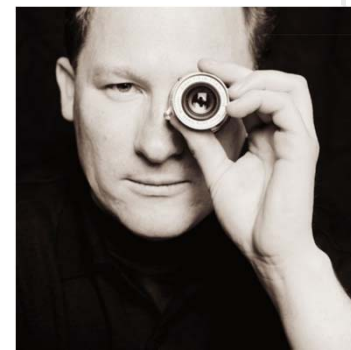
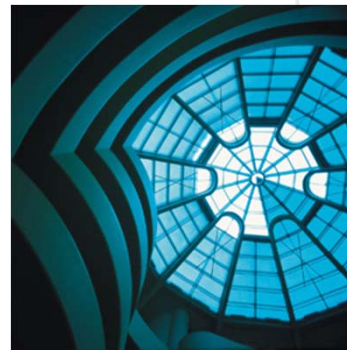
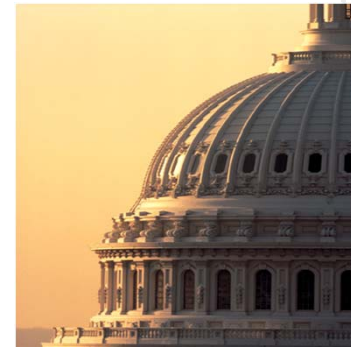


Neoiz Ltd.

Introduction of Amain for ALM





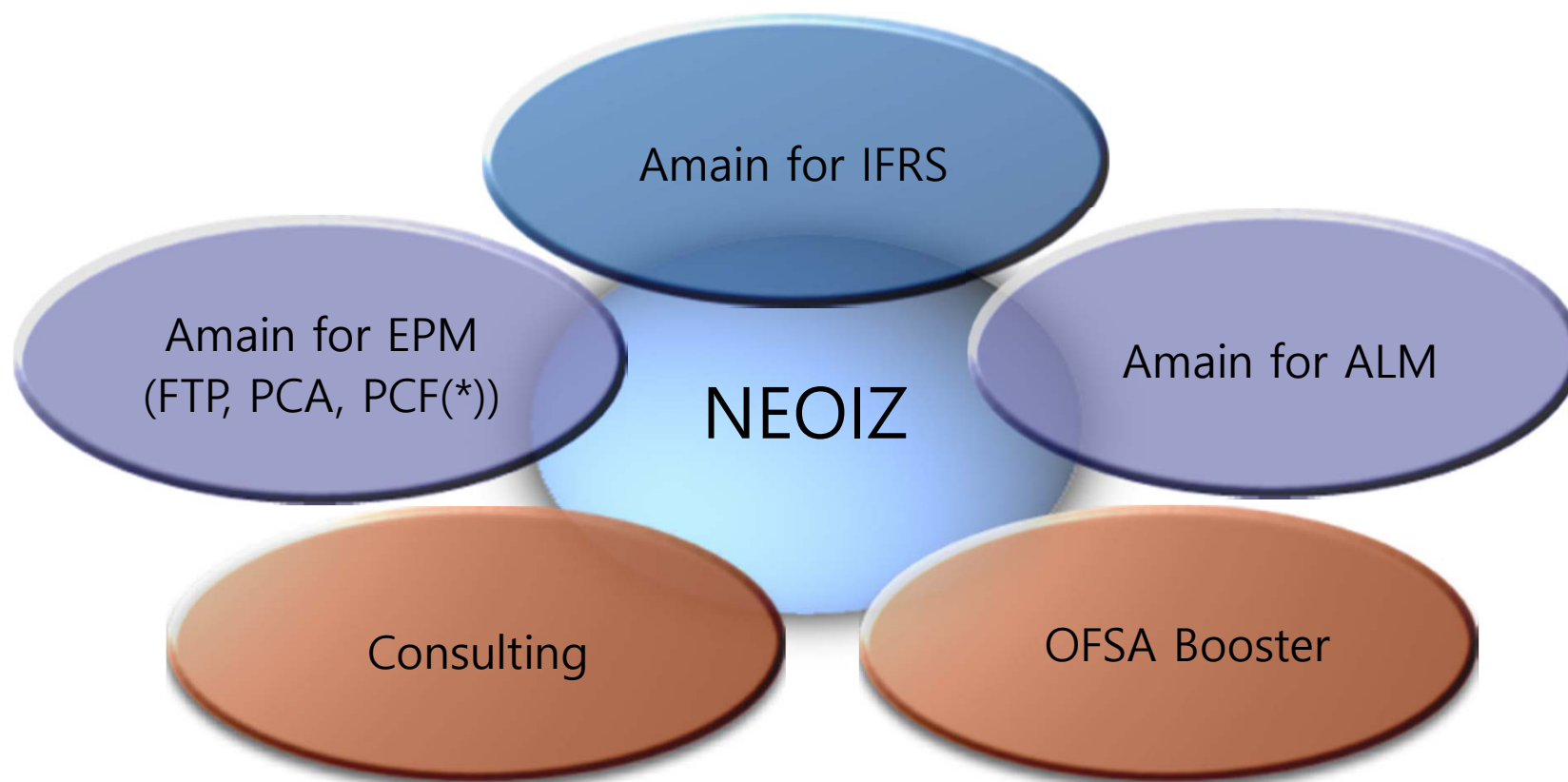
Agenda

I. Amain for ALM

1. Introduction
2. Amain for ALM
3. Amain for Job

NEOIZ – Business Area

- ❑ NEOIZ is a company focused on Financial industry with business areas of EPM(FTP, PCA, PCF), IFRS, ALM and OFSA Booster as follows.



- FTP : Fund Transfer Price
- PCA : Profit & Cost Analyze
- PCF : Profit & Cost Forecast

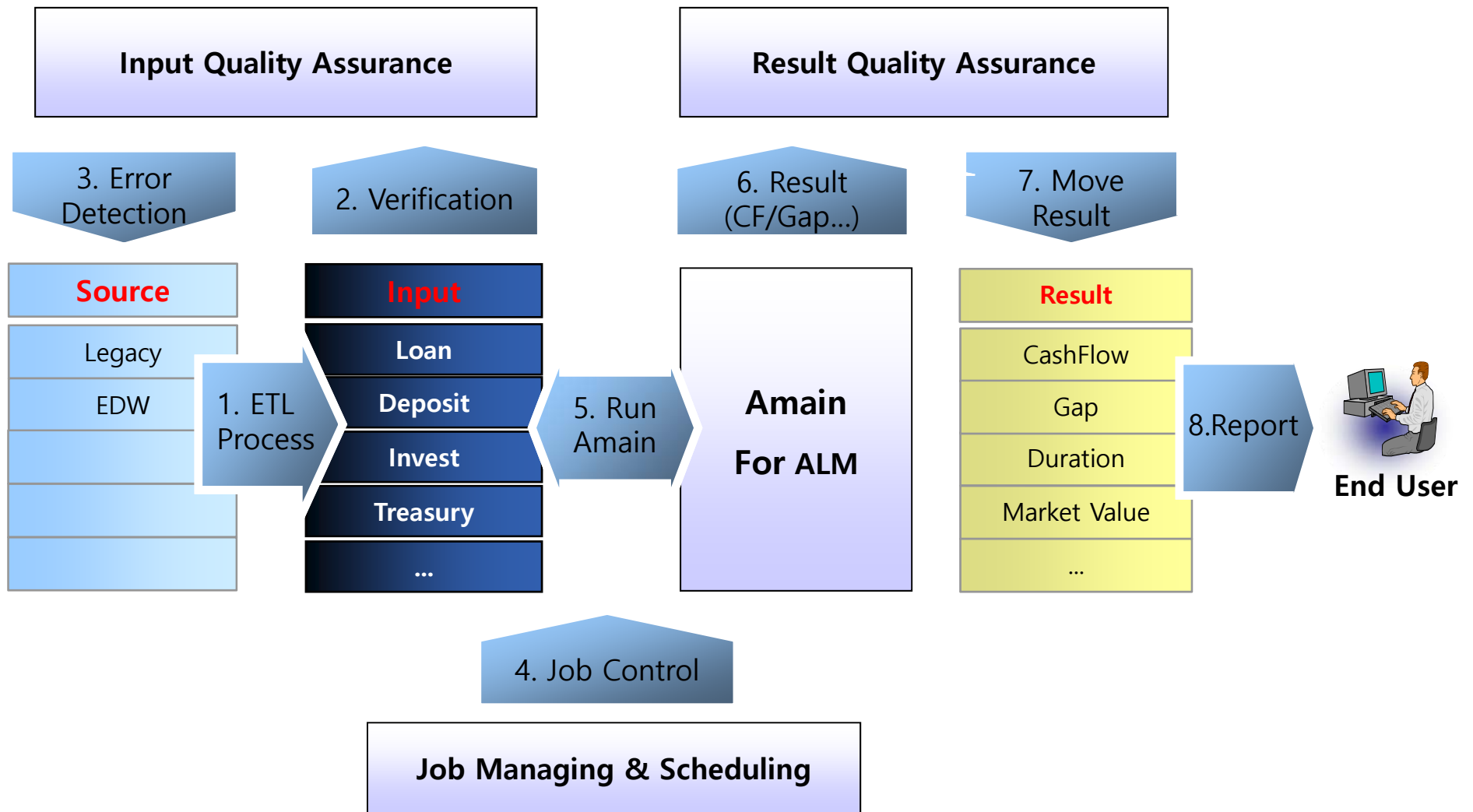
Amain for ALM – Introduction

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



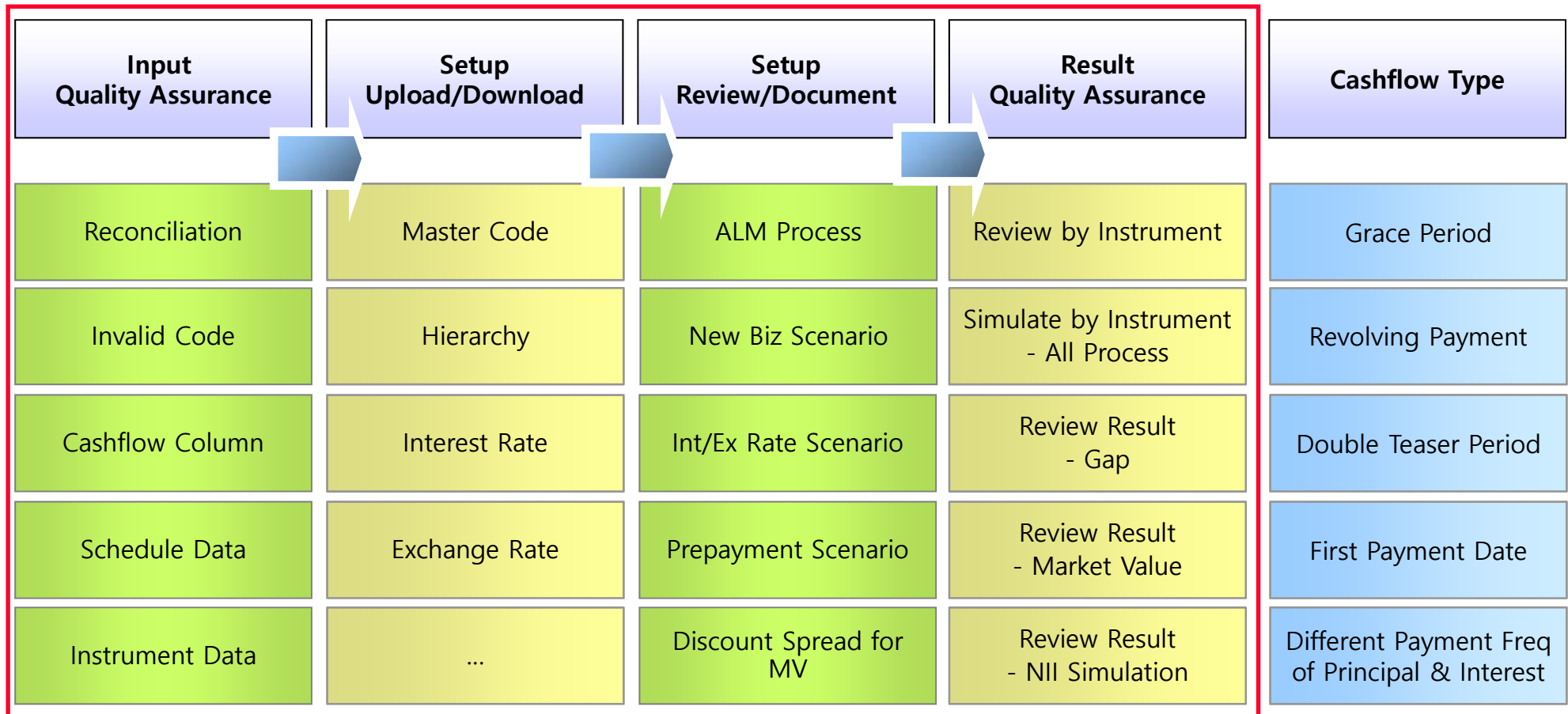
Scope of Risk	Interest Rate Risk	Liquidity Risk
Interest Rate Risk	1 Interest Rate Gap	Liquidity Gap
Liquidity Risk	2 NII Simulation	Liquidity Stress Test
Currency Risk	3 Duration/Market Value, Duration gap	Contractual Cashflow / Expected Cashflow
	4 NPV Simulation	LCR / NSFR Calculation

Amain for ALM - System Flow



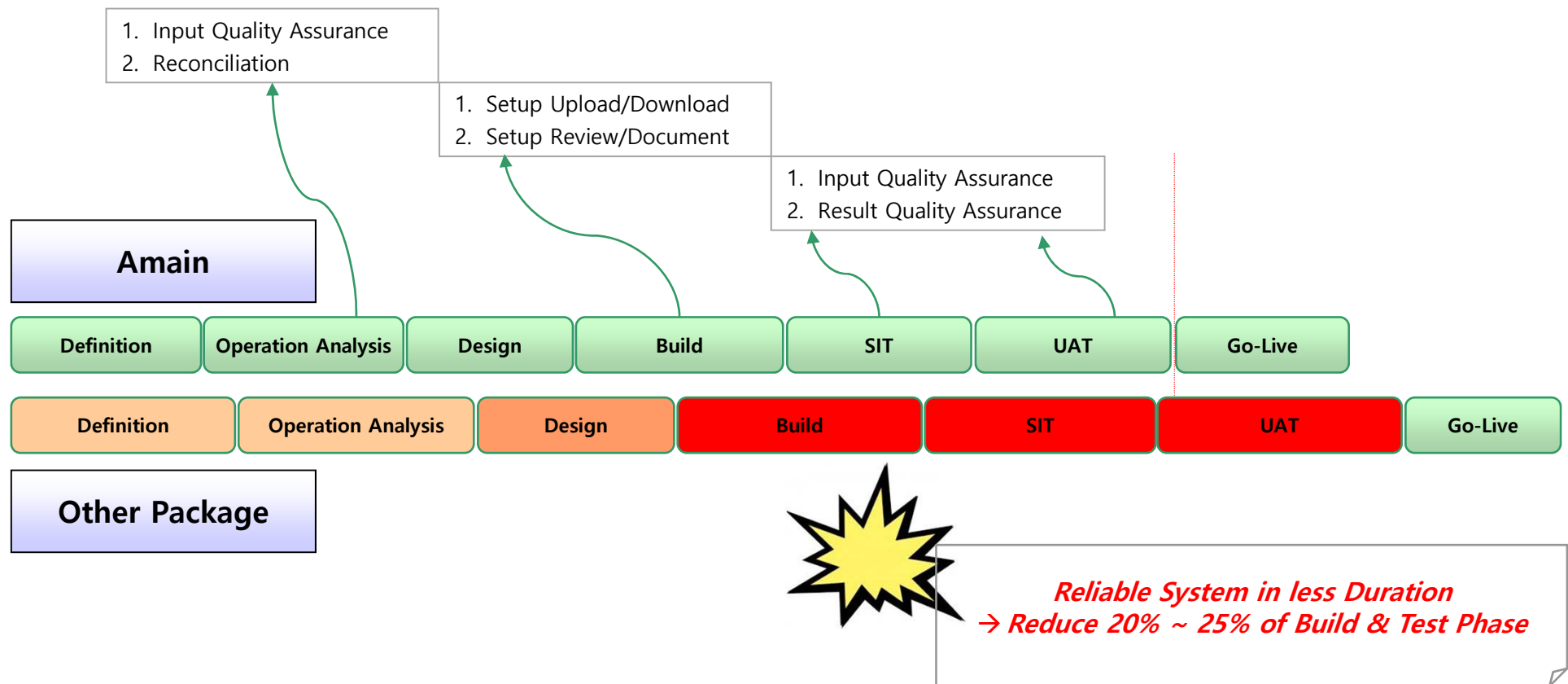
Amain for ALM – Main Menus for User Convenience & Maintenance

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

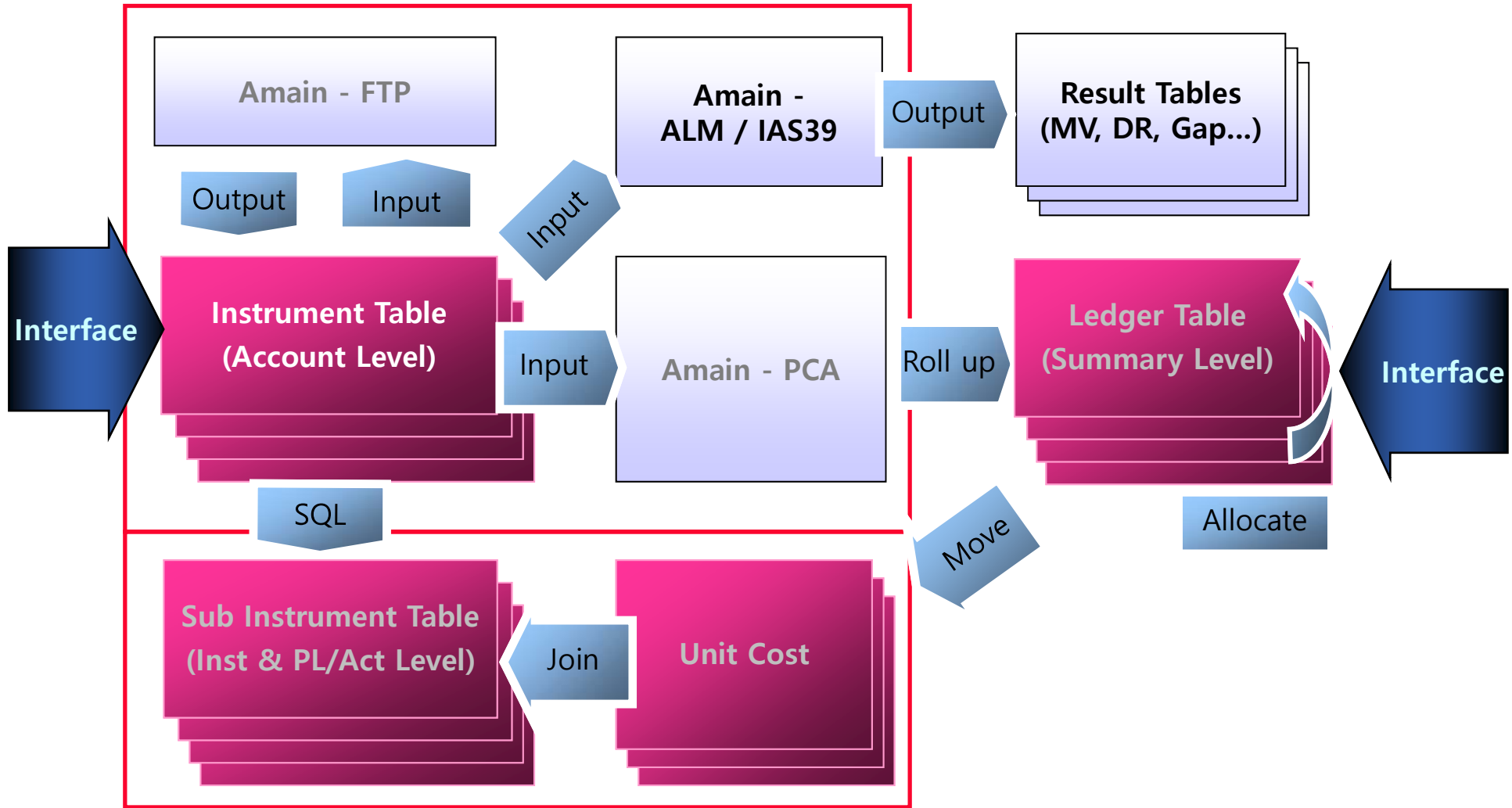


Amain for ALM – Reliable System in Less Duration

- ❑ Amain enables customer to implement ALM system in less duration with higher reliability by providing wide function coverage to meet user requirements and system requirements

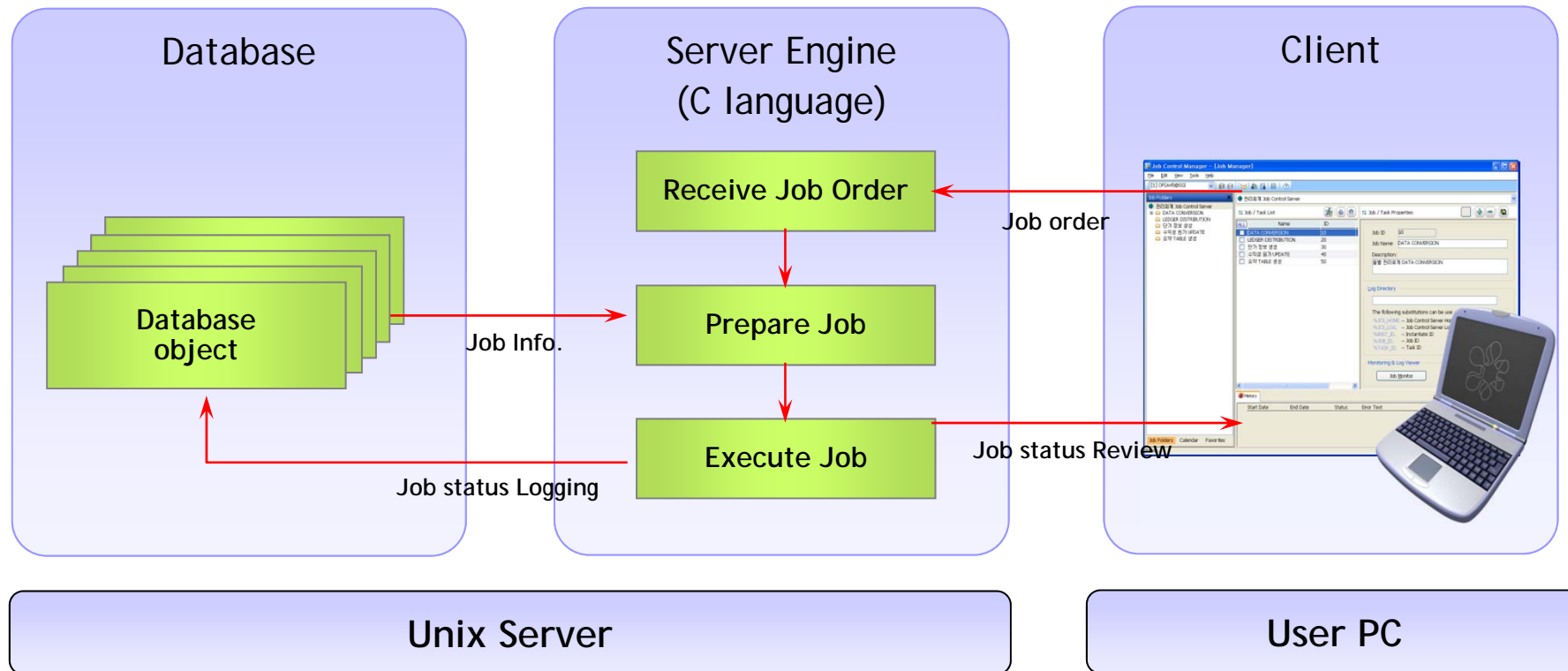


Amain for ALM - Data Flow & Main Tables



Amain for ALM - System Architecture

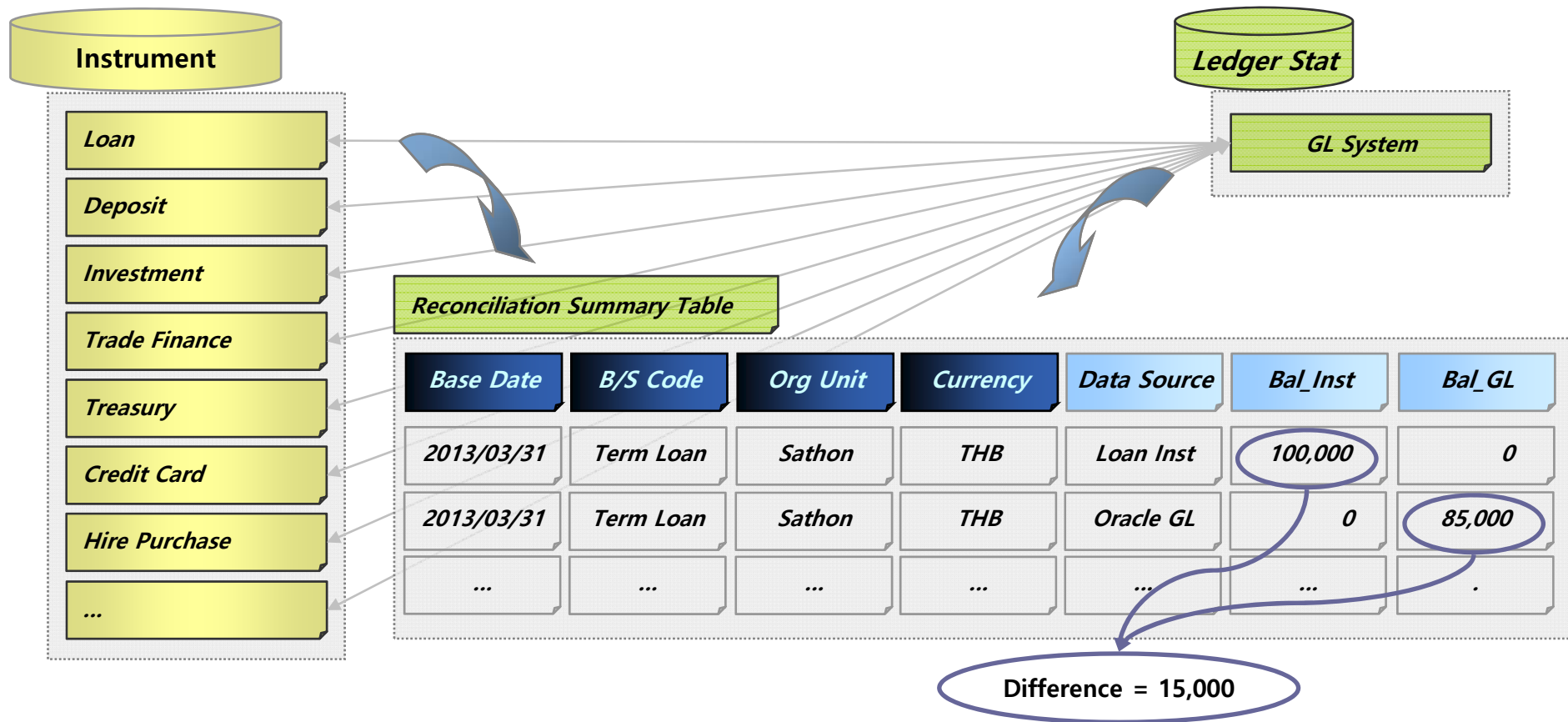
- ❑ Amain consists of 3 parts – Client(User Interface), Server(Engine) and Database



- 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.

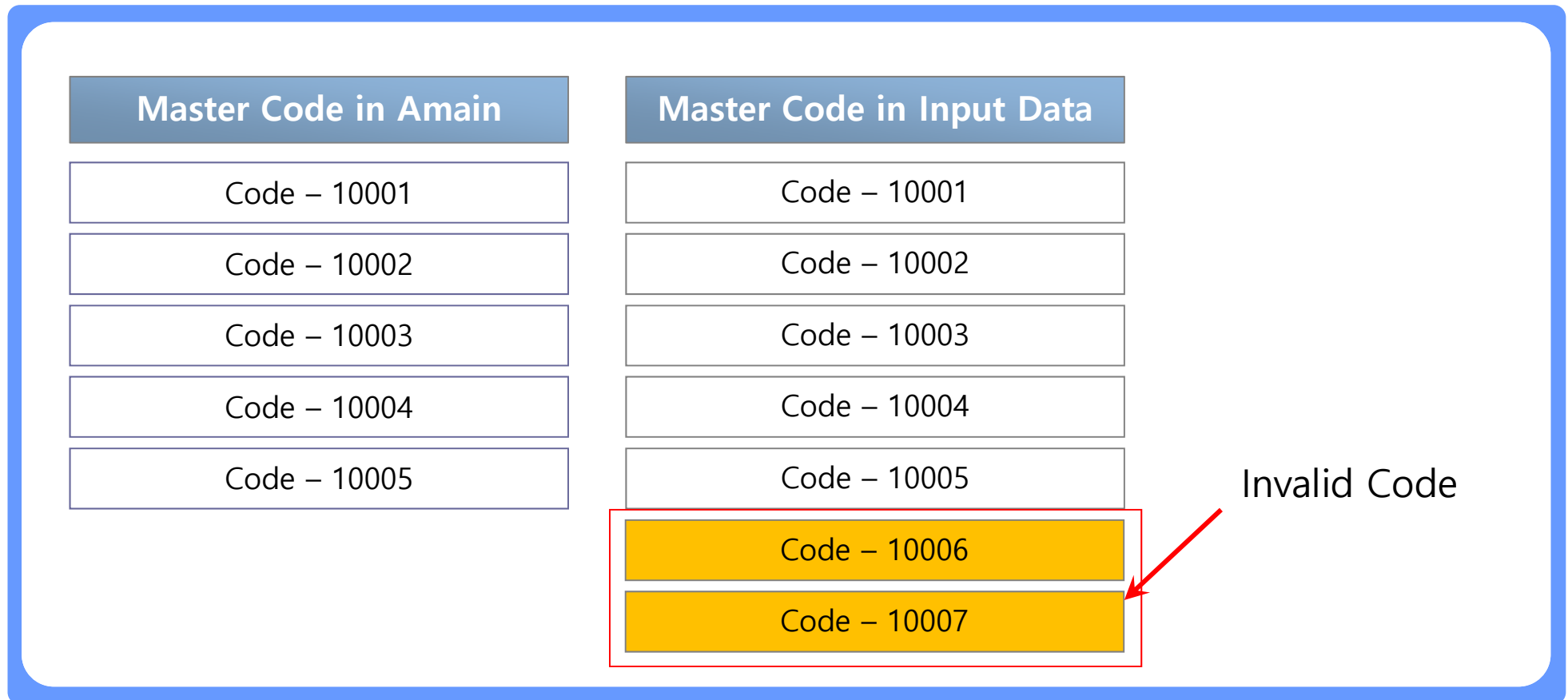
Amain for ALM – Reconciliation

- ❑ 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.



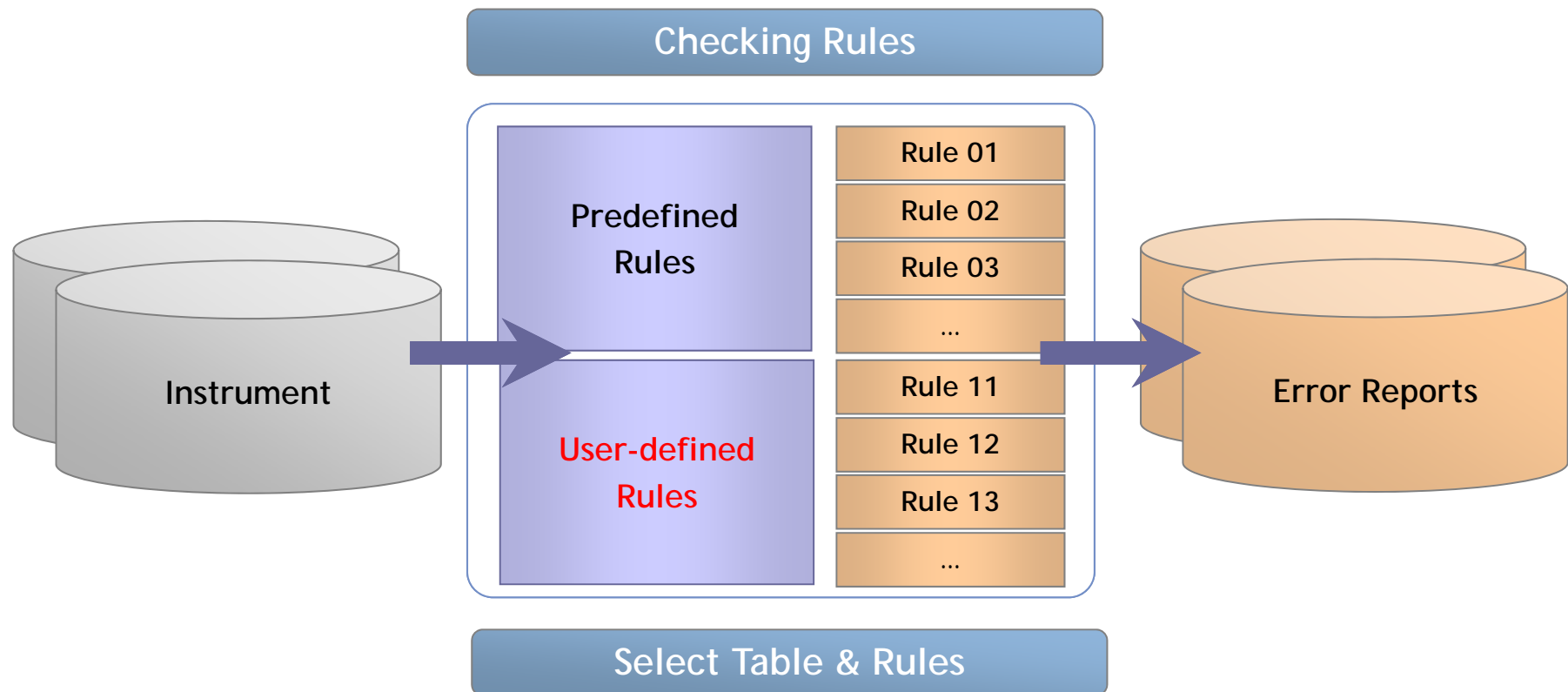
Amain for ALM – Invalid Master Code Checking

- ❑ 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.



Amain for ALM – 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 ALM – Setup Verification

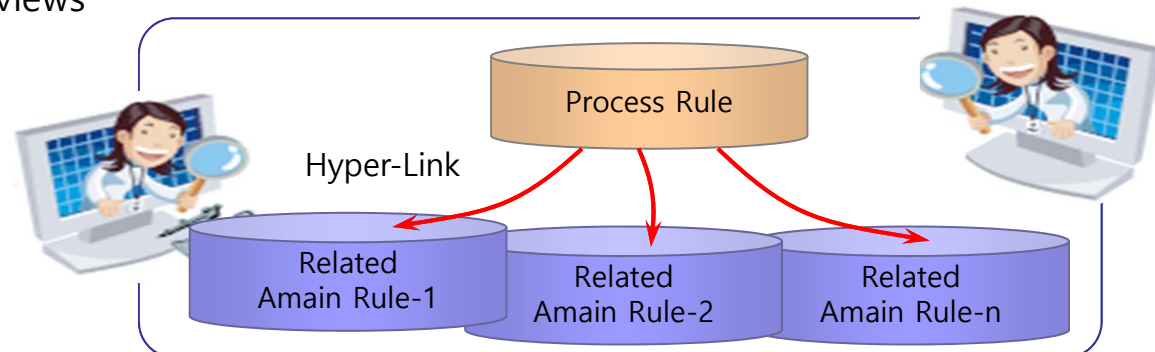
- ❑ Amain provides intuitive user interface, setup review function and hyper-link between Amain rules to help user verify the Amain setup.

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.

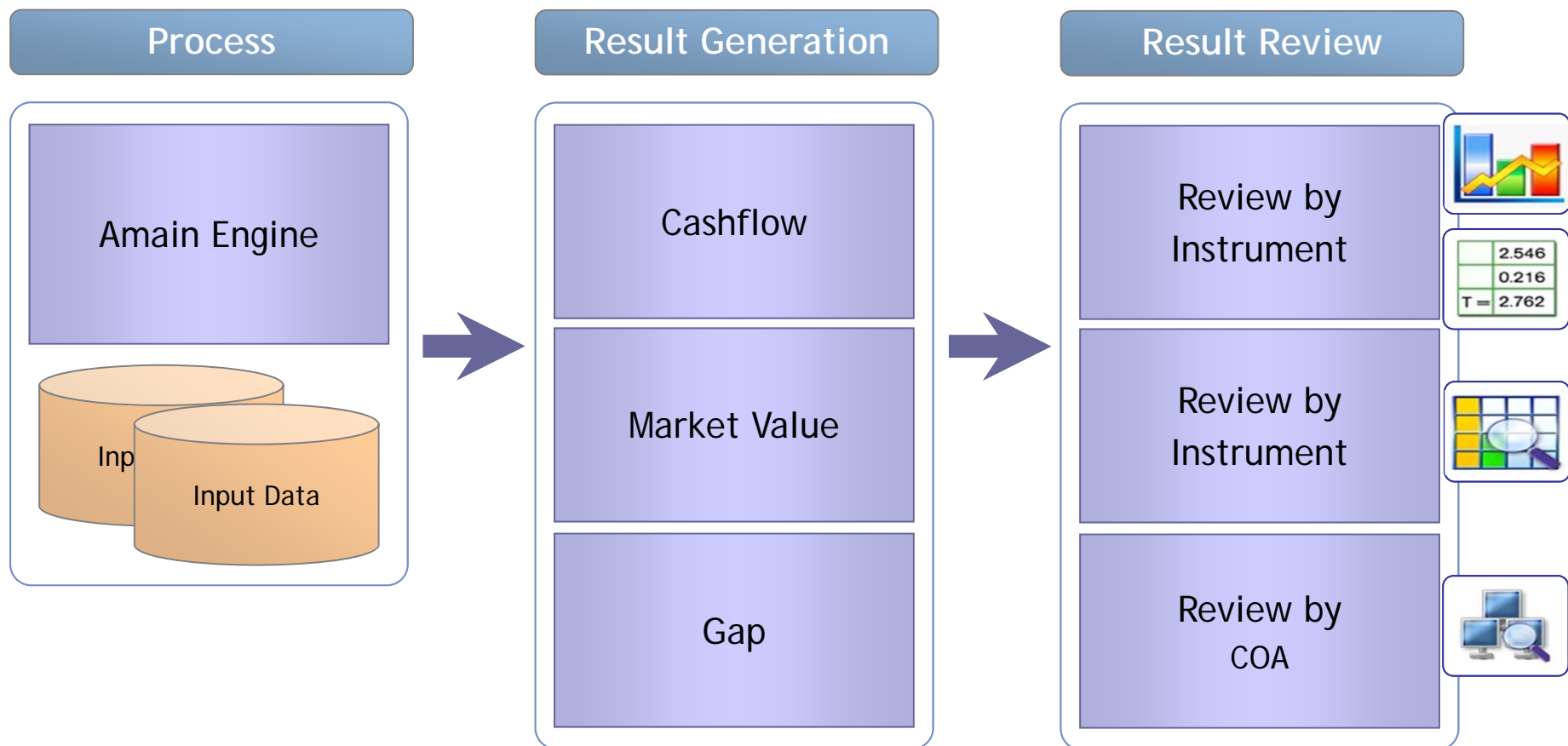
Hyper-Link between Amain Rules Provide a function to navigate between menus based on Hyper-Link. With this function any Rules can be reached by jumping down from Process Rule.

Verify in various point of views



Amain for ALM – Result Quality Assurance

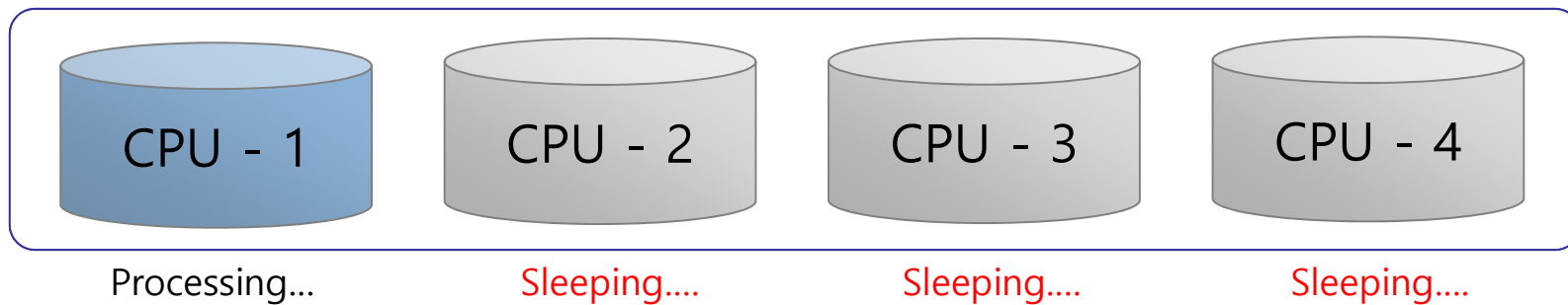
- ❑ Amain provides several menus to check the Amain results in various kinds of view such as review by single instrument, review by instrument list and review with hierarchy for user's convenience.



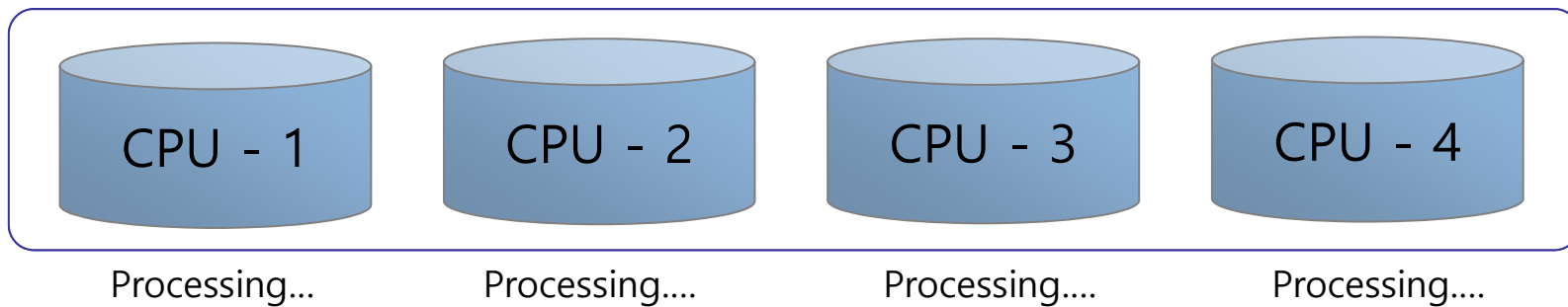
Amain for ALM – Multi Processing

- ❑ 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



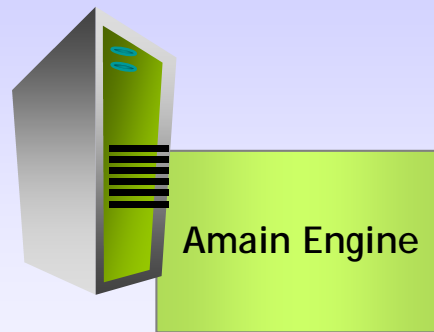
Amain for ALM – High Performance

- ❑ 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.

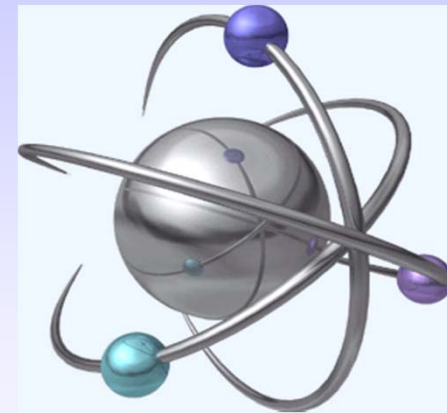
Multi Processing



C Language



Efficient Algorithm



Amain for ALM – High Performance

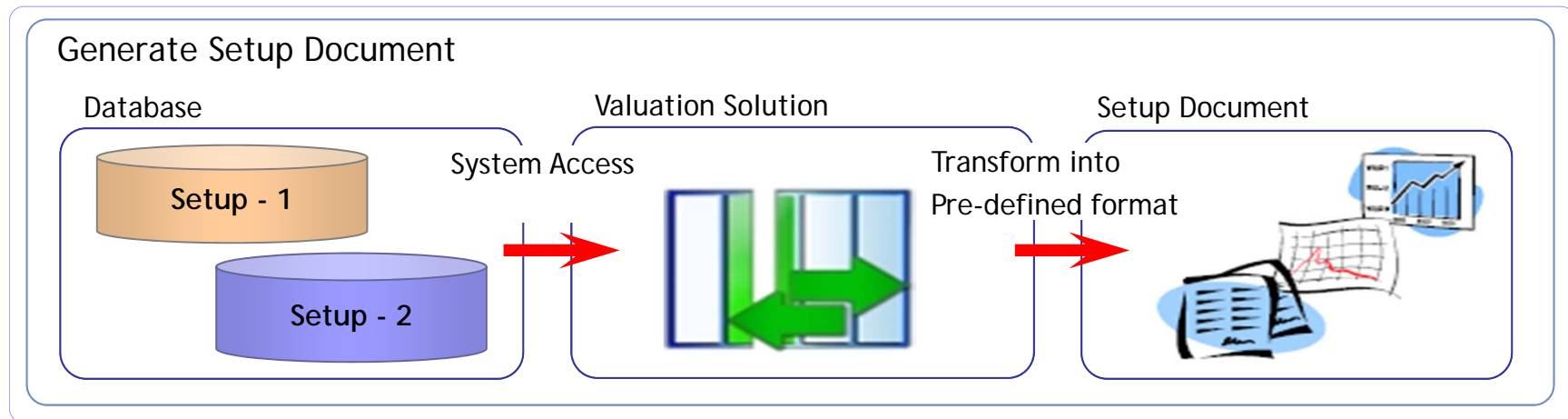
Client	Task	No of Account	Run Time	H/W Model	CPU	Memory
Client A	Market Value (No Rate Scenario)	4,000,000	75 Mins	64 HP Server RX 8640	12	24 G
	Gap Projection (No Rate Scenario)	4,000,000	60 Mins			
Client B	Market Value (No Rate Scenario)	2,000,000	60 Mins	64 HP Server RX 8640	6	24 G
	Gap Projection (No Rate Scenario)	2,000,000	50 Mins			
Client C	Market Value (No Rate Scenario)	10,000,000	150 Mins	IBM P570 9117-MMA	6	24 G
	Gap Projection (No Rate Scenario)	10,000,000	120 Mins			

Illustrative

Amain for ALM – Automated Documentation

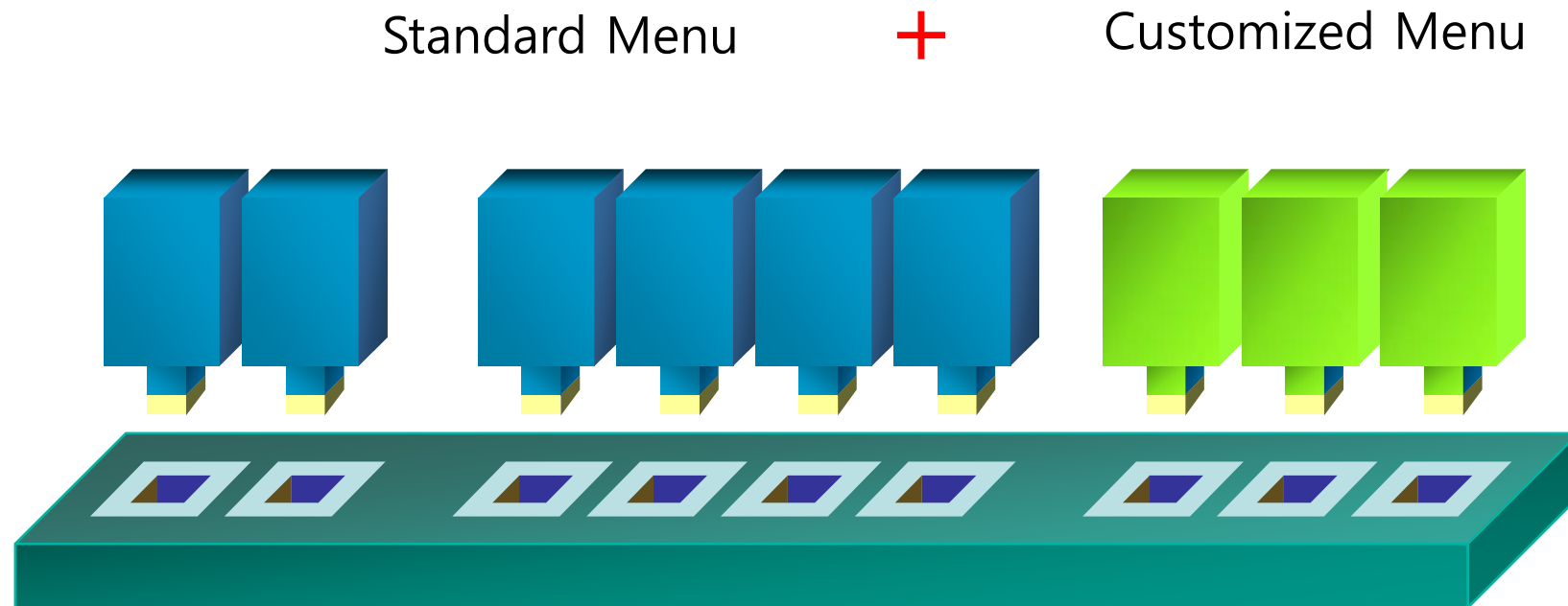
- ❑ Amain provides a function to generate Setup Document to keep the consistency between Amain system and documentation automatically.

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 ALM – Easy Customization

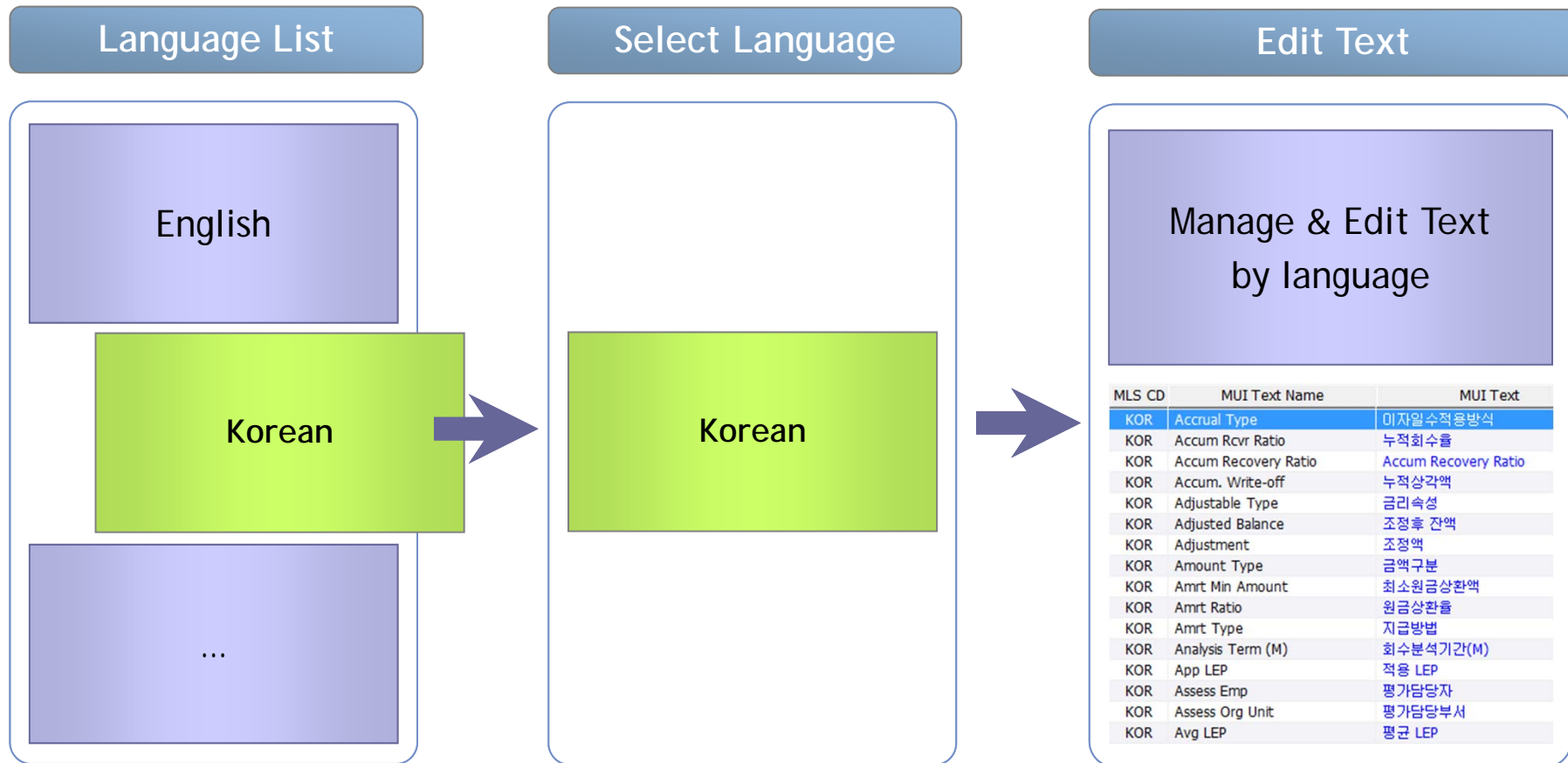
- ❑ Amain provides Tailor-made Menu for each customer by combining Standard Menu and Customized Menu



Amain Menu for Each Customer

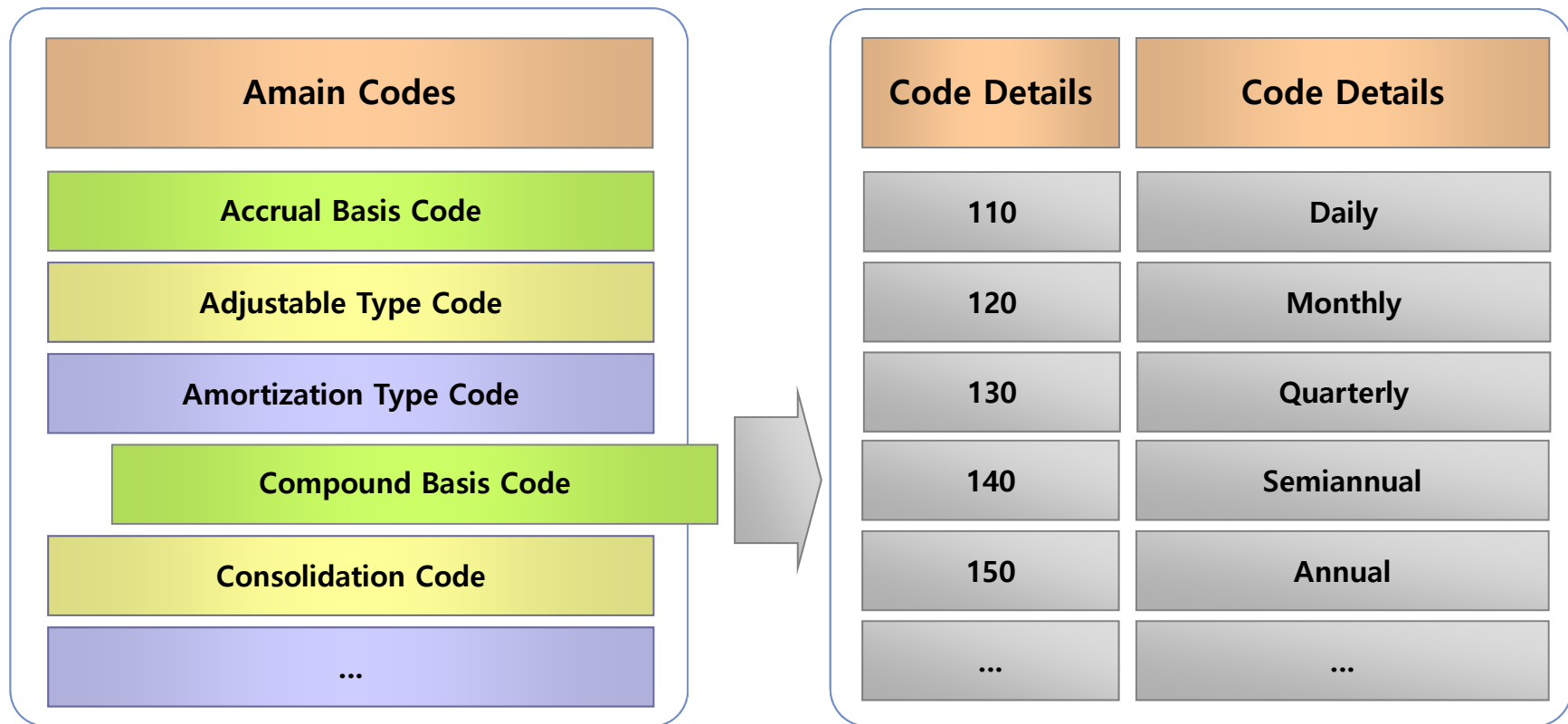
Amain for ALM – Multi Language Support

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



Amain for ALM – 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 ALM – Wrap Up

Check Input Data

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

Get Results on Time

Batch Job Running : Provide Job managing function for execution

Error Log : Provide detail log information when error occurs

Result Validation : Provide a function to Validate Amain Results

Setup Review : Verify Amain Setup against User requirements

Efficient Maintenance

One Stop Service : Put together all Functions for maintenance

Save User Time : **Focus on Analysis** rather than maintenance

Setup Document : Make Setup Document and **Detect Setup Mistake** quickly



Agenda

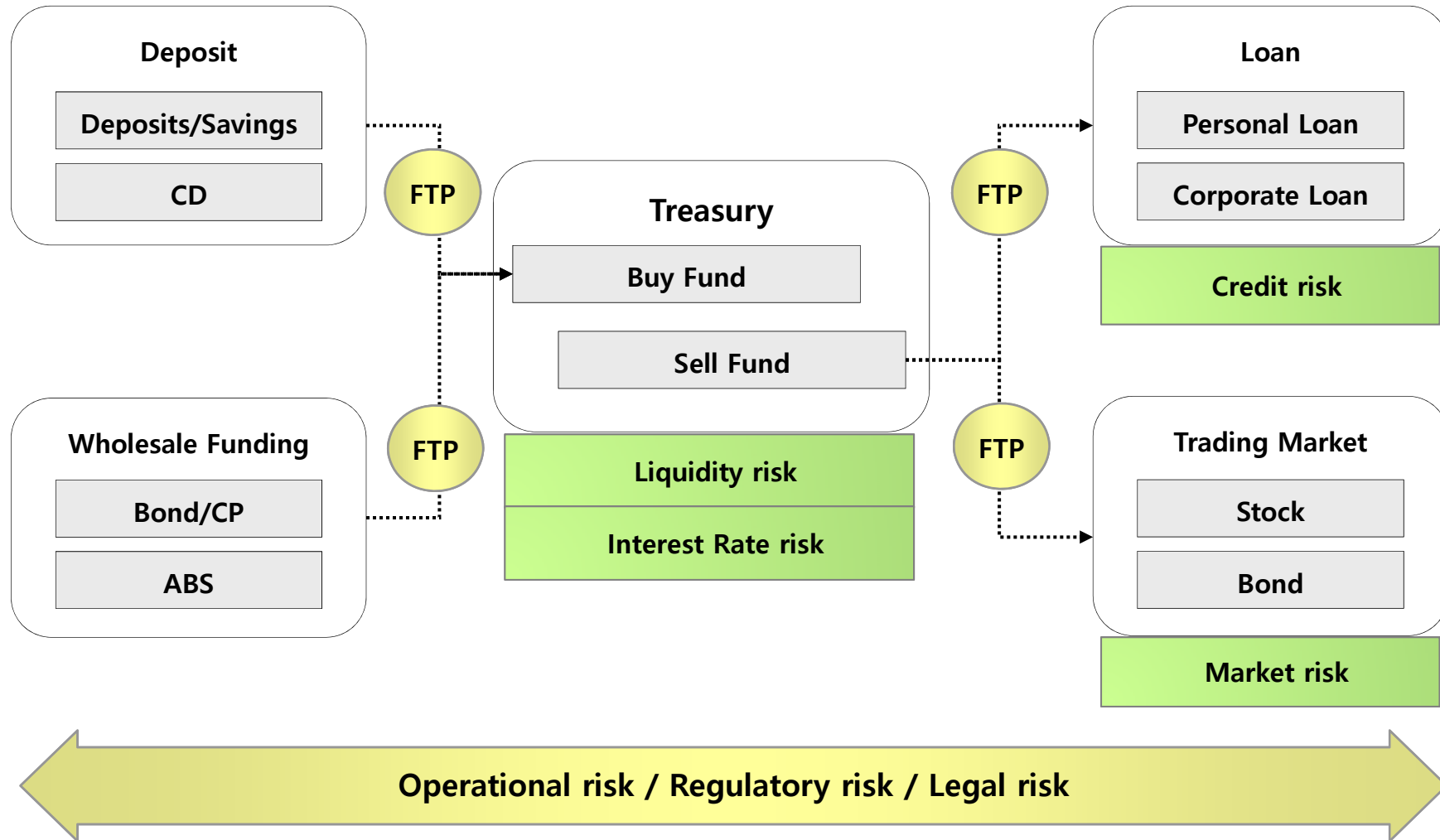
I. Amain for ALM

1. Introduction
2. Amain for ALM
3. Amain for Job

- **Key Objectives of ALM**

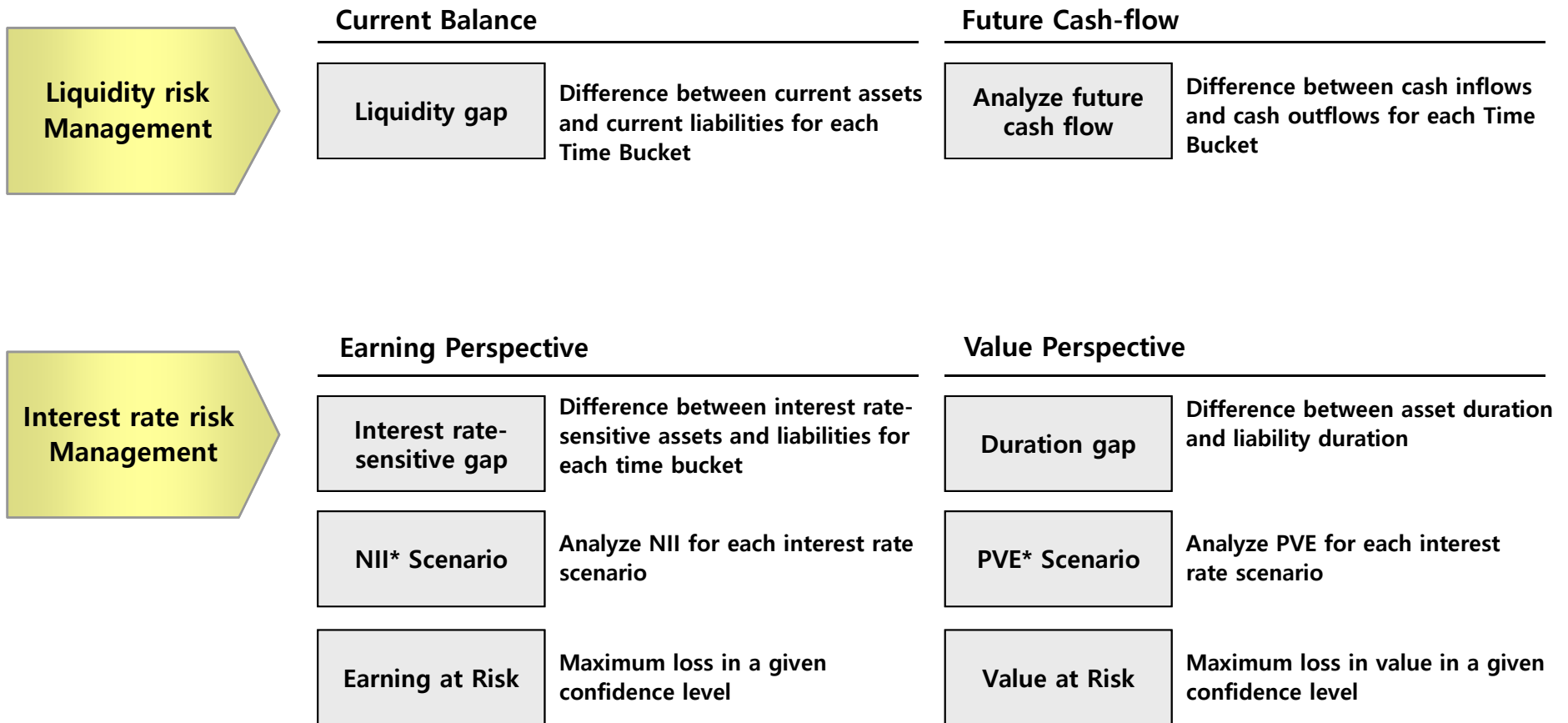
- ✓ Perform structured risk analysis including
 - Interest rate risk
 - Liquidity risk
 - Exchange Rate risk
- ✓ Reduce net interest income volatility
- ✓ Support net interest income growth over interest rate cycles
- ✓ Manage balance sheet to be in good shape against interest and liquidity volatility
- ✓ Separation of Data from Assumptions

Amain for ALM - Risk Types in Financial Institution



Amain for ALM - Risk Indicators in ALM System

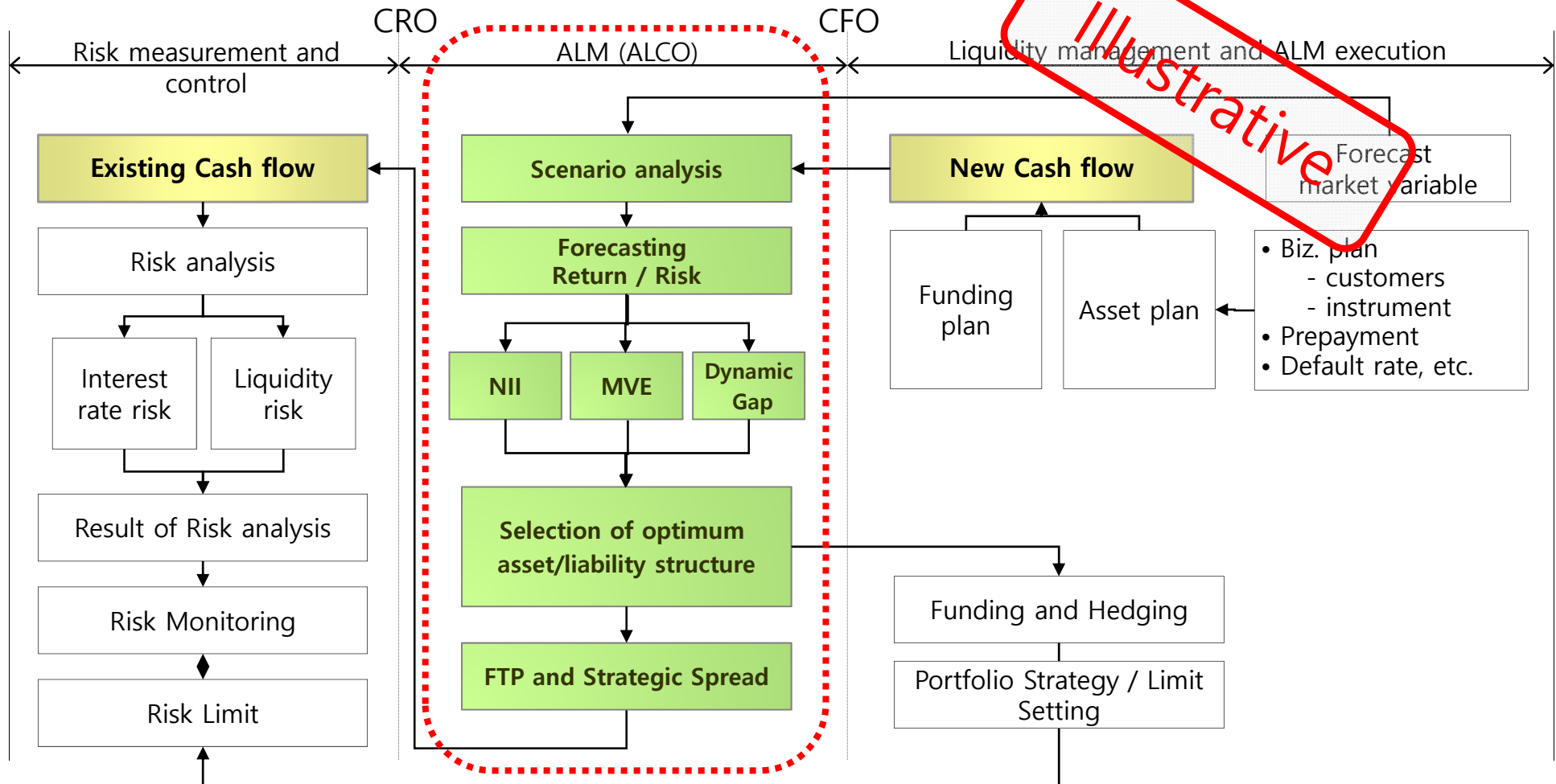
In order to maximize profit while ALM risks are kept in a given limit, most financial firms measure a variety of metrics to monitor the level of ALM risks to which they are exposed.



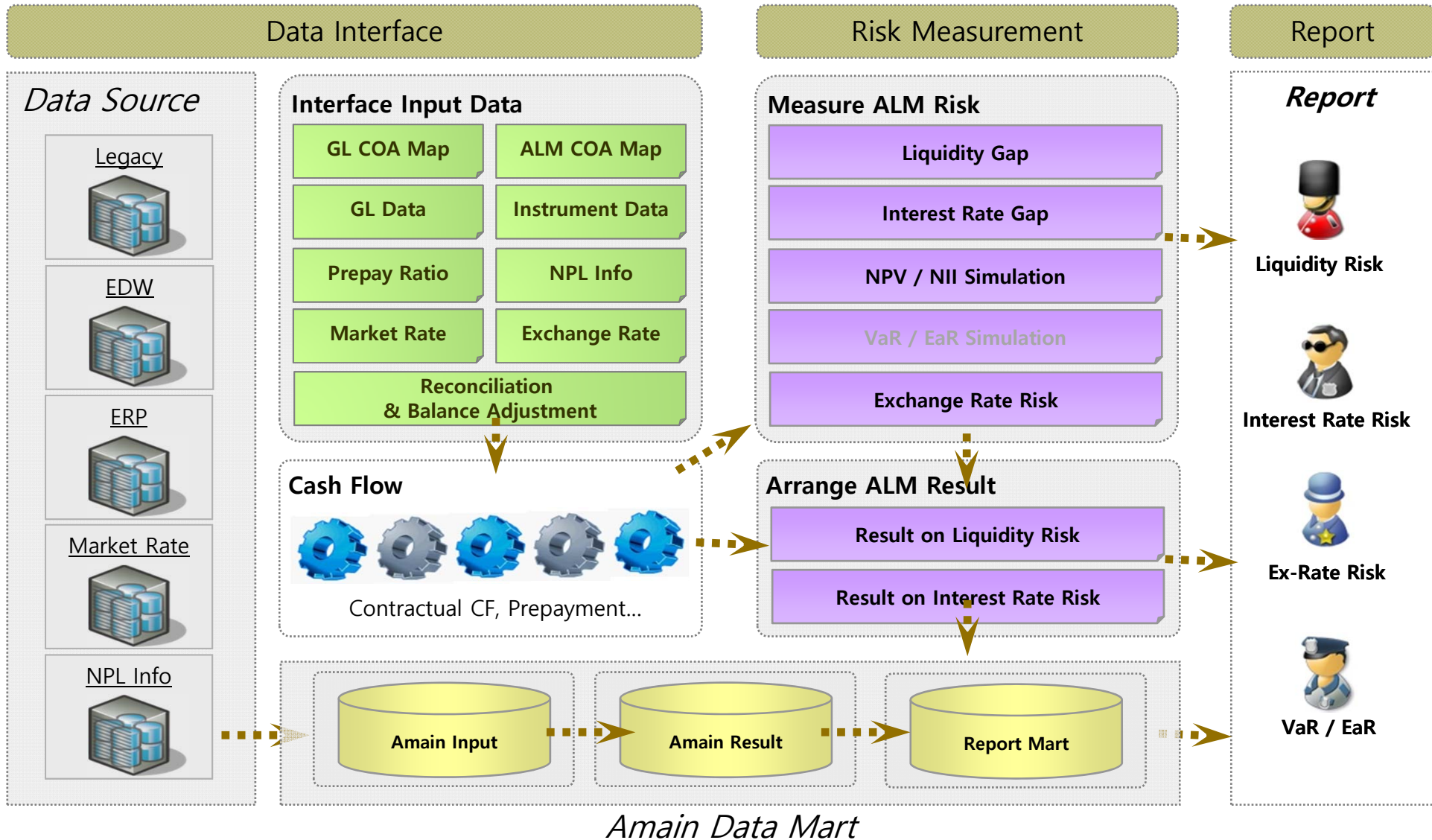
- NII : Net Interest Income
- PVE : Present Value of Equity

Amain for ALM – ALM Process Flow

In order to set optimum asset liability structure in the perspective of risk / return, ALM requires inter-functional collaboration of mainly CFO and CRO.

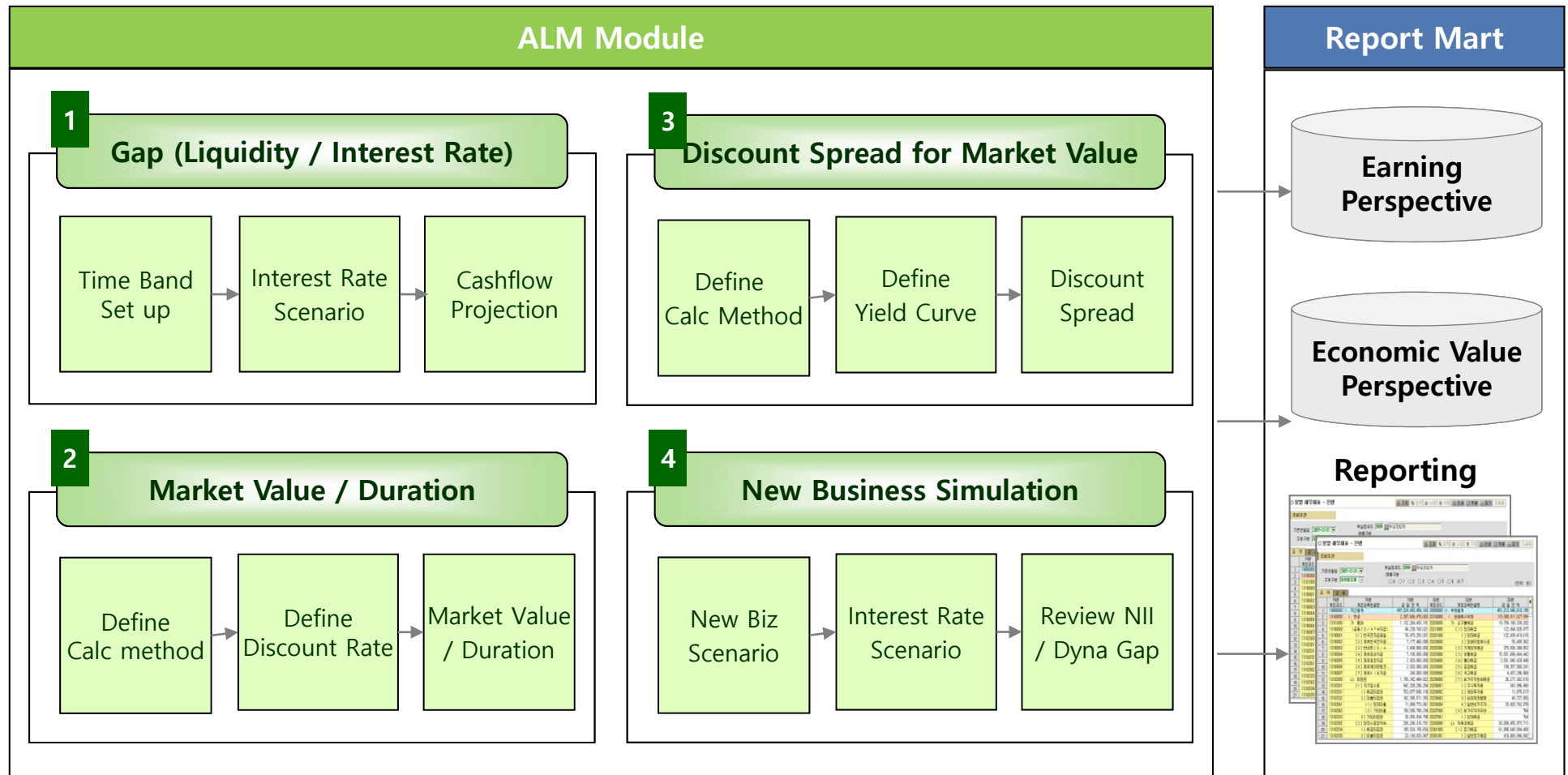


Amain for ALM – ALM System Structure



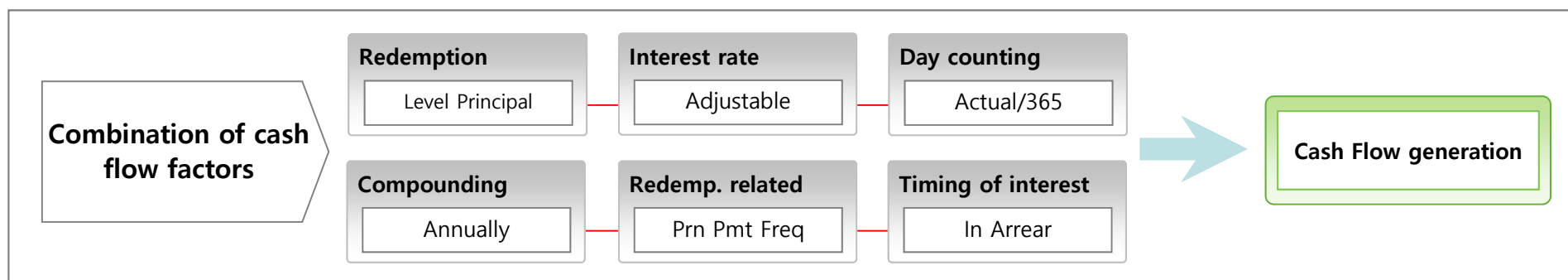
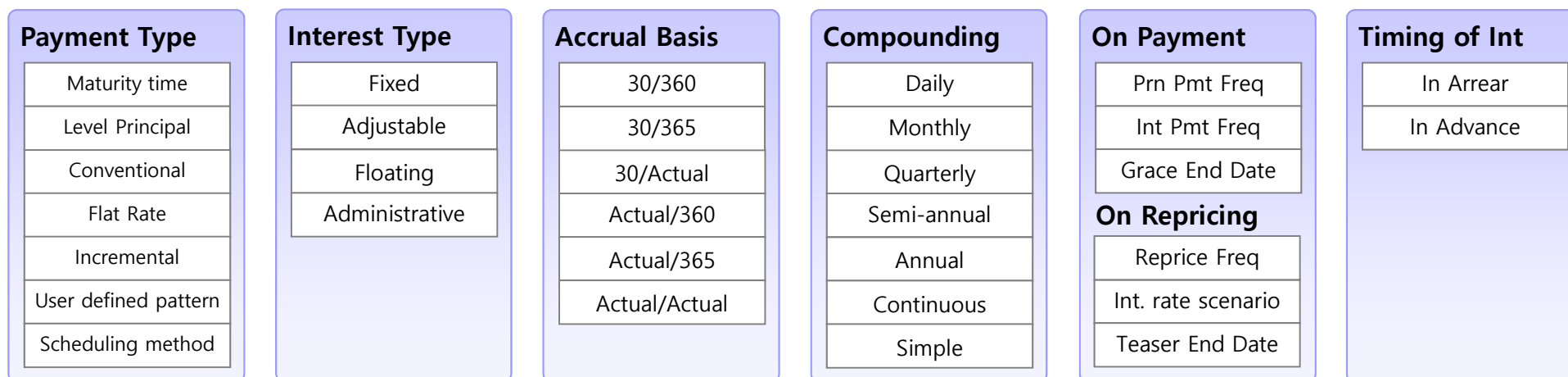
Amain for ALM – Process Flow

- With strong Cashflow engine, Amain provides flexible Discount Method and generate Market value and Duration as long as Gap information.



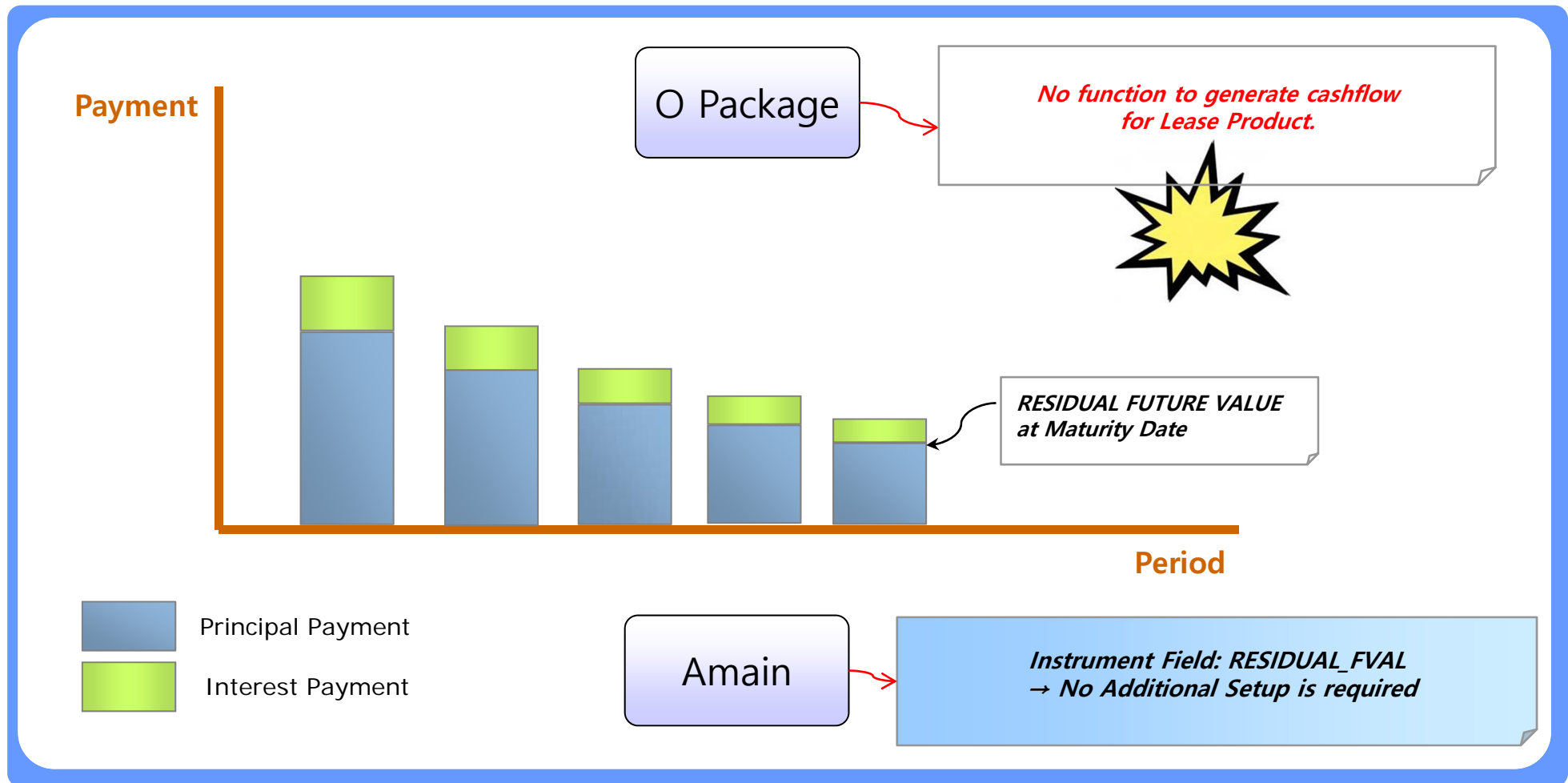
Amain for ALM – CashFlow Type : Various Factors

- ❑ Cashflow engine generates exact cash flow by considering various factors such as Amortization type, Interest type, Payment Date, Accrual basis, Compounding and etc.



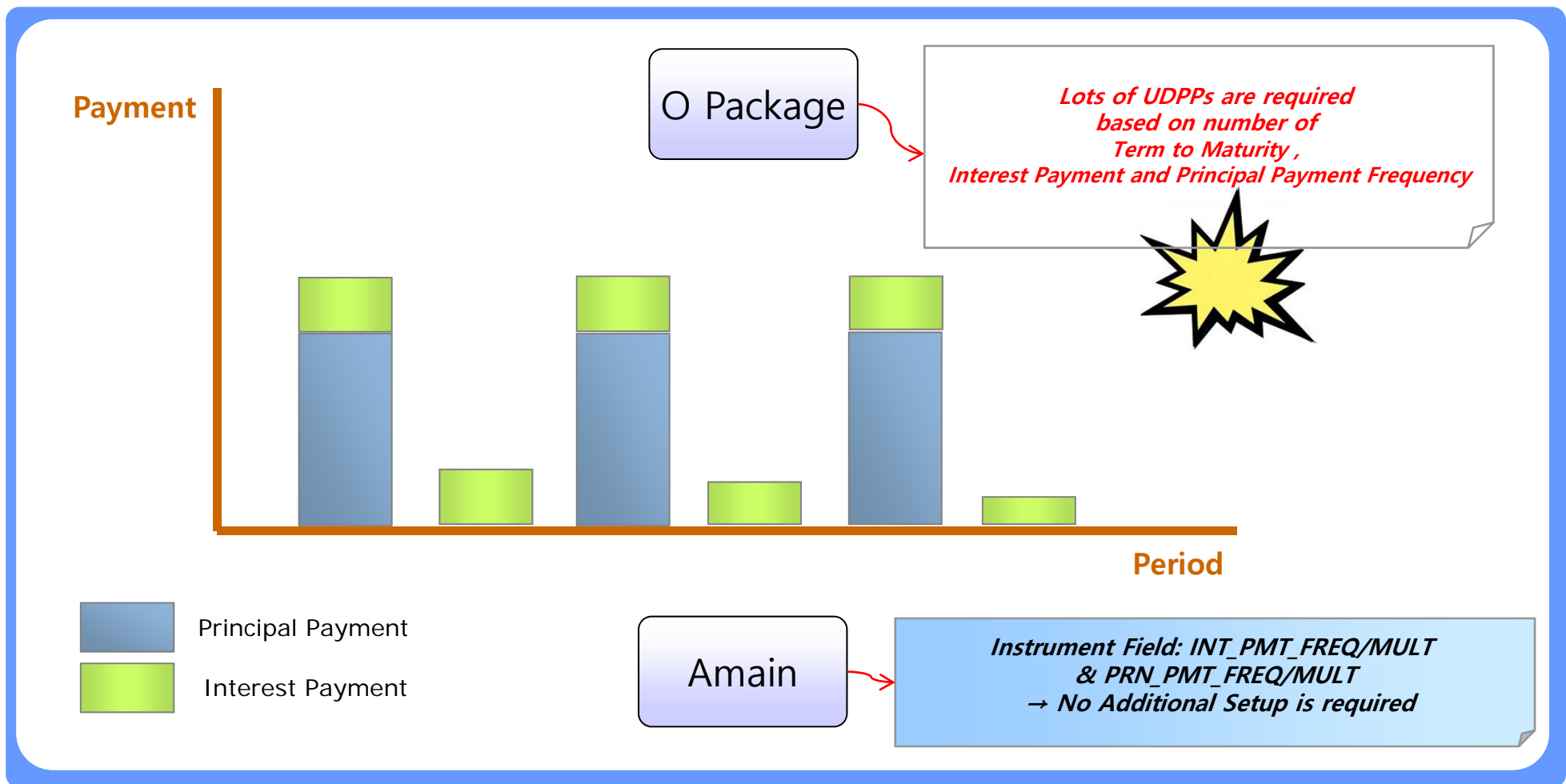
Amain for ALM – CashFlow Type : Lease Product

- ❑ Mangum can generate Cashflow for Lease product using one column which is RESIDUAL_FVAL even though O Package can't handle Lease product.



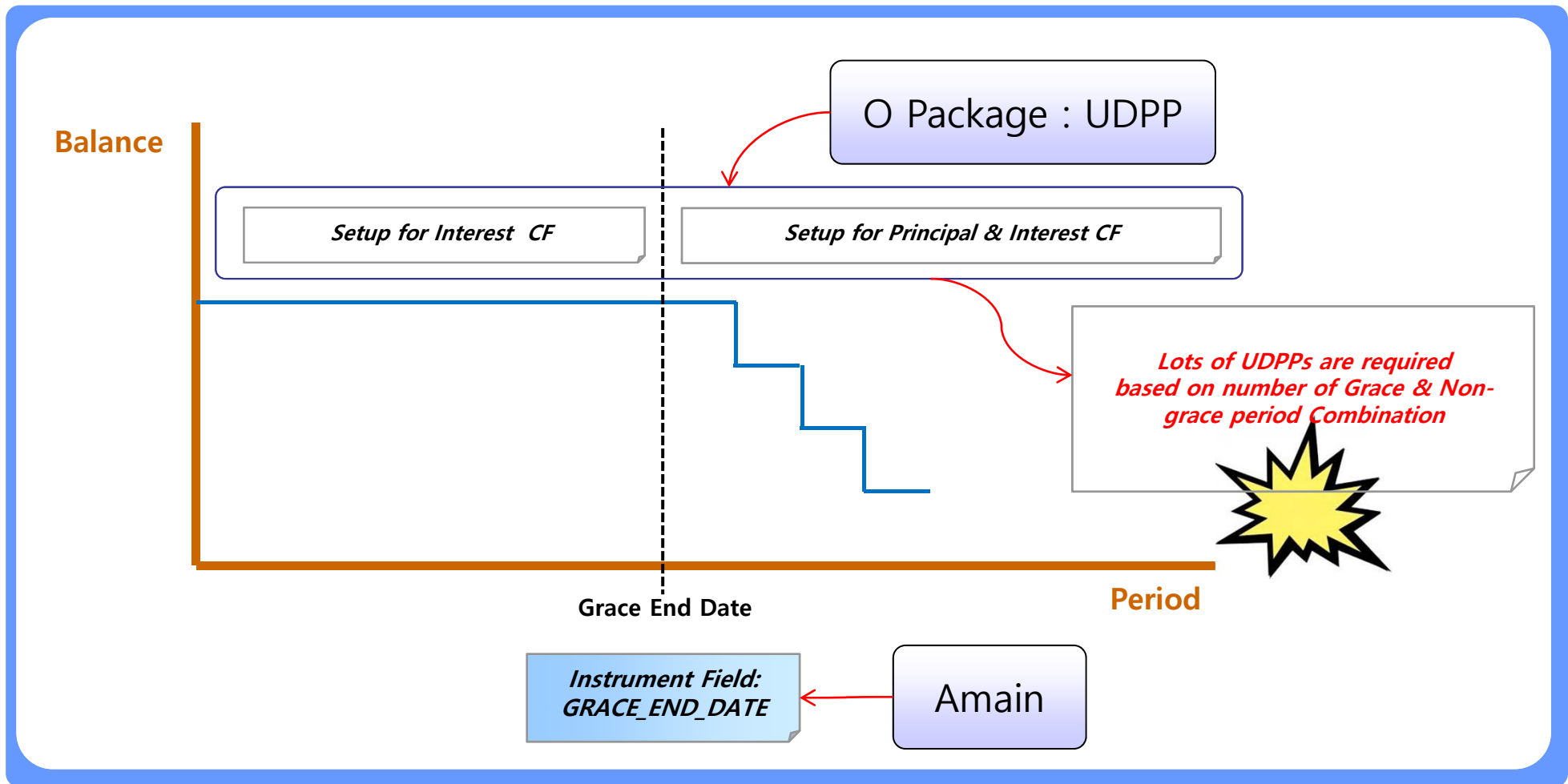
Amain for ALM – CashFlow Type : Different Payment Frequency

- ❑ O Package can't handle this case because it has only one Payment Frequency. but Mangum provides two Payment Frequency to generate accurate Principal and Interest Cashflow.



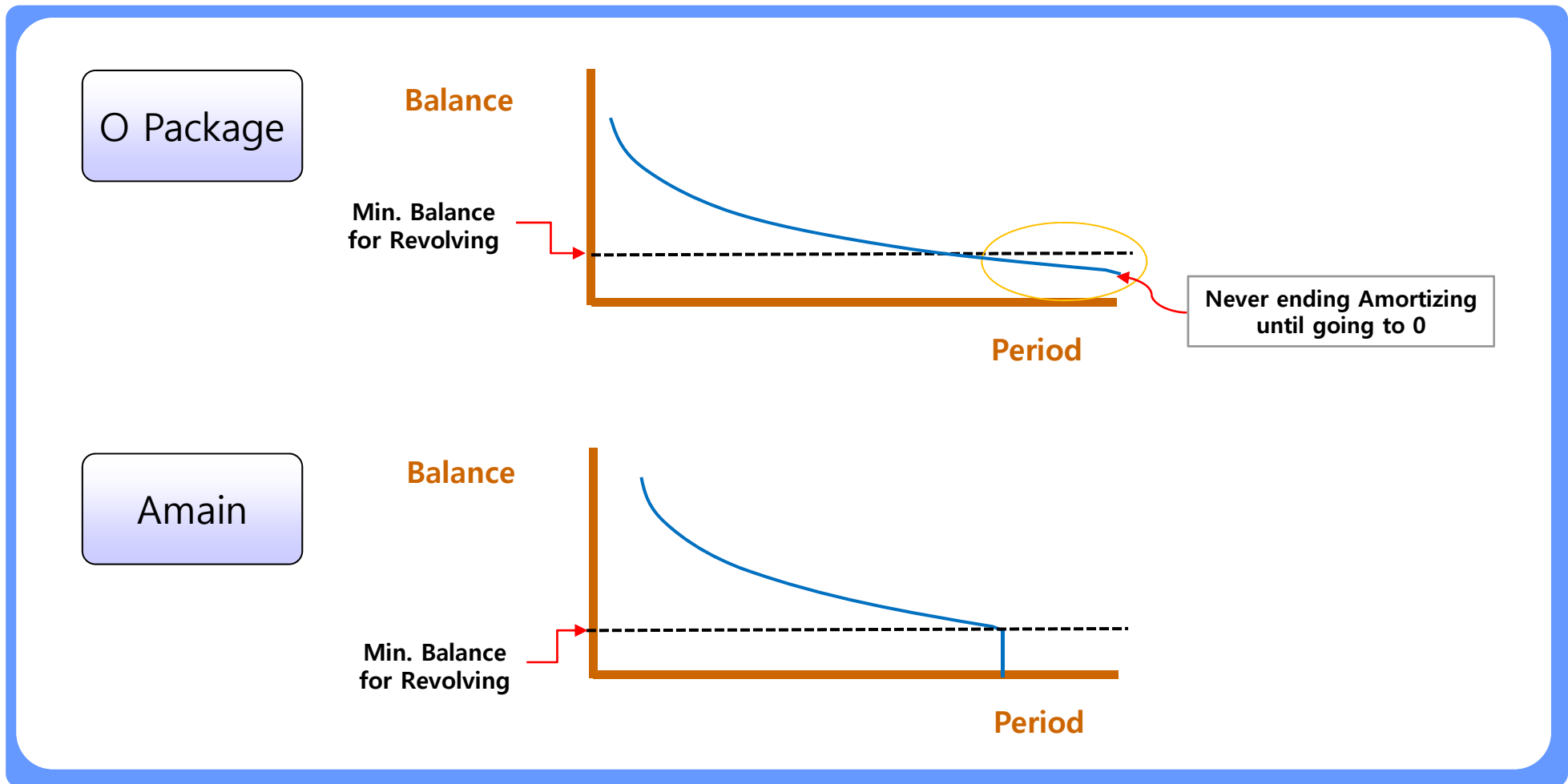
Amain for ALM – CashFlow Type : Grace Period

- ❑ Amain generates cashflow with Grace Period based on Grace_End_Date which means ending date of grace period.



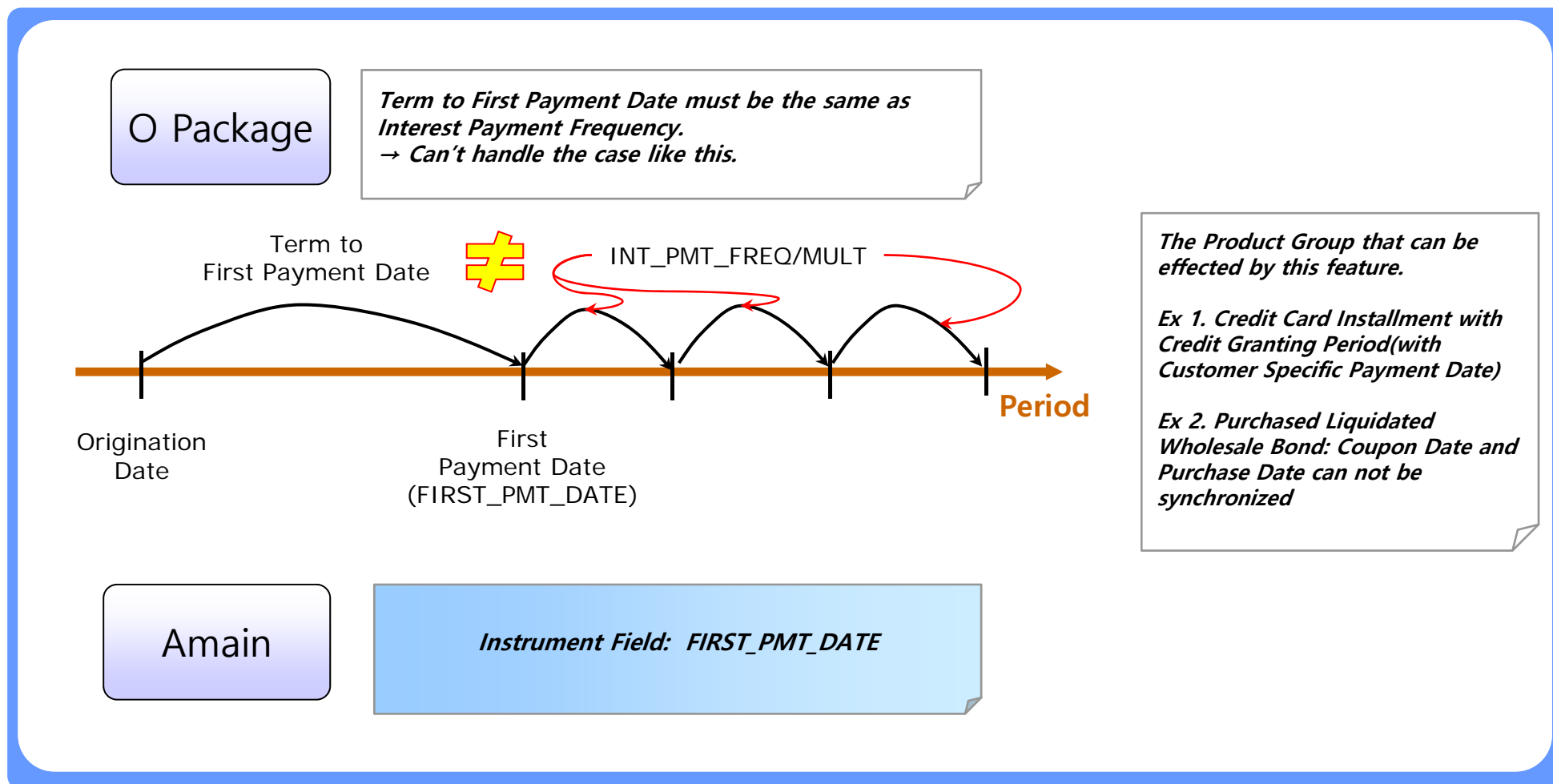
Amain for ALM – CashFlow Type : Revolving Payment for Credit Card

- ❑ O Package can generate similar cashflow based on UDPP. But it is impossible to reflect revolving minimum balance to stop revolving and pay all remaining balance.



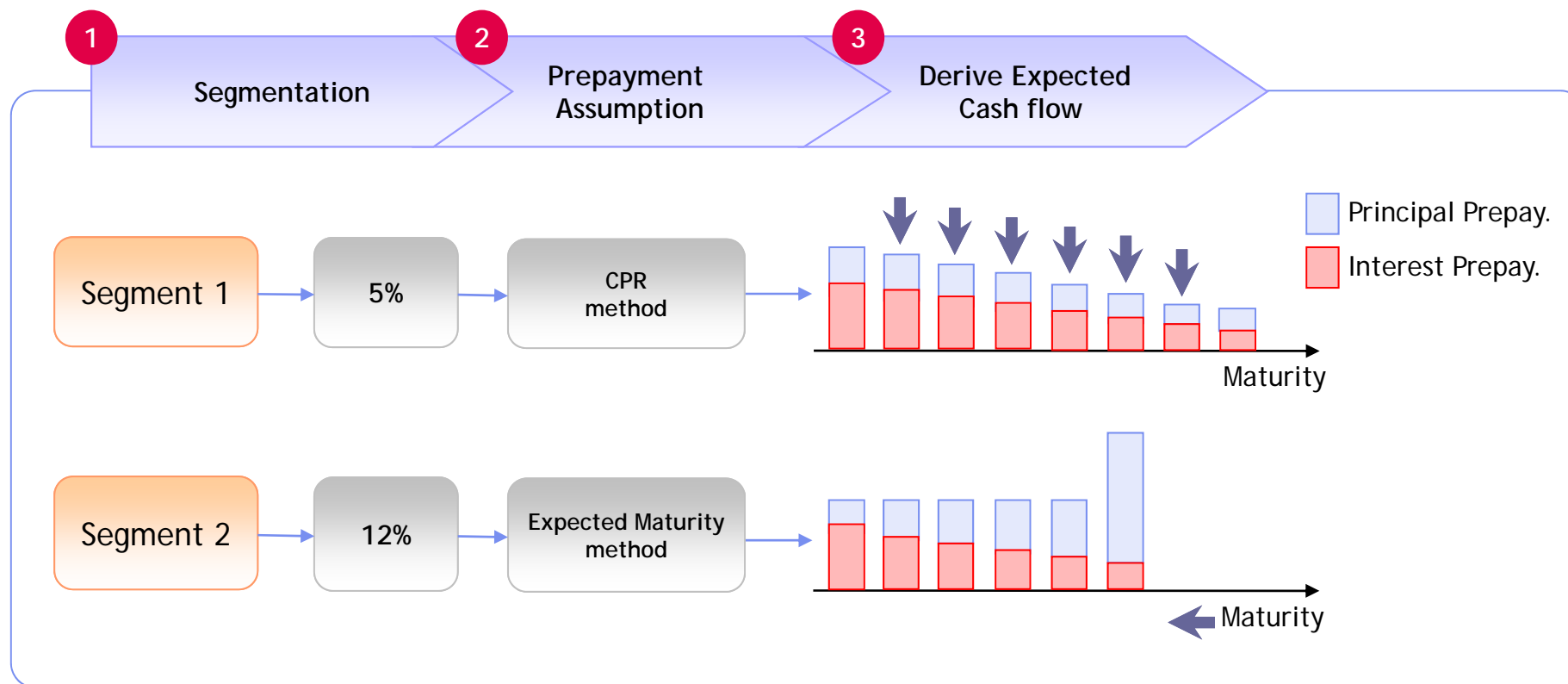
Amain for ALM – CashFlow Type : First Payment Date

- ❑ Amain can generate cashflow with specific First Payment Date. But O Package can't consider First Payment Date when they generate cashflow.



Amain for ALM – Prepayment & Expected Maturity

- ❑ Cashflow engine reflects prepayment based on both CPR (Constant prepayment rate) method and Expected maturity approach by each segment.



- CPR or Expected maturity assumption will be calculated based on historical data.

Amain for ALM - Gap : Time Band Setup

- For Gap analysis, User can summarize the cashflows based on the time band that can be defined by User for their specific requirements.

Time Band Definition

Folder	Rule No	Rule Name
ALM	102149	TB_ALM_BASE
ALM	301281	TB_ALM_GAP

Term	Multiplier
1	Months
2	Months
3	Months
4	Months
5	Months
6	Months
7	Months
8	Months
9	Months

Maturity for overdue account

Currency	Master Code	Description	Term	Multiplier
KRW	0	<None>	1	Months
KRW	10010	Long-Term Loan	1	Months
KRW	10020	Commercial Loan	1	Months
KRW	10030	Note Discounted	1	Months
KRW	10040	Prime Loan	1	Months
KRW	10050	Consumer Secured Loan	1	Months
KRW	10060	Consumer Unsecured Loan	1	Months
KRW	10070	Mortgage Loan	1	Months
KRW	10080	Commercial Secured Loan	1	Months
KRW	10090	Commercial Unsecured Loan	1	Months
KRW	10100	Commercial Loan in FCY	1	Months
KRW	20010	Term Deposit	1	Months
KRW	20020	Installment Deposit	1	Months
KRW	20030	Demand Deposit	1	Months
KRW	20040	Savings Deposit	1	Months
KRW	20050	Note Payable	1	Months
KRW	20060	Bill Sold	1	Months
KRW	20070	Call Money	1	Months
KRW	20080	Borrowing from Bank	1	Months
KRW	20090	Certificate of Deposits	1	Months
KRW	20100	Due to Bank in FCY	1	Months

- Gap information includes future principles and interests. If it is difficult to define the maturity of cash flow for overdue account, it can be defined separately.

Amain for ALM – Gap : Process Setup

- ❑ The process for Gap generation can be defined by setting Input Table, Common Setup and Gap Setup Option.

Process Rule Setup

Calculation Type

Market Value - Flat(Rem)	<input type="checkbox"/>
Market Value - Forward(Rem)	<input type="checkbox"/>
Market Value - Flat(Org)	<input type="checkbox"/>
Market Value - Forward(Org)	<input type="checkbox"/>
EIR - Flat(Rem)	<input type="checkbox"/>
EIR - Flat(Org)	<input type="checkbox"/>
EIR - Forward(Org)	<input type="checkbox"/>
Gap	<input checked="" type="checkbox"/>
Cashflow - Flat(Rem)	<input type="checkbox"/>
Cashflow - Forward(Rem)	<input type="checkbox"/>
Cashflow - Flat(Org)	<input type="checkbox"/>
Cashflow - Forward(Org)	<input type="checkbox"/>
Disc Spread - Flat(Rem)	<input type="checkbox"/>
Disc Spread - Forward(Rem)	<input type="checkbox"/>
Disc Spread - Flat(Org)	<input type="checkbox"/>
Disc Spread - Forward(Org)	<input type="checkbox"/>
-----	<input type="checkbox"/>

Input Tables

Table Name
MAG_INST_ALM_01
MAG_INST_ALM_02

Common Setup

Filter Condition: <None>

Recovery Period: [DEMO_ALM] RP_ALM_MAIN

Prepayment: <None>

Forecast Rate Set: <None>

Gap

Market Value | Spread | EIR

Time Band Rule: [DEMO_ALM] TB_ALM_MAIN

Calculation Option

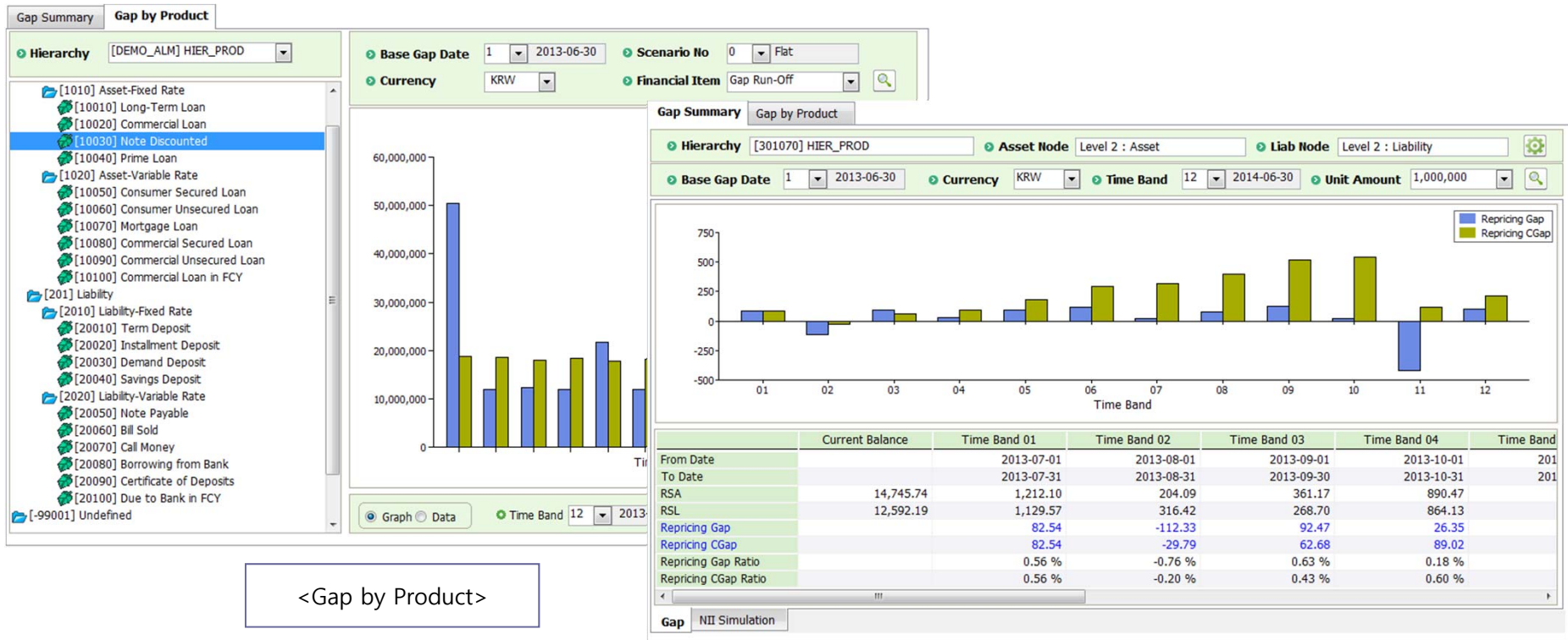
Repricing GAP

Log Information

Cash Flow Log Rate Log

Amain for ALM – Gap : Result Analysis

- ❑ The Gap results can be reviewed and verified in conjunction with any hierarchy selected by user.



<Gap by Product>

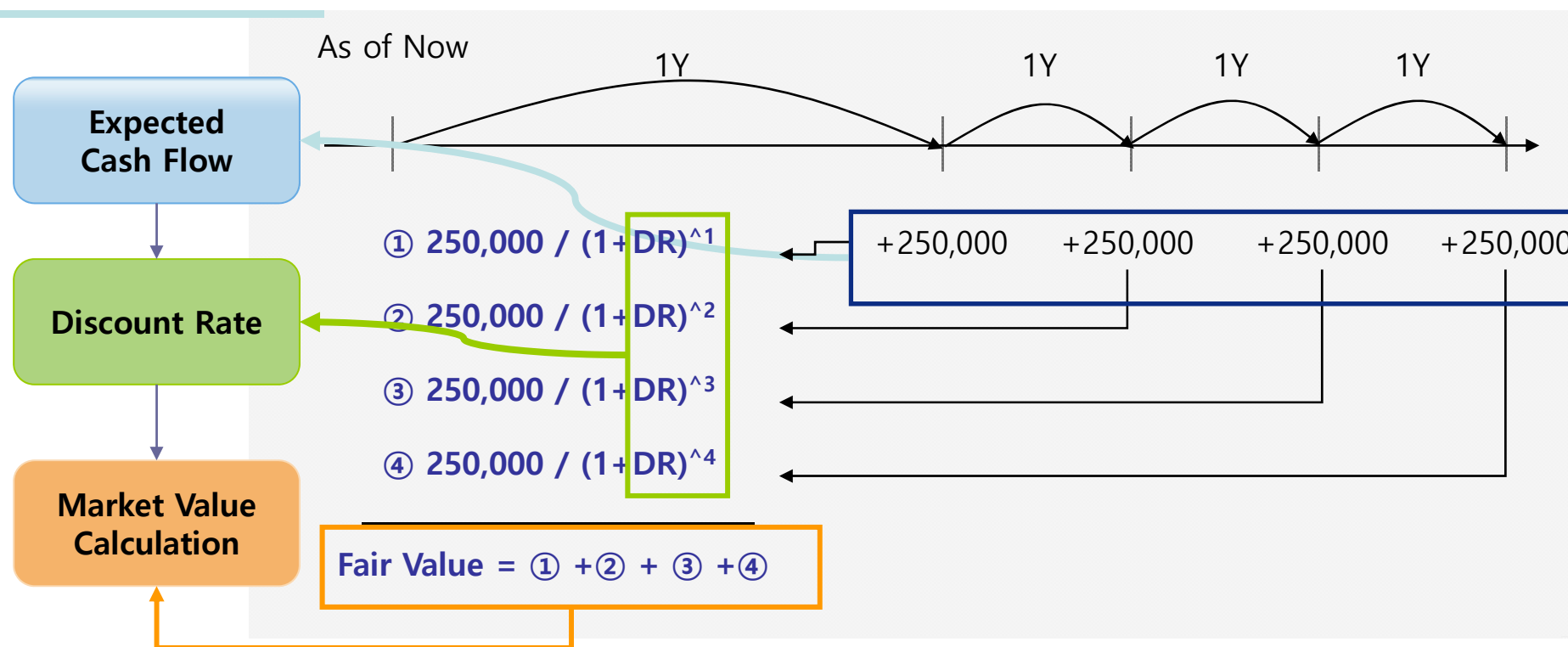
<Gap Analysis by Time Band>

- The result for Gap information can be reviewed conveniently in the format of graph or table type in Top-Down way.

Amain for ALM – Market Value Calculation(1) : Conceptual Logic

- ❑ Market Value is calculated by discounting Cashflows with related discount rates.
- ❑ Prepayment assumption can be applied to generate expected Cashflows.

Discount Model



Amain for ALM – Market Value Calculation(2) : Calculation Method

- Market Value can be calculated by the combination of Discount method, Cash Flow type, Including of interests and interpolation

Discount method	Cash flow type	Including of interest
Discount curve	Interest Only	Clean Price
Spot Rate	Mature at Reprice	Dirty Price

Interpolation
Linear
Exponential

Market Value Method

Discount Method:
Interest Rate Code

Discount Spread Type
 Spread by Instrument
 Spread by COA
 Both

Cash Flow Definition
 Mature at Reprice

Discount by Yield Curve
 20100
 KRW-SPOT

Discount by Single Rate
 Discount: 0

Clean or Dirty Pricing
 Clean Price Dirty Price

Discount Rate Interpolation

Linear Interpolation
 Exponential Interpolation

- Choose discount method – Use Discount curve or single spot rate
- Cash flow type – Define Target Cash Flow for discount (Interest based or Principal based / Interest maturity or Contract maturity)
- Including of Interest – Option to include interest occurred before Base Date.
- Interpolation – Way to calculate interest rate between term points in discount curve

Amain for ALM – Market Value Calculation(3) : Discount Rate

- ❑ The Discount Rate should be defined first. The historical rates for each discount rate are accumulated inside the Amain engine through the interface program.

The screenshot displays the Amain software interface for defining and viewing discount rates. It is divided into several sections:

- Interest Rate Code:** A list of codes and descriptions for various interest rate types.
- Rates Terms:** A table defining the terms and multipliers for the discount rates.
- Rates:** A detailed view of historical rates for a specific date range, showing effective dates and rates for different terms.

IRC	Descriptoin
20110	YTM-국고채
20120	YTM-은행채(AAA)
61100	SPOT-USD
61200	SPOT-USD-IRS
61300	SPOT-USD-CRS
62100	SPOT-EUR
62200	SPOT-EUR-IRS
62300	SPOT-EUR-CRS
63100	SPOT-JPY
63200	SPOT-JPY-IRS
63300	SPOT-JPY-CRS
71100	YTM-USD
72100	YTM-EUR
73100	YTM-JPY

Term	Multiplier
1	Days
3	Months
6	Months
9	Months
12	Months

Rates | **Terms**

Date Range: 2010-04-30 ~ 2010-05-31

Effective Date	1D	3M	6M	9M	12M	18M	24M	30M	36M
2010-05-31	2.1700	2.4500	2.4215	2.6575	2.8429	3.3209	3.5188	3.5908	3.6628
2010-05-30	2.1700	2.4500	2.4215	2.6472	2.8326	3.3001	3.5192	3.5911	3.6631
2010-05-29	2.1700	2.4500	2.4215	2.6472	2.8326	3.3001	3.5192	3.5911	3.6631
2010-05-28	2.1700	2.4500	2.4215	2.6472	2.8326	3.3001	3.5192	3.5911	3.6631
2010-05-27	2.1500	2.4500	2.4011	2.6268	2.8121	3.2691	3.4987	3.5813	3.6533
2010-05-26	2.1500	2.4500	2.3705	2.6064	2.7917	3.2485	3.4887	3.5819	3.6539
2010-05-25	2.1500	2.4500	2.3705	2.5961	2.7814	3.2382	3.4784	3.5609	3.6339
2010-05-24	2.1300	2.4500	2.3705	2.5961	2.8124	3.2902	3.5304	3.6128	3.6828

Amain for ALM – Market Value : Process Setup

- ❑ The process for market values is defined by setting up input data, common setup and market value method. Among these, setting the fair value method is the most crucial part of the process setup.

Process Rule Setup

Calculation Type

Gap	<input type="checkbox"/>
Market Value - Flat(Org)	<input type="checkbox"/>
Market Value - Flat(Rem)	<input checked="" type="checkbox"/>
Discount Spread - Flat(Org)	<input type="checkbox"/>
Discount Spread - Flat(Rem)	<input type="checkbox"/>
Cashflow - Flat(Org)	<input type="checkbox"/>
Cashflow - Flat(Rem)	<input type="checkbox"/>
EIR - Flat(Org)	<input type="checkbox"/>
EIR - Flat(Rem)	<input type="checkbox"/>

Input Tables

Table Name
MAG_INST_ALM_01

Common Setup

Filter Condition: <None>

Prepayment: <None>

Market Scenario: [DEMO_ALM] FS_Rate_Scen_0

Recovery Period: [DEMO_ALM] RP_ALM_MAIN

Log Information

Cash Flow Log Rate Log

Market Value Method [DEMO_ALM] MV_ALM_MAIN

Calculation Option

Effective Duration

Result Dimensions

B/S Code Organization Cust Group

Discount Rate Interpolation

Discount Method: Interest Rate Code

Discount Rate Code: 10000

Discount YC-KRW

Cash Flow Definition

Interest Only Mature at Reprice

Spot Rate

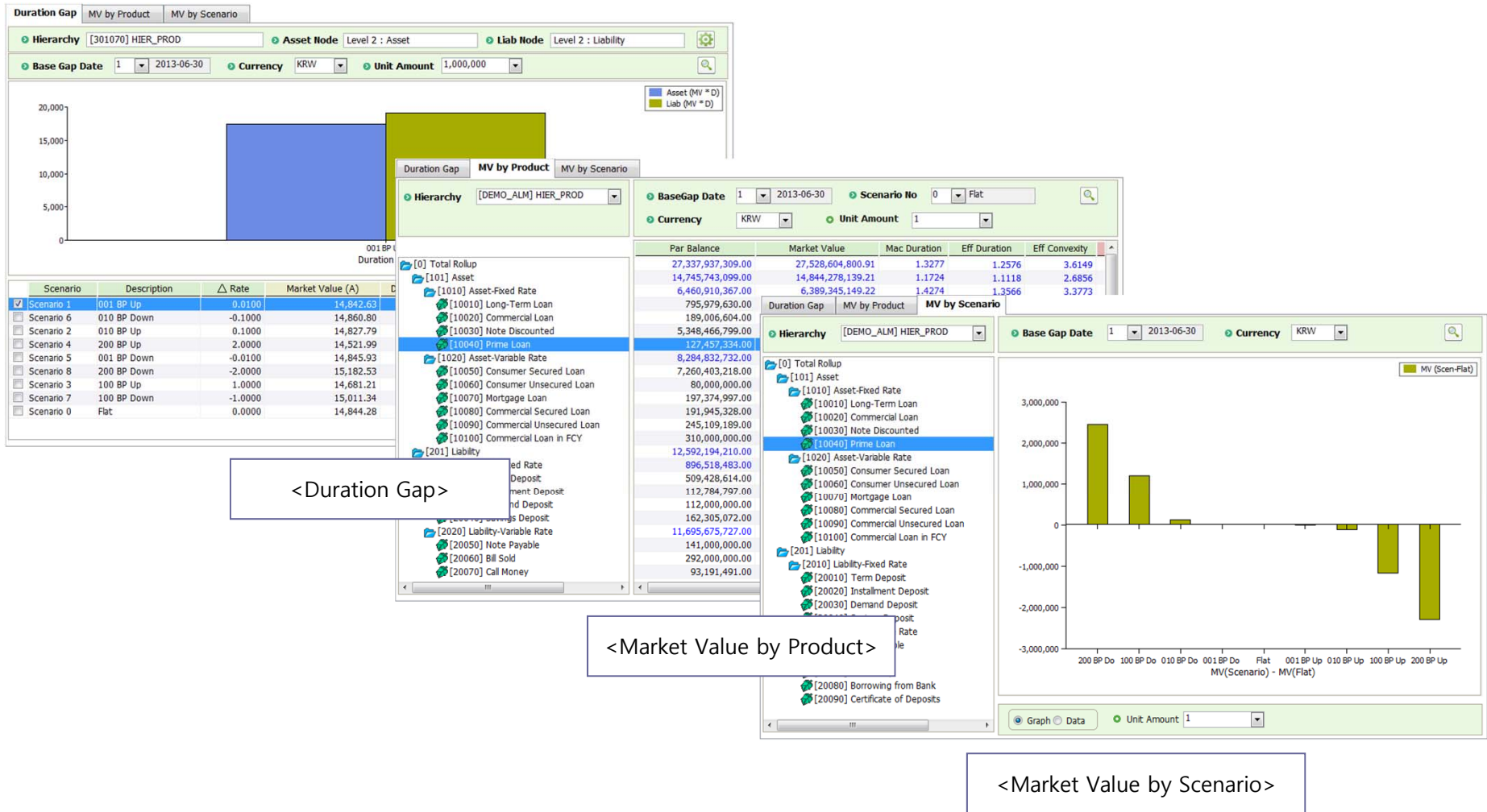
Discount Rate: 0

Clean or Dirty Pricing

Clean Price Dirty Price

Amain for ALM – Market Value : Result Analysis

- ❑ Amain can generate market value and related results such as Mac Duration, Effective Duration and Effective Convexity for the analysis on Interest Rate Risk.



Amain for ALM – Market Value : Result Verification by Instrument

- The market value can be verified by showing generated market value, market value method, discount spread (residual spread + credit spread), final discount rate after adjusting discount spread calculated for each instrument.

Instrument

Dim BS	Currency	Adjustable Type	Origination Date	Maturity Date	Grace End Date	Next Repr Date
[20090] Certificate of Deposits	KRW	Fixed	2012-06-25	2014-06-25	2012-06-25	2014-06-25

Market Value	Cur Par Bal	Cur Rate	Discount Spread	Cur Eff Rate	Residual Spread	Cur MOR
44,925,558	44,633,378	6.0000	1.3400	0.0600	0.8379	5.3600

Market Value Method

Discount Method: Interest Rate Code

Discount Rate Code: 20100

Discount Spread Type: Spread by Instrument

Cash Flow Definition: Mature at Reprice

Discount Rate

Term	Multiplier	Interest Rate	Discount Rate
1	Days	2.5000	3.8400
1	Months	2.7500	4.0900
3	Months	3.0000	4.3400
6	Months	3.2500	4.5900
1	Years	3.5000	4.8400
2	Years	3.7500	5.0900
3	Years	4.0000	5.3400
5	Years	4.2500	5.5900
10	Years	4.5000	5.8400

- Detailed Cash Flow by instrument can be retrieved for verification or generated through the simulation menu if it is required by users.

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Amain for ALM – New Business Simulation : Scenario Setup

- The process for New Business Simulation is defined by setting up input data, common setup and scenario for new business. Scenario for new business is comprised of Volume, Maturity, Margin scenario and Product Specification.

Volume		Rollover			
Band	Term	Mult	From Date	To Date	Volume
1	1	M	2013-07-01	2013-07-31	3,000,000.00
2	2	M	2013-08-01	2013-08-31	3,000,000.00
3	3	M	2013-09-01	2013-09-30	3,000,000.00
4	4	M	2013-10-01	2013-10-31	3,000,000.00
5	5	M	2013-11-01	2013-11-30	3,000,000.00
6	6	M	2013-12-01	2013-12-31	3,000,000.00
7	7	M	2014-01-01	2014-01-31	3,000,000.00
8	8	M	2014-02-01	2014-02-28	3,000,000.00
9	9	M	2014-03-01	2014-03-31	3,000,000.00
10	10	M	2014-04-01	2014-04-30	3,000,000.00
11	11	M	2014-05-01	2014-05-31	3,000,000.00
12	12	M	2014-06-01	2014-06-30	3,000,000.00
13	15	M	2014-07-01	2014-09-30	3,000,000.00

Volume		Rollover			
Band	Term	Mult	From Date	To Date	Source Master
1	1	M	2013-07-01	2013-07-31	[10040] Prime Loan
2	2	M	2013-08-01	2013-08-31	[10040] Prime Loan
3	3	M	2013-09-01	2013-09-30	[10040] Prime Loan
4	4	M	2013-10-01	2013-10-31	[10040] Prime Loan
5	5	M	2013-11-01	2013-11-30	[10040] Prime Loan
6	6	M	2013-12-01	2013-12-31	[10040] Prime Loan
7	7	M	2014-01-01	2014-01-31	[10040] Prime Loan
8	8	M	2014-02-01	2014-02-28	[10040] Prime Loan
9	9	M	2014-03-01	2014-03-31	[10040] Prime Loan
10	10	M	2014-04-01	2014-04-30	[10040] Prime Loan
11	11	M	2014-05-01	2014-05-31	[10040] Prime Loan
12	12	M	2014-06-01	2014-06-30	[10040] Prime Loan
13	15	M	2014-07-01	2014-09-30	[10040] Prime Loan

<Volume Scenario Setup>

Detail Setup		
Term	Mult	Ratio
3	Years	30.0000
5	Years	70.0000
Sum :		100.0000

<Maturity Scenario Setup>

Detail Setup	
Coupon Spread	Reduce Rate
2.0000	0.0000

<Margin Scenario Setup>

Amain for ALM – Statistics : Interest Rate Analysis

- ❑ Amain has function to analyze historical interest rate to generate 0.1 percentil, 1 percentil, 99 percentil, 99.9 percentil value of interest rate change.
- ❑ These results can be used for stress test after analyzing the results by many times of generating with various parameters.

Generate Rule [301233] Int Rate Change Generate

Base Date: 2013-06-30 Currency: KRW
 Historical Term: 60 Month Time Difference: 12 Month

IRC	Description	IRC Term	Percentile 0.1%	Percentile 1%	Percentile 5%	Percentile 95%	Percentile 99%	Percentile 99.9%	Average	Minimum	Maximum	Std Deviation
10100	FTP-Base YC	1 D	-1.0356	-0.9927	-0.8996	0.2757	0.3937	0.4345	-0.2651	-1.0404	0.4390	0.4088
		1 M	-0.9423	-0.9011	-0.8163	0.8577	0.9894	1.0028	-0.1428	-0.9469	1.0043	0.5417
		3 M	-0.8367	-0.7974	-0.7130	1.1346	1.2076	1.2512	0.1630	-0.8411	1.2561	0.6835
		6 M	-0.8790	-0.8141	-0.5733	0.3222	0.4498	0.5203	-0.0811	-0.8862	0.5281	0.3168
		1 Y	-0.8720	-0.8677	-0.8309	0.4269	0.7553	0.8166	-0.2632	-0.8725	0.8234	0.4180
		3 Y	-1.5425	-1.5320	-1.3778	1.1849	1.2913	1.3296	-0.1439	-1.5437	1.3338	0.9012
		5 Y	-0.5258	-0.5017	-0.0853	0.7430	0.9384	1.0697	0.3382	-0.5285	1.0843	0.3009
		10 Y	-0.5235	-0.4825	-0.3354	1.6450	1.6662	1.6775	0.3733	-0.5280	1.6788	0.5988
		30 Y	-1.4312	-1.3687	-1.0000	1.0128	1.1247	1.1274	-0.1016	-1.4381	1.1277	0.6649
		10150	FTP-Prime Rate	1 Y	-0.3193	-0.3132	-0.2809	1.0540	1.0895	1.1049	0.3882	-0.3200
20000	KRW-YTM	1 D	-3.6425	-3.5416	-3.4500	0.4400	0.5532	0.6000	-1.			
		1 M	-3.6430	-3.5433	-3.4565	0.4465	0.5566	0.6000	-1.			
		3 M	-3.5000	-3.4400	-3.3485	0.7300	1.0217	1.0500	-1.			
		6 M	-3.2300	-3.2100	-3.1000	0.6400	1.0248	1.0700	-1.			
		1 Y	-3.2283	-3.1317	-2.8770	0.7400	1.0236	1.1742	-0.			
		2 Y	-2.8882	-2.6380	-2.3480	0.9880	1.1200	1.1800	-0.			
		3 Y	-2.6809	-2.3472	-2.0770	1.0385	1.2300	1.2700	-0.			
		5 Y	-2.5049	-2.1792	-1.7800	1.0560	1.3000	1.3566	-0.			
		10 Y	-2.3692	-2.1317	-1.7485	1.0540	1.2834	1.3909	-0.			
		20100	KRW-SPOT	1 D	-3.6425	-3.5416	-3.4500	0.4400	0.5532	0.6000	-1.	
3 M	-3.5000	-3.4400	-3.3480	0.7300	1.0216	1.0500	-1.					
6 M	-3.2300	-3.2100	-3.1000	0.6400	1.0248	1.0700	-1.					
1 Y	-3.2283	-3.1316	-2.8760	0.7400	1.0228	1.1742	-0.					
2 Y	-2.8882	-2.6380	-2.3480	0.9880	1.1200	1.1800	-0.					
3 Y	-2.6807	-2.3456	-2.0760	1.0380	1.2300	1.2700	-0.					
5 Y	-2.5049	-2.1792	-1.7800	1.0560	1.3000	1.3566	-0.					
10 Y	-2.3690	-2.1316	-1.7480	1.0520	1.2832	1.3908	-0.					
20200	KRW-SPOT-IRS	1 D	-3.6425	-3.5416	-3.4500	0.4700	0.5800	0.7974	-1.			
		1 M	-3.6426	-3.5421	-3.4505	0.4405	0.5542	0.6000	-1.			
		3 M	-3.5000	-3.4400	-3.3480	0.7300	1.0216	1.0500	-1.			
		6 M	-3.2300	-3.2100	-3.1000	0.6480	1.0248	1.0700	-1.			
		1 Y	-3.2283	-3.1316	-2.8760	0.7400	1.0228	1.1742	-0.			
2 Y	-2.8882	-2.6380	-2.3480	0.9880	1.1200	1.1800	-0.					

Forecast Rate Set Rule: [301239] FS_Scen_11_Statistics
 Historical Term: 60 M Time Difference: 12 M

No.	Scenario	Statistics Value Type	Statistics App Type	Operator	Coefficient
0	Flat	None	[0] None	*	0.00
1	Percentile 01% - Rep	Δ Rate Percentile 01.0%	[1] Using Rep. IRC	*	1.00
2	Percentile 99% - Rep	Δ Rate Percentile 99.0%	[1] Using Rep. IRC	*	1.00
3	Percentile 01% - Ind	Δ Rate Percentile 01.0%	[2] Using Same IRC	*	1.00
4	Percentile 99% - Ind	Δ Rate Percentile 99.0%	[2] Using Same IRC	*	1.00

<Generate Statistics on Interest Rate>

<Apply to Interest Rate Scenario>



Agenda

I. Amain for ALM

1. Introduction
2. Amain for ALM
3. 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

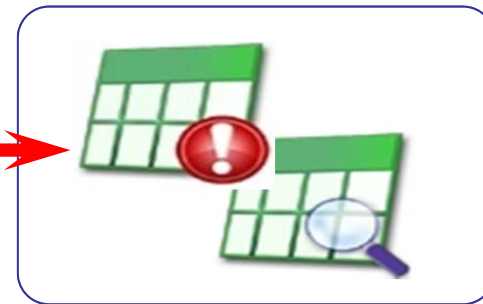
Register Job



Execute Job

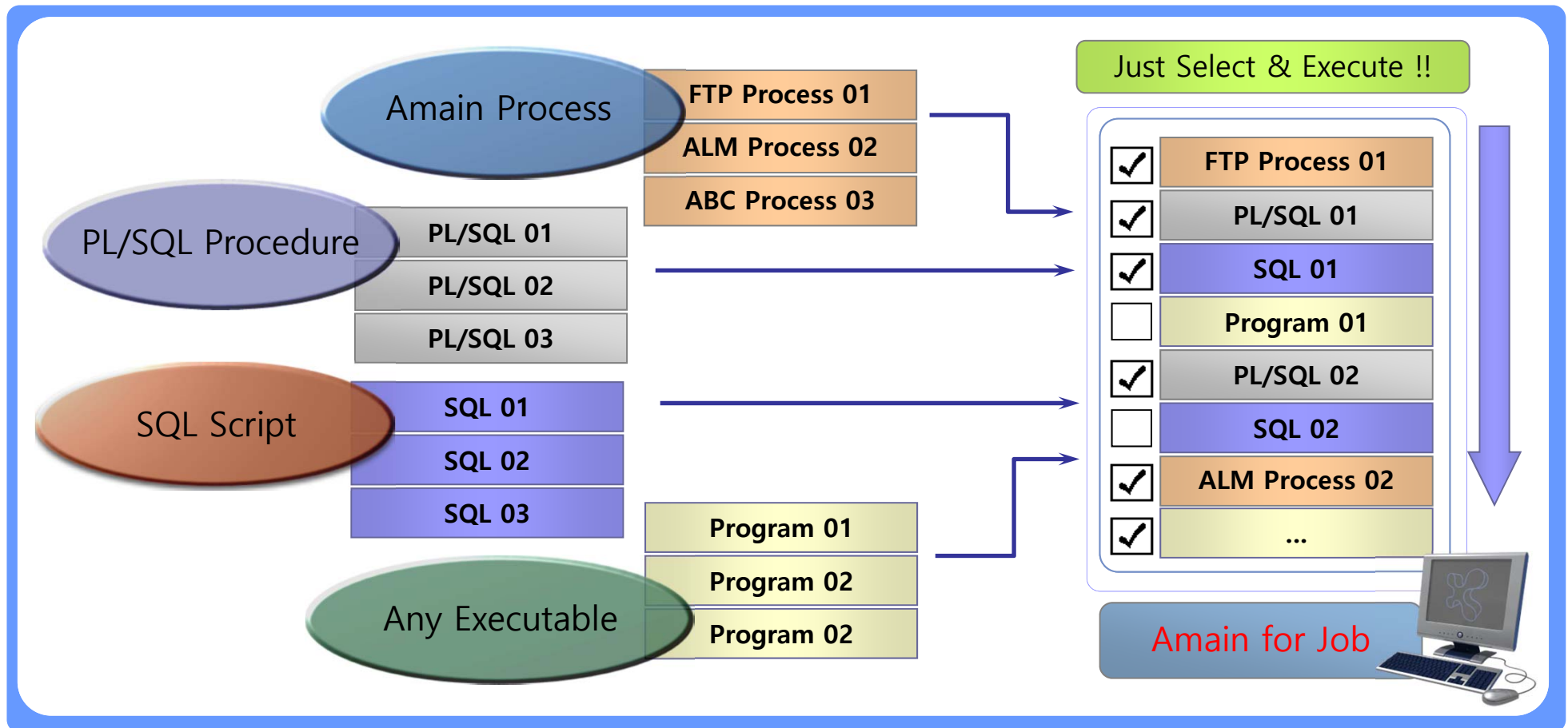


Monitor Job Status



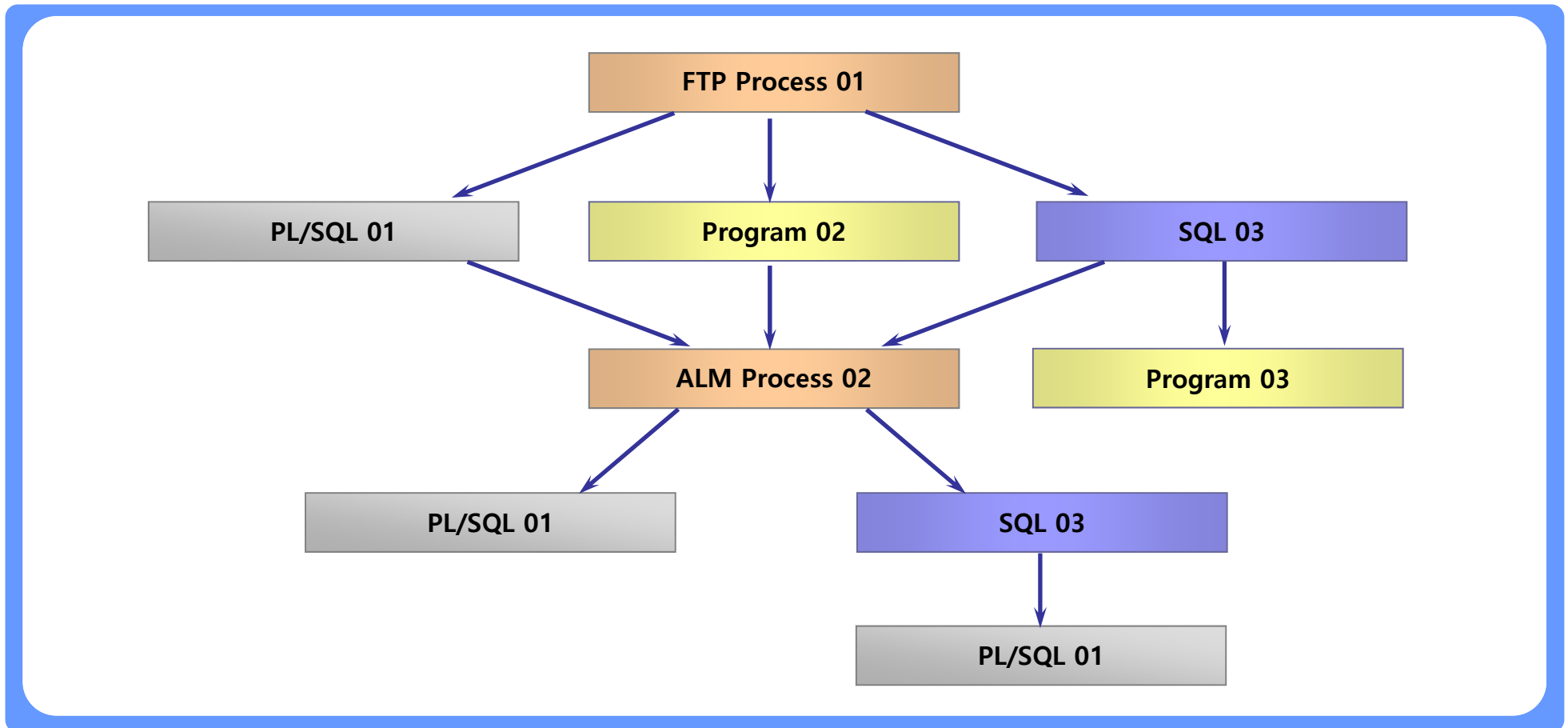
Amain for Job - Execute All kinds of Job

- ❑ 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.



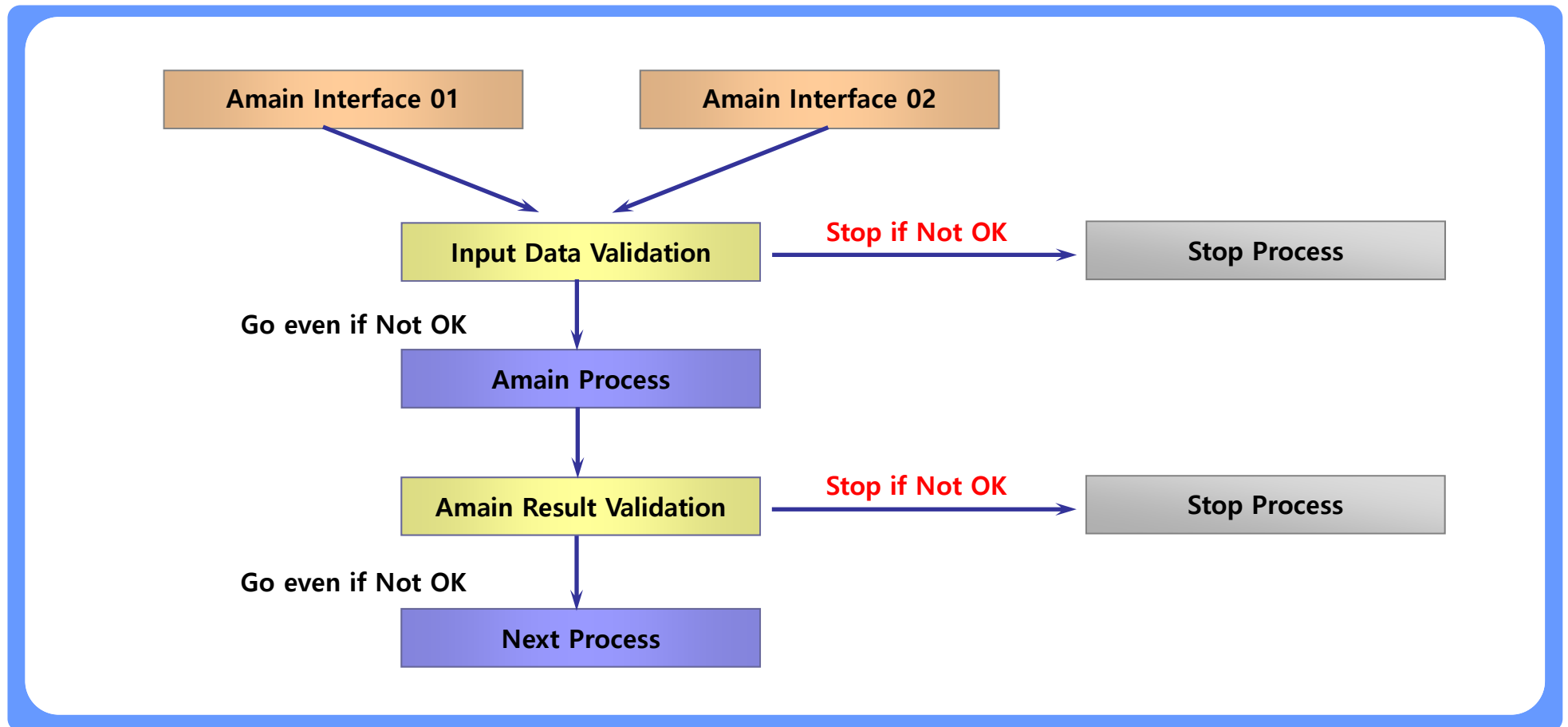
Amain for Job – Manage Job Dependency

- ❑ 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.



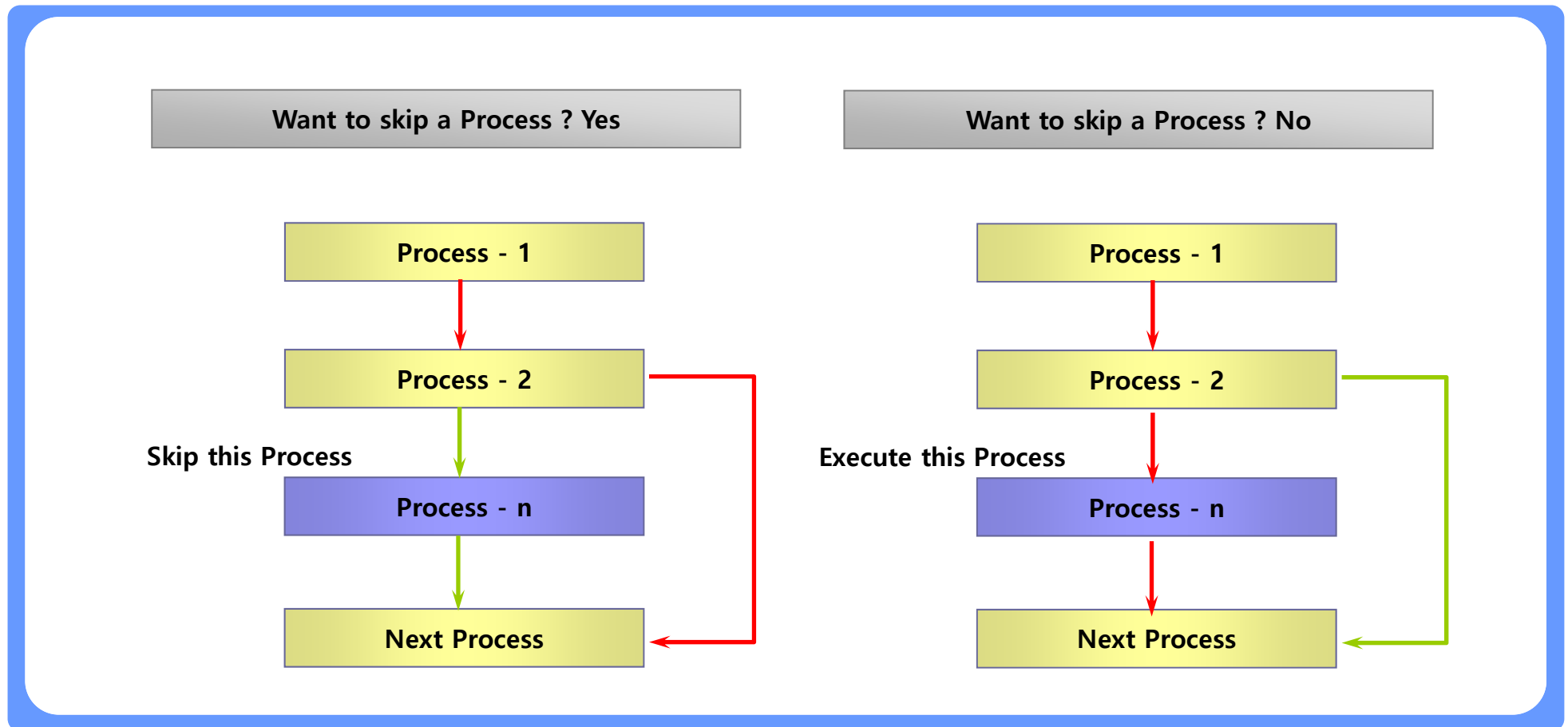
Amain for Job – Control Sequence on Errors (Go/Stop ?)

- ❑ 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.

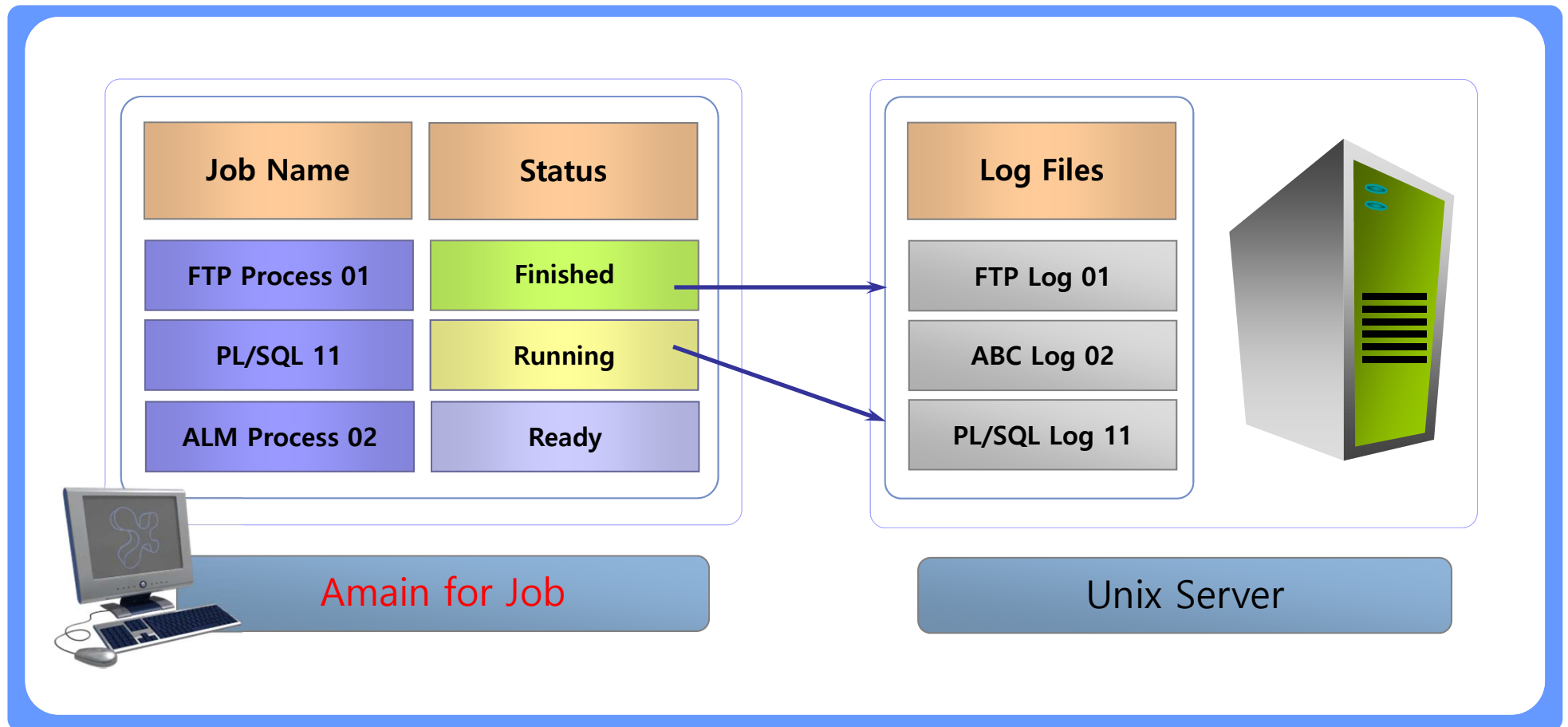
Suspend Job Resume Job Kill Job

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

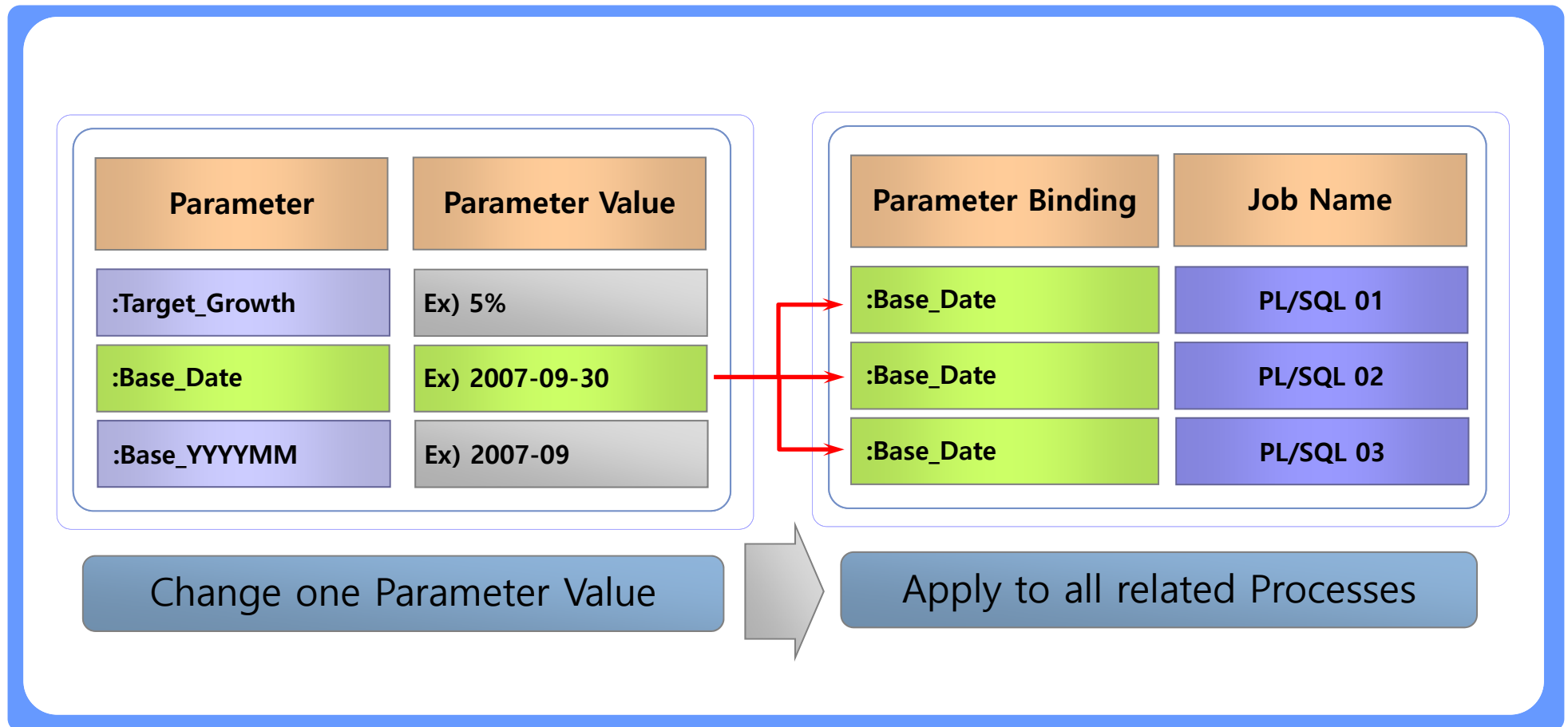
Amain for Job – Access Log Information

- 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.



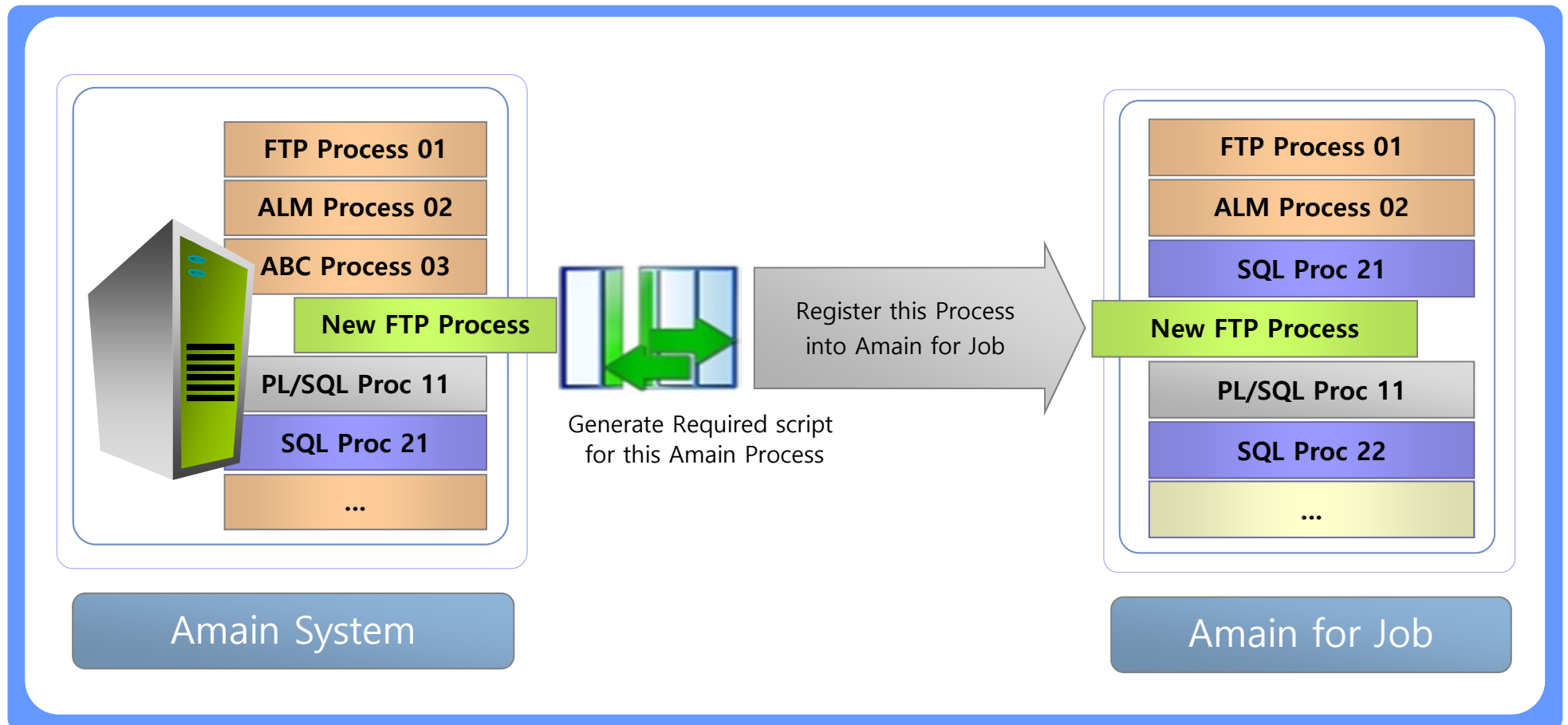
Amain for Job – Manage Parameters

- ❑ 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.



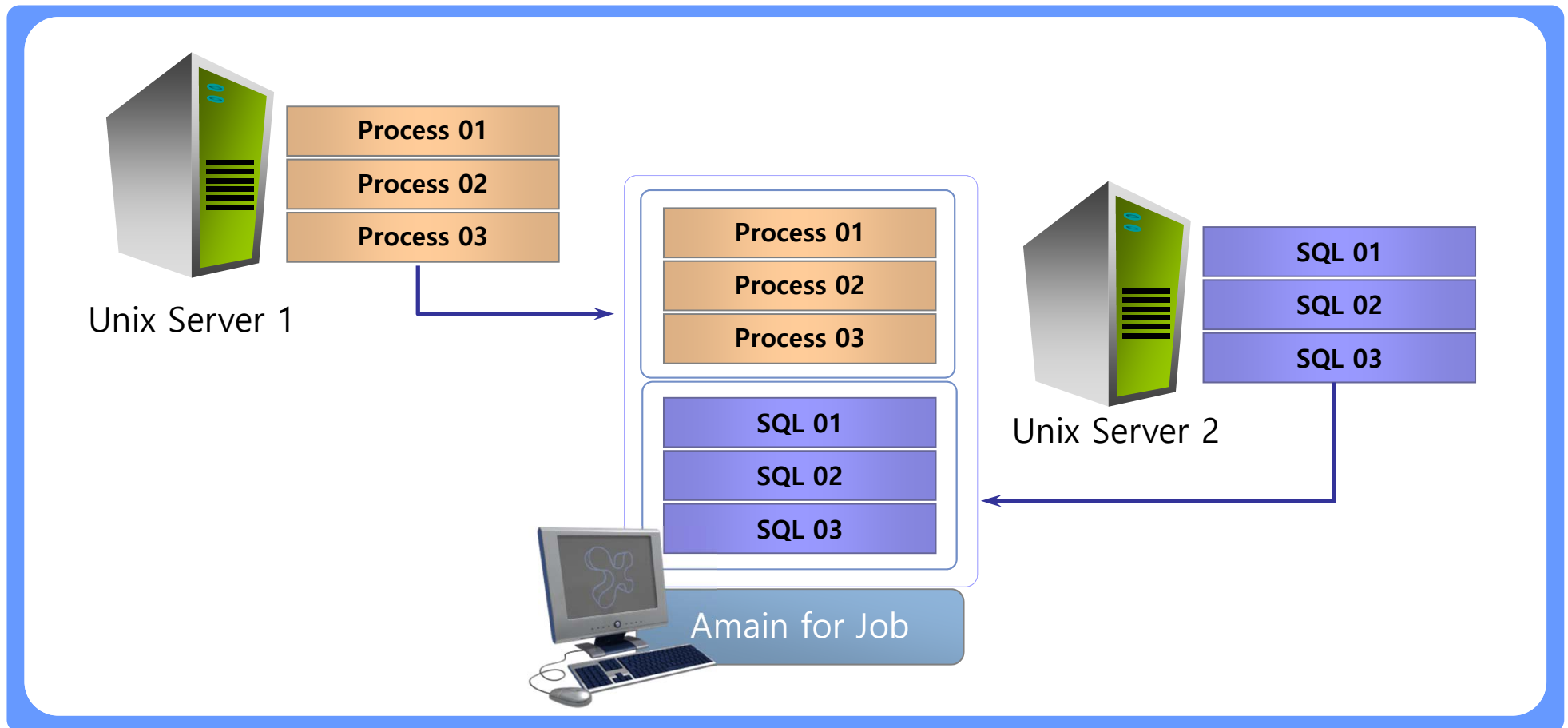
Amain for Job – Easy Register of Amain Process

- ❑ 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

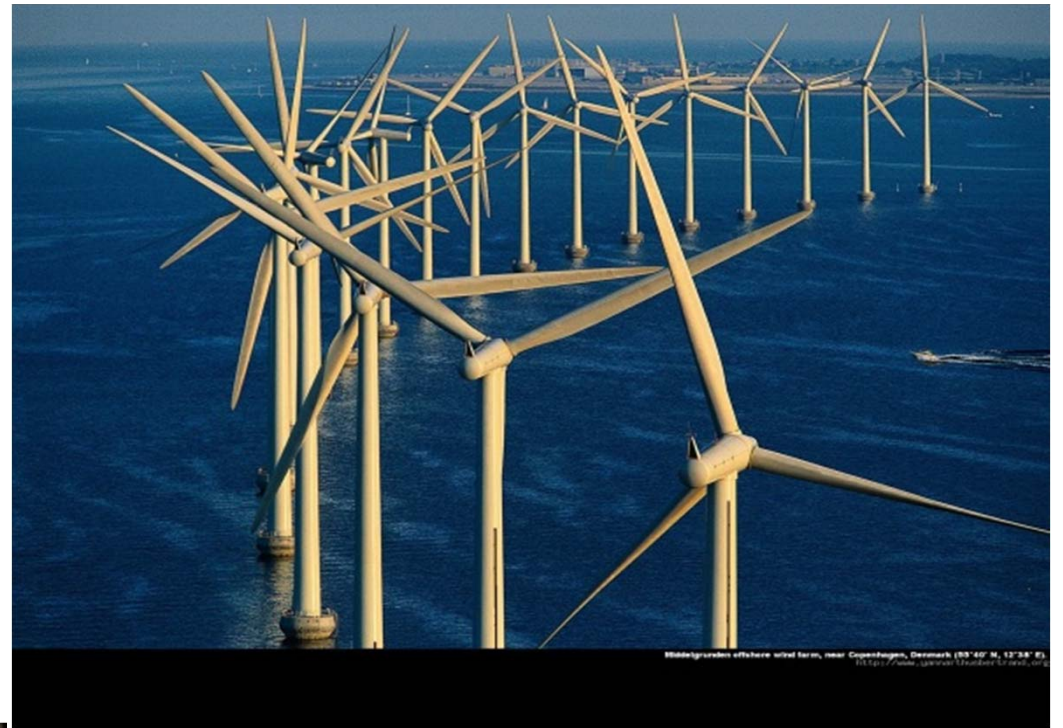
- Processes in multiple servers can be integrated into Amain for Job. With this function User can execute and control multiple servers in the same screen.



Amain for Job – 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



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