	[20020] Installment Deposit	2.00	2.00	0.00
[1003] Las Vegas Branch	[20030] Demand Deposit	[20030] Demand Deposit	2.00	2.00	0.00
[1003] Las Vegas Branch	[10030] Note Discounted	[10030] Note Discounted	3.00	3.00	0.00
[1003] Las Vegas Branch	[10010] Long-Term Loan	[10010] Long-Term Loan	3.00	3.00	0.00
[1001] New York Branch	[10020] Commercial Loan	[10020] Commercial Loan	2.00	2.00	0.00
[1002] Chicago Branch	[10040] Prime Loan	[10040] Prime Loan	2.00	2.00	0.00
[1001] New York Branch	[10030] Note Discounted	[10030] Note Discounted	2.00	2.00	0.00
[1001] New York Branch	[20010] Term Deposit	[20010] Term Deposit	2.00	2.00	0.00
[1003] Las Vegas Branch	[10020] Commercial Loan	[10020] Commercial Loan	3.00	3.00	0.00
[1002] Chicago Branch	[10030] Note Discounted	[10030] Note Discounted	2.00	2.00	0.00
[1003] Las Vegas Branch	[10040] Prime Loan	[10040] Prime Loan	2.00	2.00	0.00
[1002] Chicago Branch	[10020] Commercial Loan	[10020] Commercial Loan	2.00	2.00	0.00
[1001] New York Branch	[10010] Long-Term Loan	[10010] Long-Term Loan	3.00	3.00	0.00

Amain for PCA - Result Verification – Data by Allocation

- ❑ With a function to compare the data between before allocation and after allocation, User can recognize any difference between them easily.

The screenshot displays the 'Result Review' tab of the PCA setup interface. It includes sections for 'Table Information', 'Source', 'Driver', 'Mapping Information', and 'Ad-hoc Condition'. A blue arrow points from the 'Table Information' section to the 'Result Review' table. The table compares 'Cust Annual Fee_Source' and 'Annual Fee_Target' for various customer numbers, showing a 'Difference' column. A large red 'Example' watermark is overlaid on the table.

Cust No	Cust Annual Fee_Source	Annual Fee_Target	Difference
20000001	30,000.00	30,000.00	0.00
50000001	10,000.00	10,000.00	0.00
60000001	70,000.00	70,000.00	0.00
40000001	100,000.00	100,000.00	0.00
90000001	50,000.00	50,000.00	0.00
10000001	20,000.00	20,000.00	-0.00
70000001	120,000.00	120,000.00	0.00
80000001	20,000.00	20,000.00	0.00
30000001	50,000.00	50,000.00	0.00

Amain for PCA - Result Verification – Data by Lookup

- ❑ With a function to generate expected result and compare with actual result, User can find any difference easily.

Rule No 301029 83_Lookup->Liq Res&Prem
Rule Desc Lookup for Liquidity Reserve & Liquidity Premium

Instrument Information
Instrument MAG_INST_FTP_01
Filter Rule

Ad-hoc Condition

List of Lookup Information

Instrument	Operator	Lookup Table	Lookup Table	Filter Rule
Update Column (Output)	Driver Column (Input)	Lookup Table	Return Column	Filter Rule
TP_LIQ_RES		MAG_LK_LIQ_RES	LK_VALUE	
TP_LIQ_PREM		MAG_LK_LIQ_PREM	LK_VALUE	

Result

Base Date	Reference No	Seq	Engine Result	Validation Result	Return Value	Join Key	
			TP_LIQ_RES		LK_VALUE	Org Yymm	Dim Prod
2013-06-30	40002	1	0.0200	0.0200	0.0200	201,212	10020
2013-06-30	30003	1	0.0300	0.0300	0.0300	201,212	10030
2013-06-30	90004	1	0.0400	0.0400	0.0400	201,210	10040
2013-06-30	10001	1	0.0100	0.0100	0.0100	201,212	10010
2013-06-30	30002	1	0.0200	0.0200	0.0200	201,212	10020
2013-06-30	20002	1	0.0200	0.0200	0.0200	201,212	10020
2013-06-30	10002	1	0.0200	0.0200	0.0200	201,212	10020
2013-06-30	60003	1	0.0300	0.0300	0.0300	201,209	10030
2013-06-30	10003	1	0.0300	0.0300	0.0300	201,210	10030
2013-06-30	50002	1	0.0200	0.0200	0.0200	201,212	10020
2013-06-30	20003	1	0.0300	0.0300	0.0300	201,207	10030

Example



Agenda

I. Amain for EPM

1. Introduction
2. Amain for FTP
3. Amain for PCA
4. Amain for JOB

Amain for Job - Function Summary

- ❑ Amain for Job helps you to Operate Amain System with all kinds of Processes by providing required functions such registration, execution, monitoring and scheduling.

- Execute all kinds of Job
- Control Sequence (Error/Skip)
- Access Log Information
- Easy Register of Amain Process
- Manage Job Dependency
- Monitor Process Status
- Manage Parameters
- Integrate Multiple Servers

Job Operation Flow

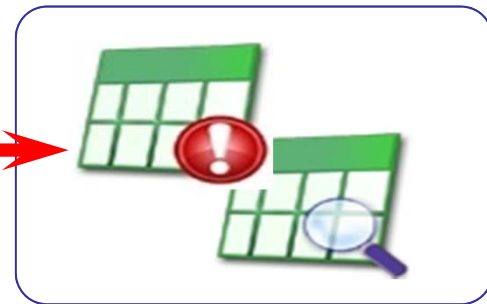
Register Job



Execute Job

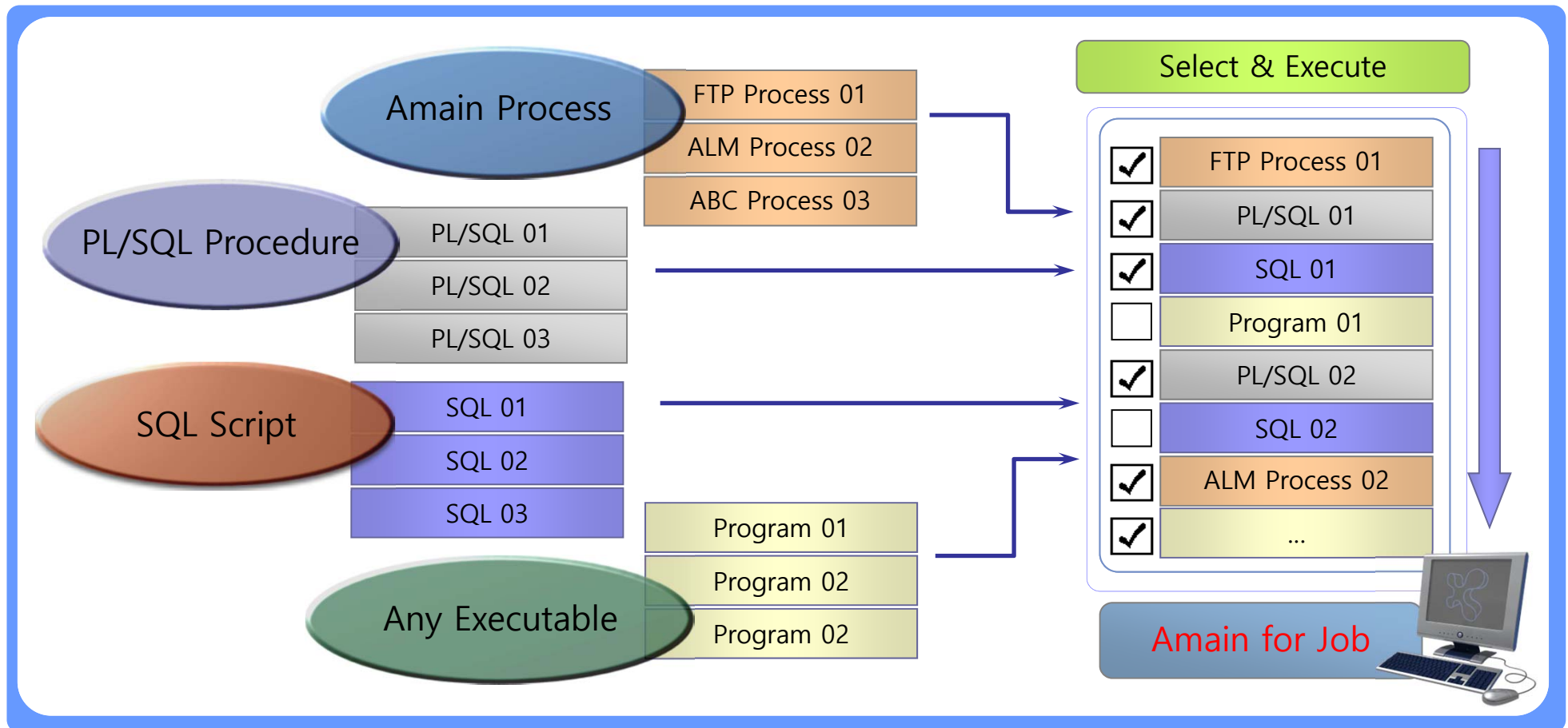


Monitor Job Status



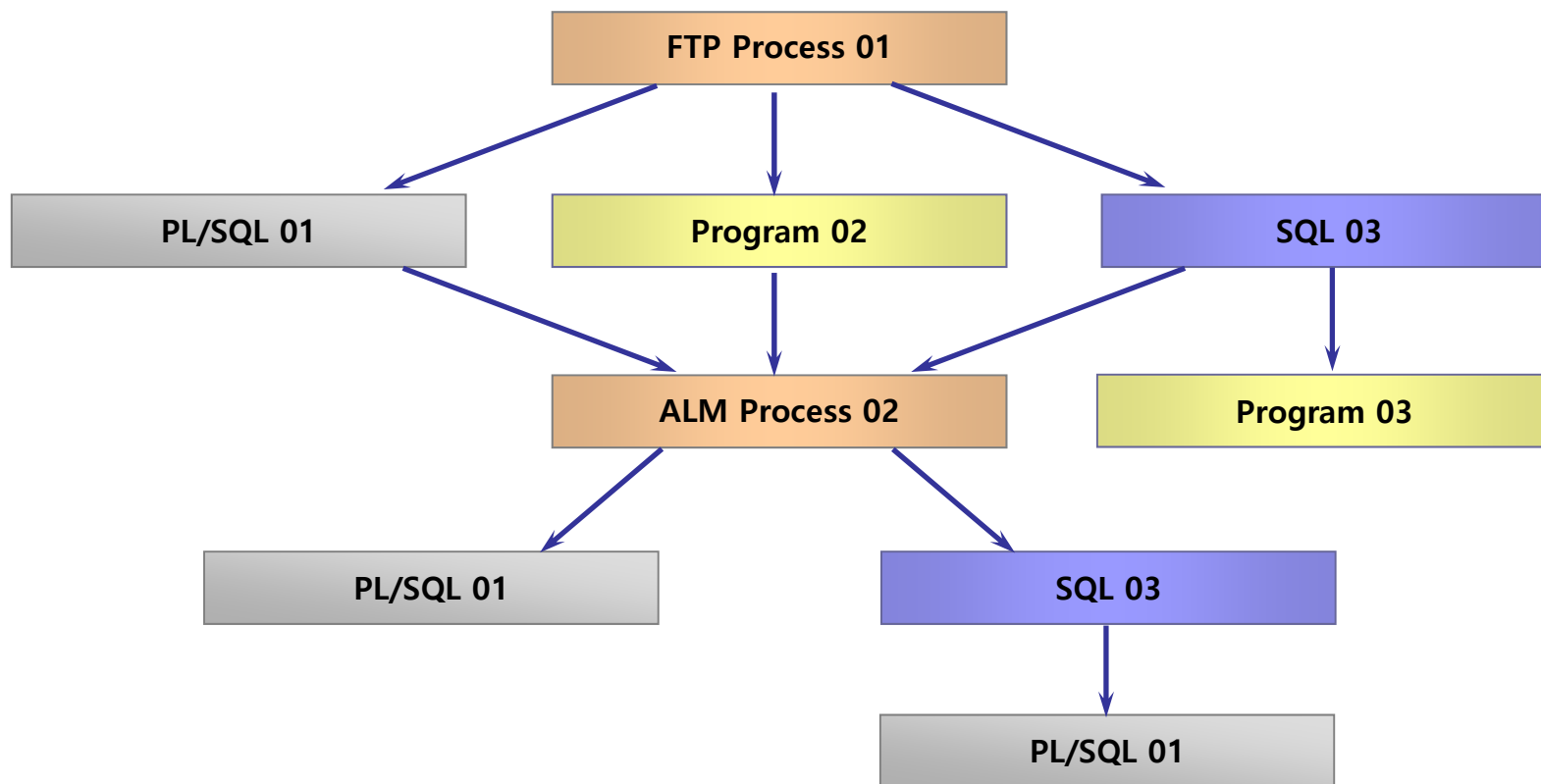
Amain for Job - Execute All kinds of Job

- ❑ Amain for Job provides 'Single Screen' to register and execute all kinds of processes in Amain system. No need to log into many places such as Amain, Unix Server and Database.



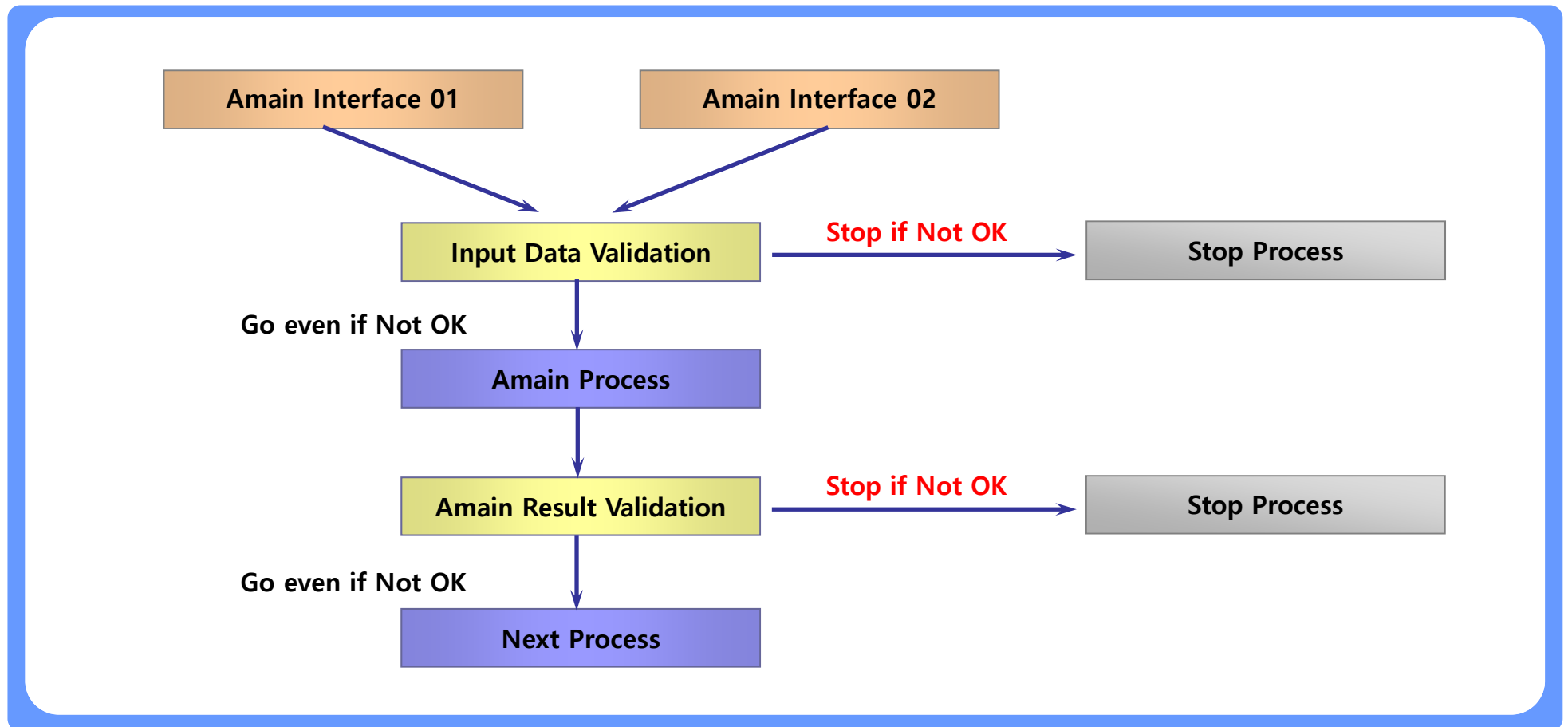
Amain for Job – Manage Job Dependency

- ❑ Amain for Job can control Dependencies between processes in your sequence. Based on this function, the Processes can be executed in the correct order that you expect.



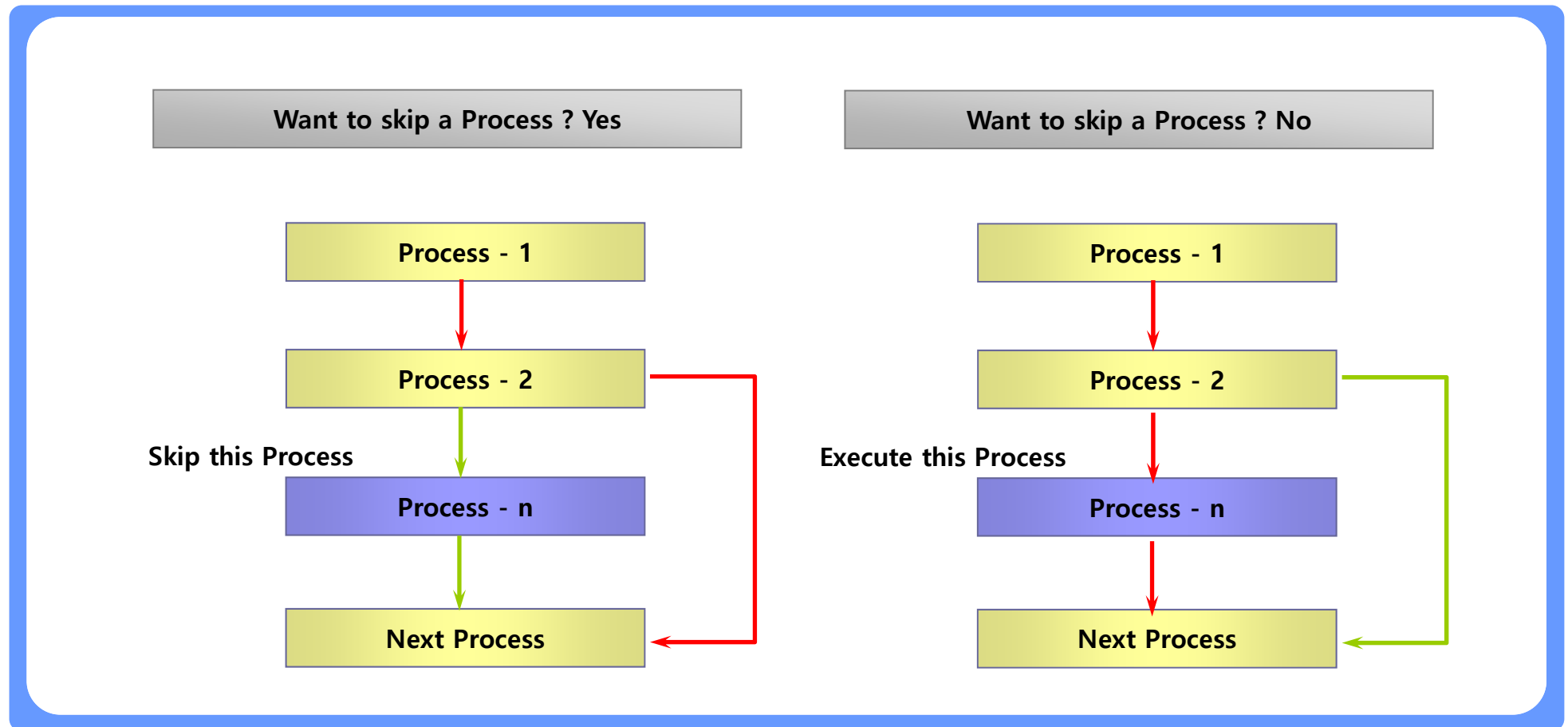
Amain for Job – Control Sequence on Errors (Go/Stop ?)

- ❑ Amain for Job can control the Errors while you run the Sequence. Against Errors or certain conditions, you can Stop or Continue the Sequence according to your intention.



Amain for Job – Control Sequence by Skip (Skip or Not ?)

- ❑ Amain for Job can control the Sequence by setting the option of Skip or not. You can Skip or Execute any process depending on your intention.



Amain for Job – Monitor Process Status

- ❑ Amain for Job is monitoring the Status of each process running on your system and provide several convenient options such as suspend, resume, kill job and auto refresh.

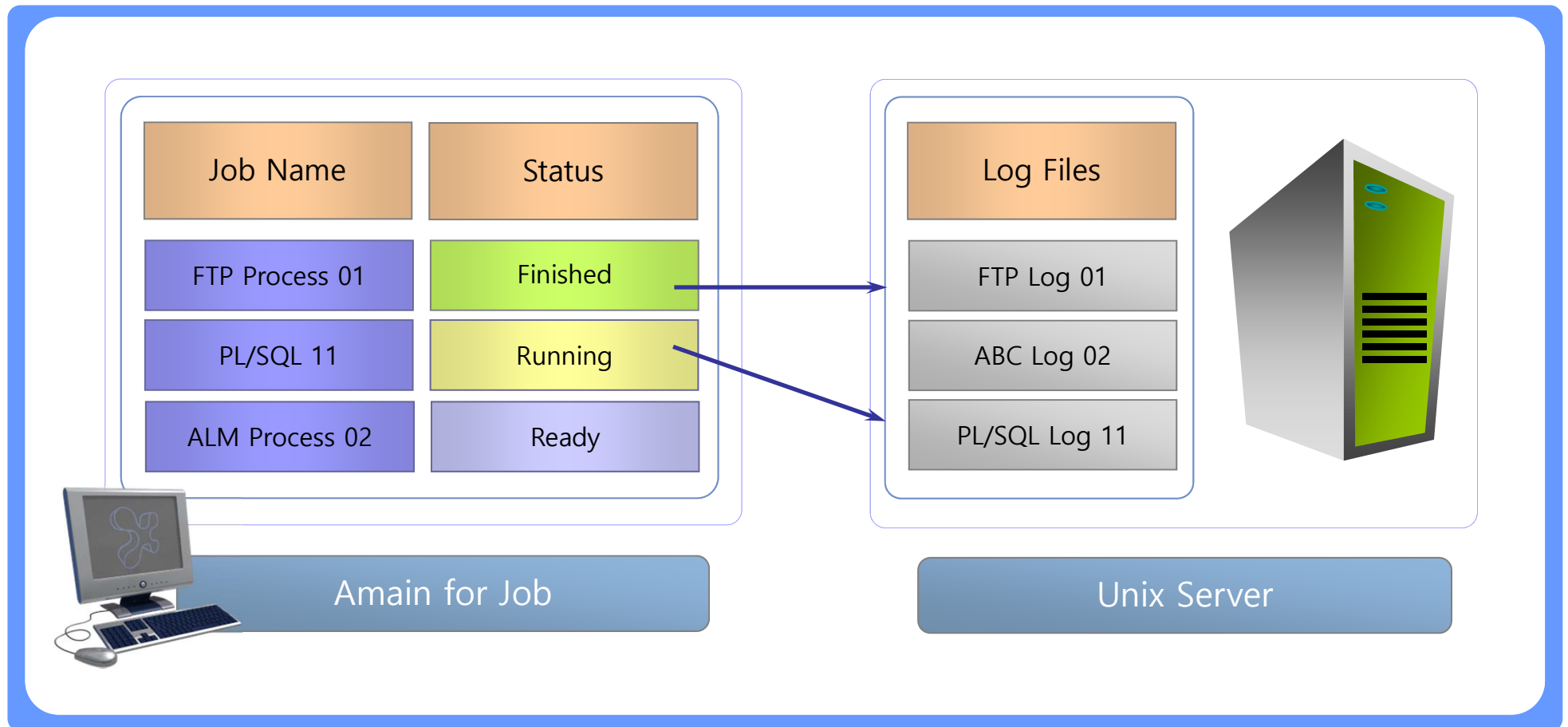
Suspend JobResume JobKill Job

Job Name	Start Time	End Time	Elapsed Time	Status
FTP Process 01	2007-09-12 10:12:04	2007-09-12 10:27:09	00:15:05	Finished
PL/SQL 01	2007-09-12 10:12:04	2007-09-12 10:27:09	00:15:05	Error
ALM Process 02	2007-09-12 10:27:10			Running
PL/SQL 03				Ready

Auto Refresh Interval (Sec) : 5

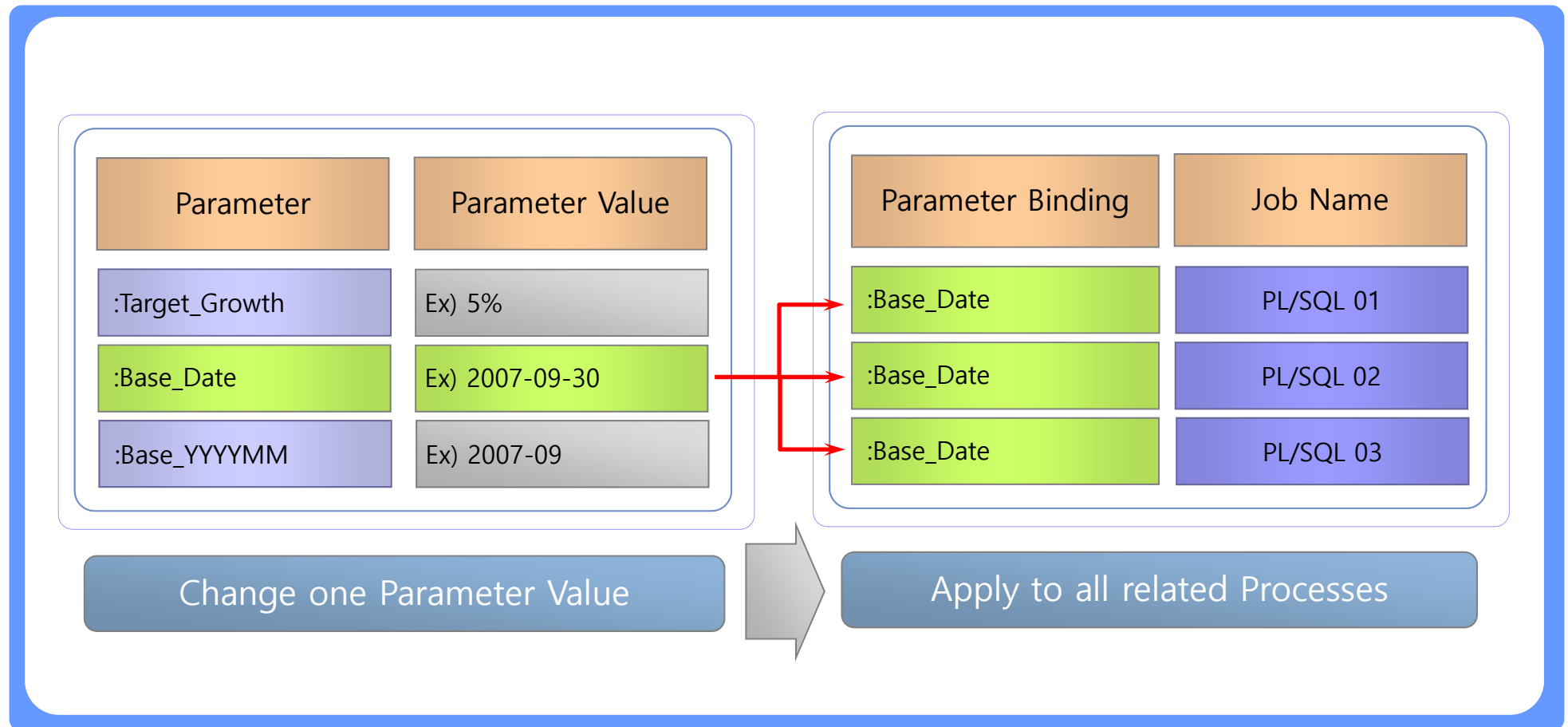
Amain for Job – Access Log Information

- ❑ Detail Log Information can be accessed just by Clicking a Process you want to check. When you encounter error, this function will help you to find the reason for that.



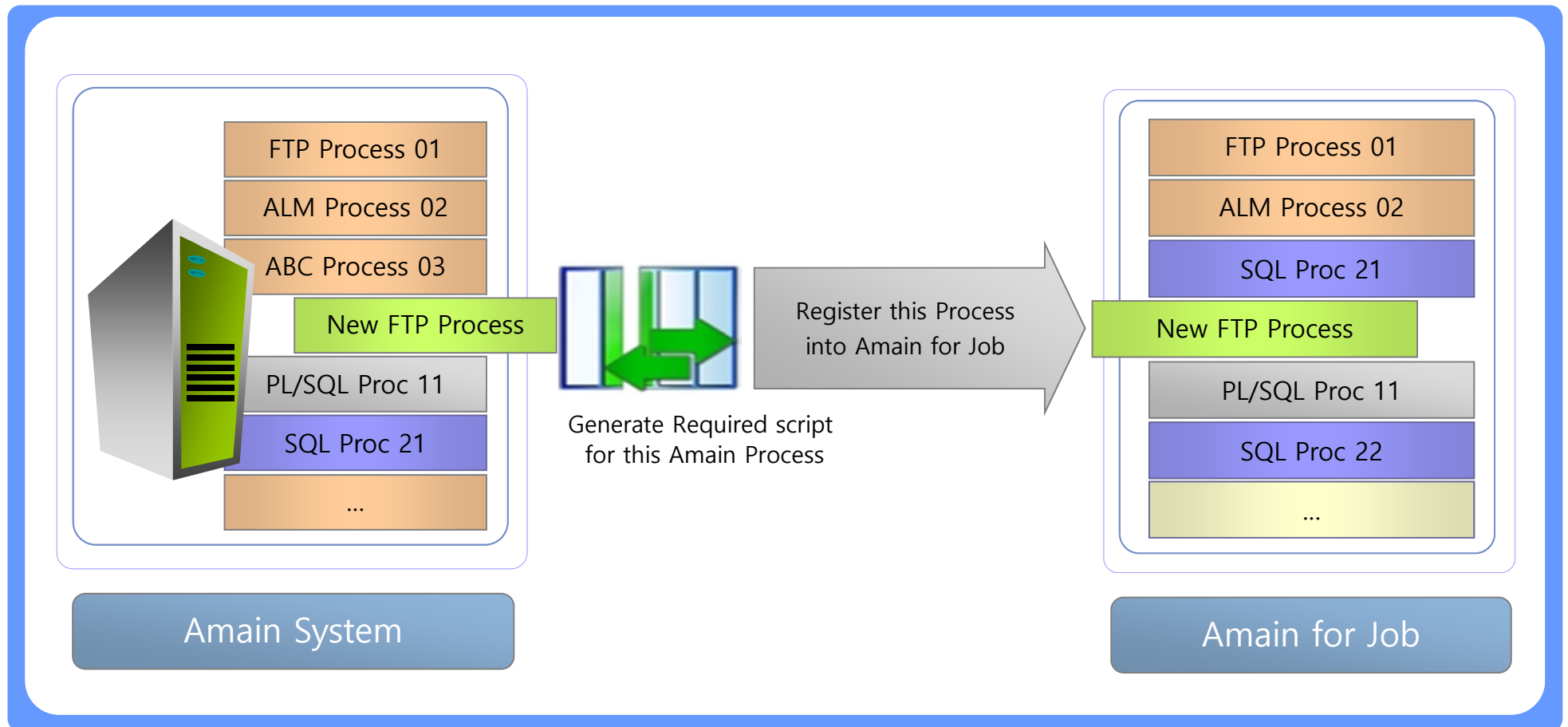
Amain for Job – Manage Parameters

- ❑ Parameter for Processes can be managed and changed systematically. Amain for Job can apply a specific parameter to all related processes by updating only one time.



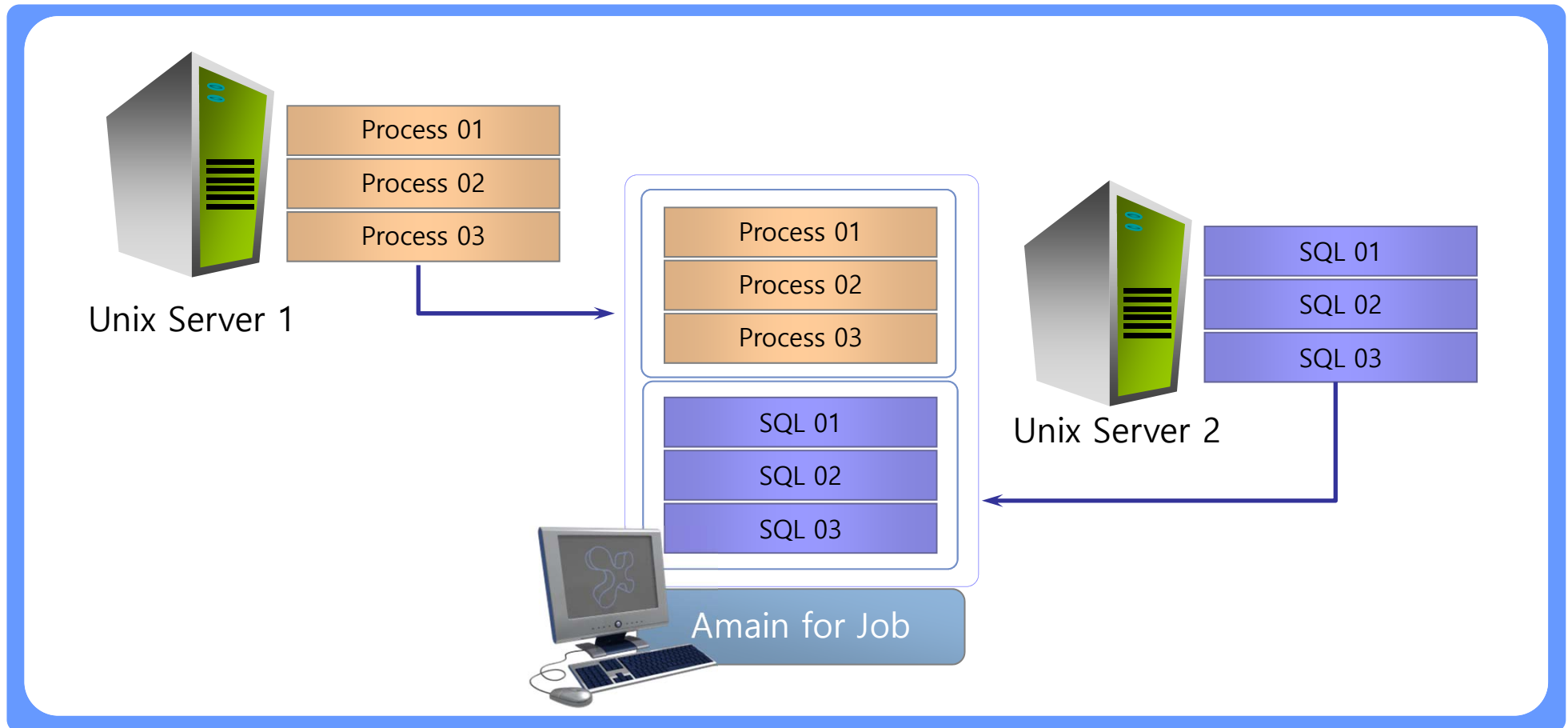
Amain for Job – Easy Register of Amain Process

- ❑ Amain Processes can be registered easily into Amain for Job because Amain for Job is connected with Amain system and able to use Amain Setup information directly when it is needed.



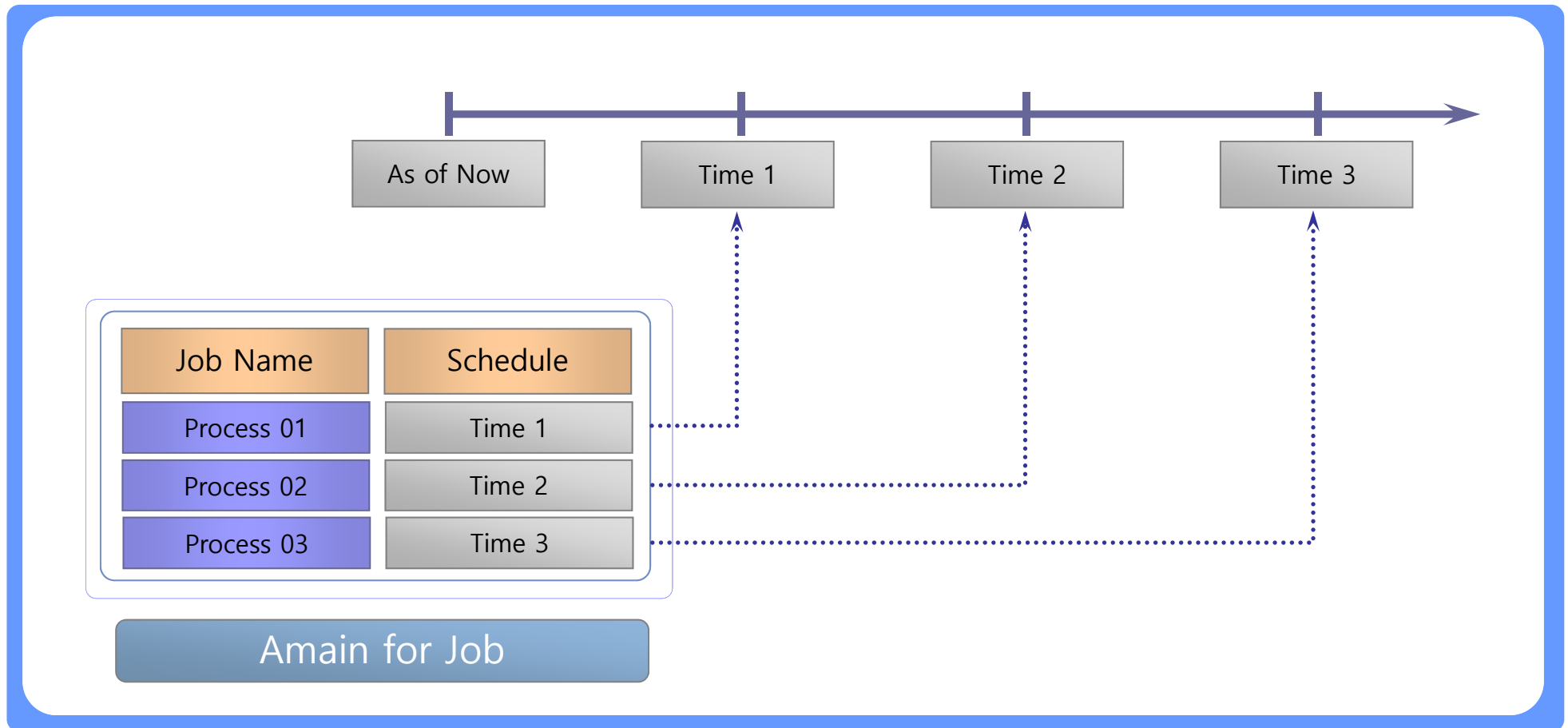
Amain for Job – Integrate Multiple Servers

- ❑ Processes in multiple servers can be integrated into Amain for Job. With this function User can execute and control multiple servers in the same screen.



Amain for Job – Schedule Process in advance

- ❑ Process can be scheduled to execute on a specific data and time. No need to wait for long time to execute a certain process. (under development)



Amain for Job – Main Benefits

❑ Amain for Job is useful Tools for operation of Any system(+Amain) with below benefits.

Efficient Operation	Minimize manual job and mis-operation through the whole sequence
All Kinds of Job	Execute all kinds of Jobs(Amain, PL/SQL, SQL ..) in a Single Screen
User Defined Condition	Define any condition and related action against Input Data or Result
Sequence Control on Error	Decide to go or stop the sequence against Errors or conditions
Dependency Management	Control Job Sequence using Dependency setup and Enable(Skip) option
Easy Job Monitoring	Can Monitor the status of Each Jobs by each execution
Help Troubleshooting	Provide easy access to Log and Job status information in Unix Server



Camel caravan in the dunes, near Nouakchott, Mauritania (18° 09' N, 15° 20' W)
<http://www.spencer-landscapes.com/>



Ørsted offshore wind farm, near Copenhagen, Denmark (55° 40' N, 12° 38' E)
<http://www.ordsted.com/>

neoliz