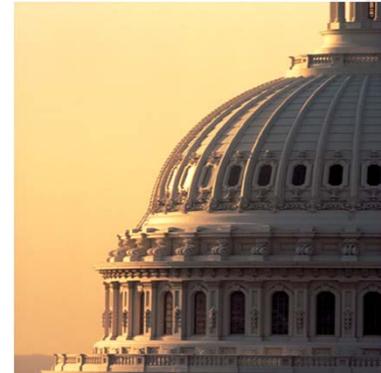


Neoiz Ltd.

# Introduction of Amain for IFRS

2015-Jan





## Agenda

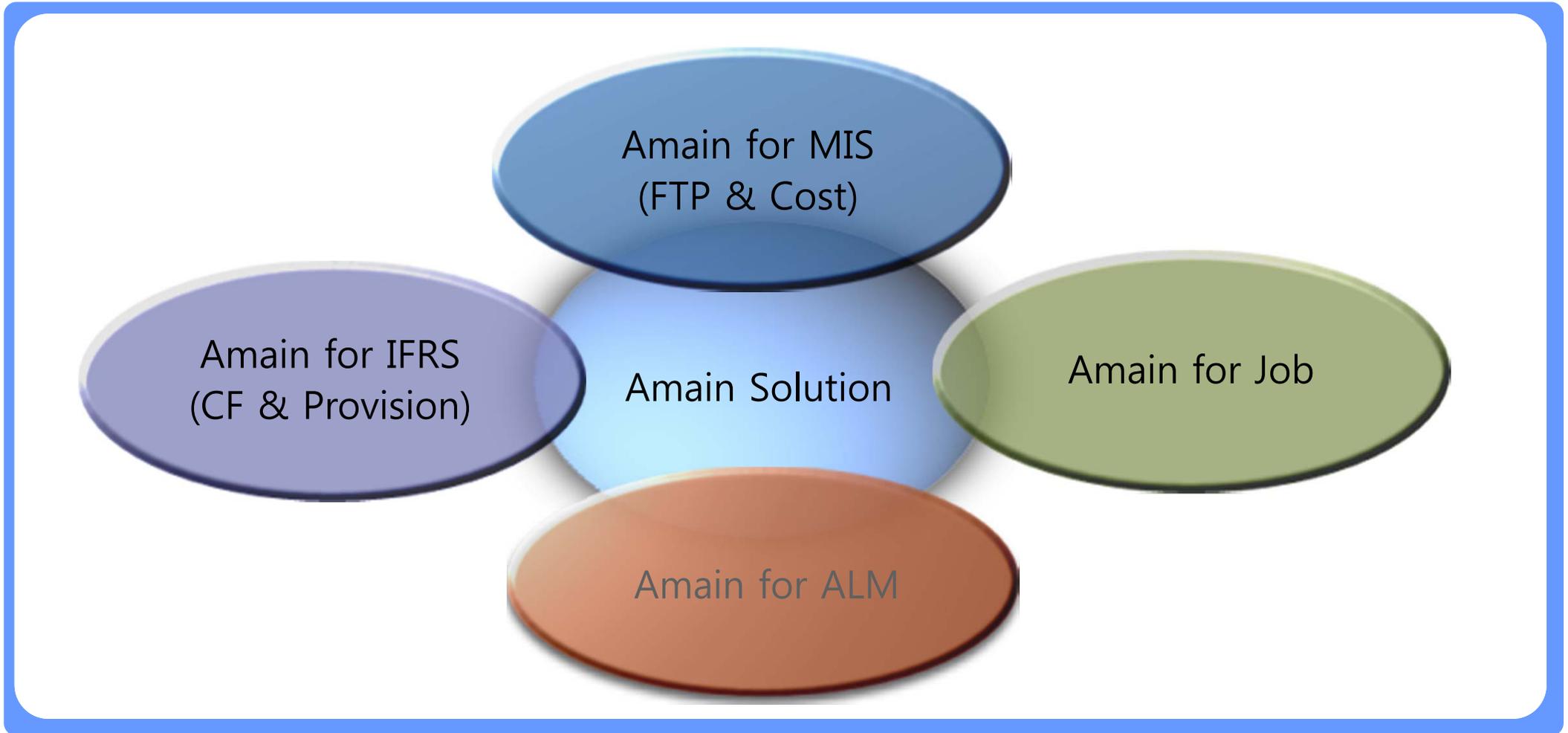
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### I. Amain for MIS

1. Introduction
2. Amain for CashFlow
3. Amain for Provision
4. Amain for Job
5. Amain for Admin

## Amain for IAS39 – Amain Product Family

- ❑ Amain consists of 5 components of FTP, Cost, IAS39(IFRS), ALM and Job to provide 'One-Stop Service' to implement and maintain the Systems for Financial Institutions.



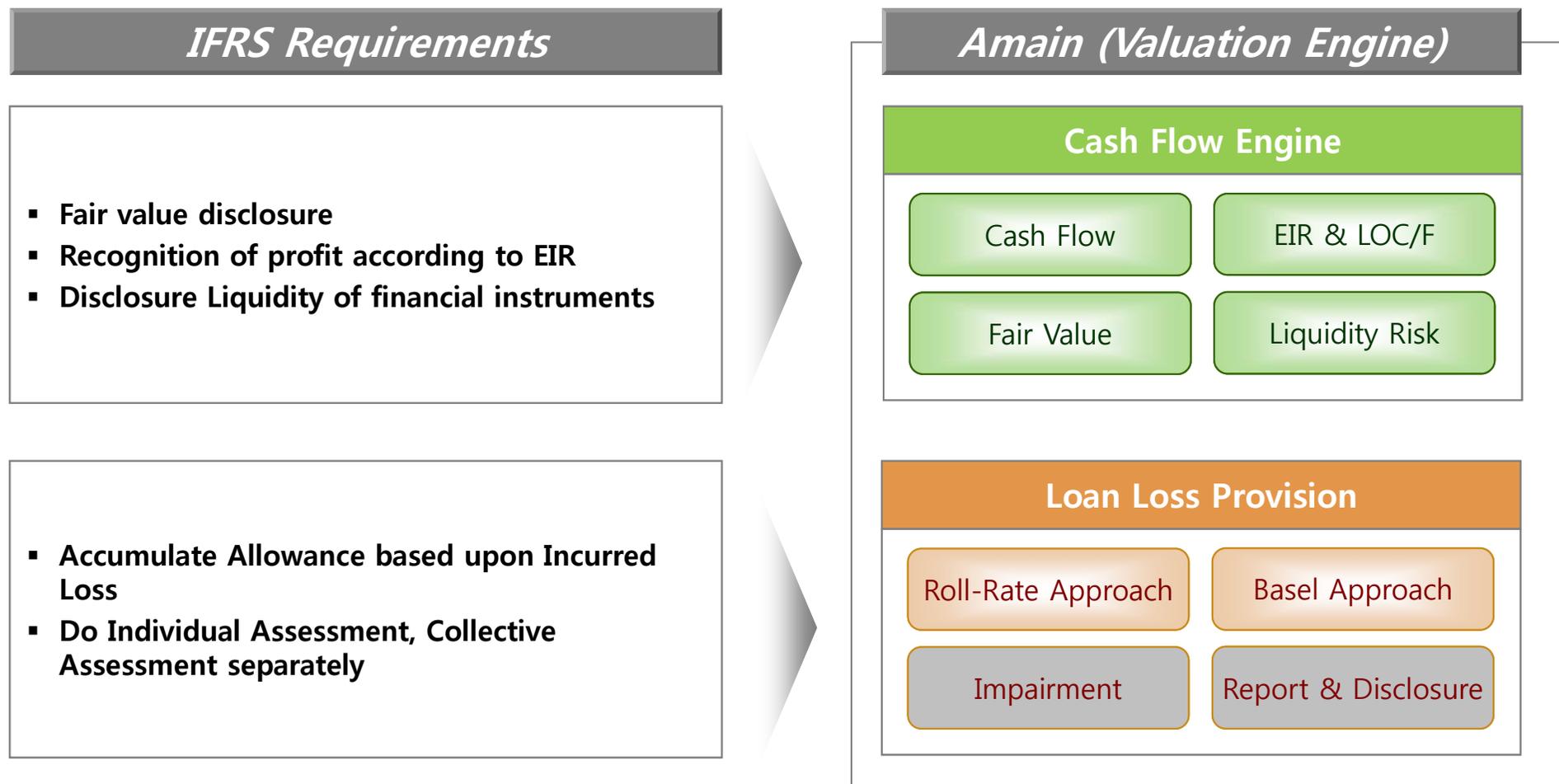
## Amain for IFRS – Introduction

- ❑ NEOIZ has developed Amain for IFRS to enable financial institutions to adopt IAS39 and IFRS 7 with minimal changes in their information systems by providing core-functions for valuation processes. In the core-functions, there are required functions related to cash flow and loan loss provision to satisfy IAS39 requirements.

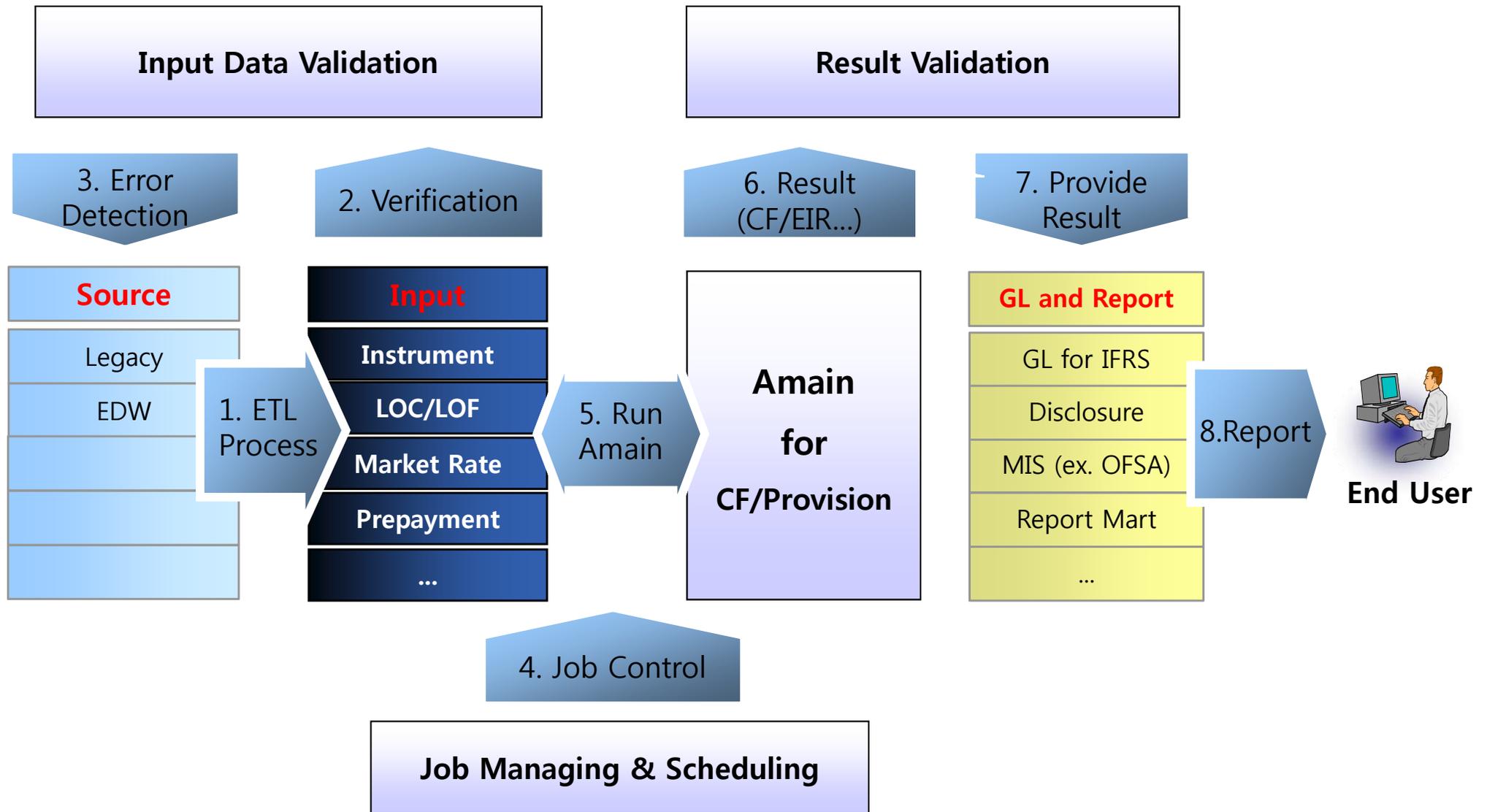


# Amain for IFRS – Introduction

- ❑ Amain is designed to fully satisfy the needs of Valuation requirement based on DCF method by providing easy steps of input validation, configuration setup, result generation and result validation.
- ❑ Amain provides 'One-Stop Service' to cover all the valuation processes in IFRS.

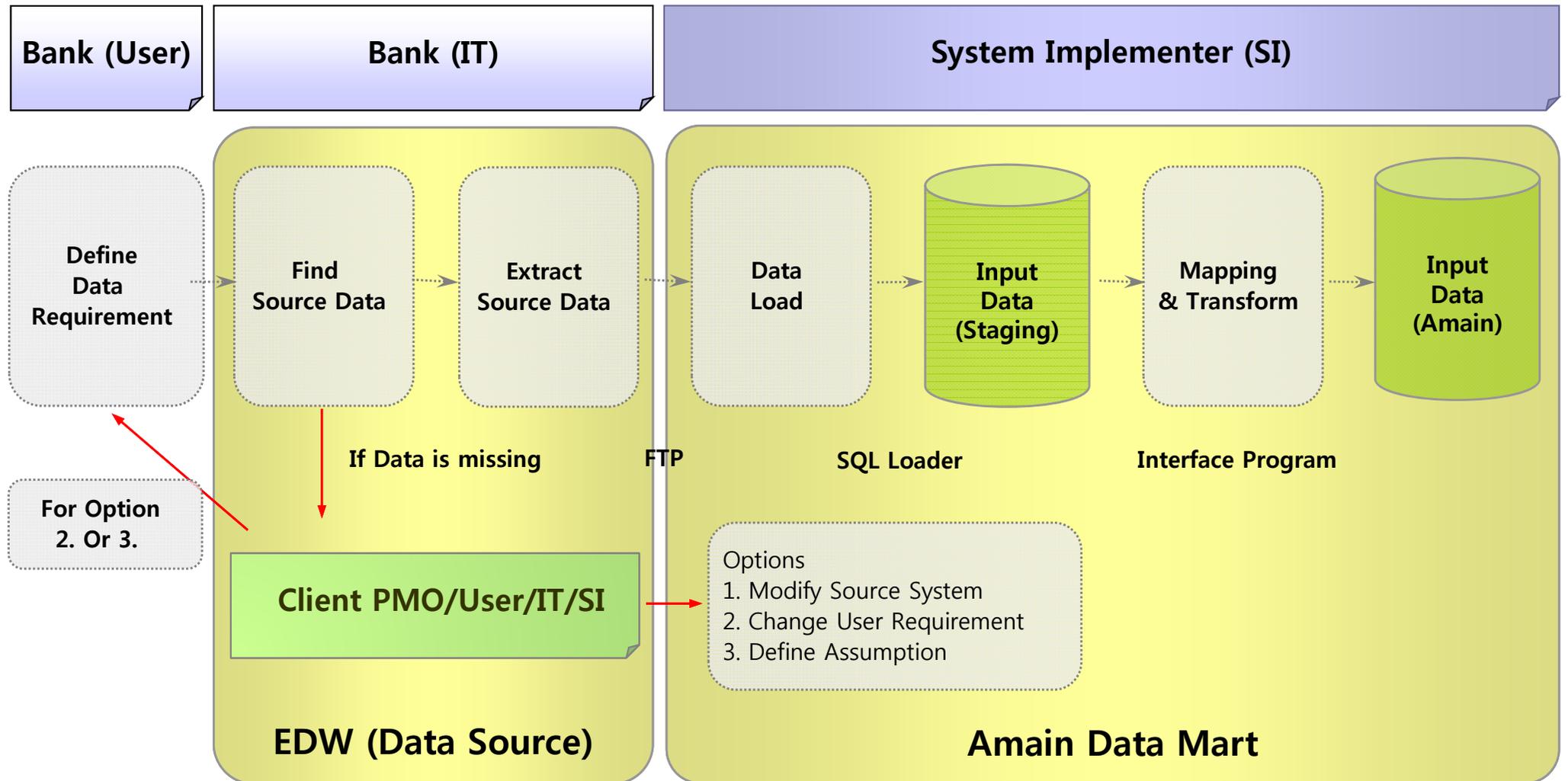


# Amain for IFRS - System Flow



# Amain for IFRS - Data Interface Flow

## □ Data Interface Flow



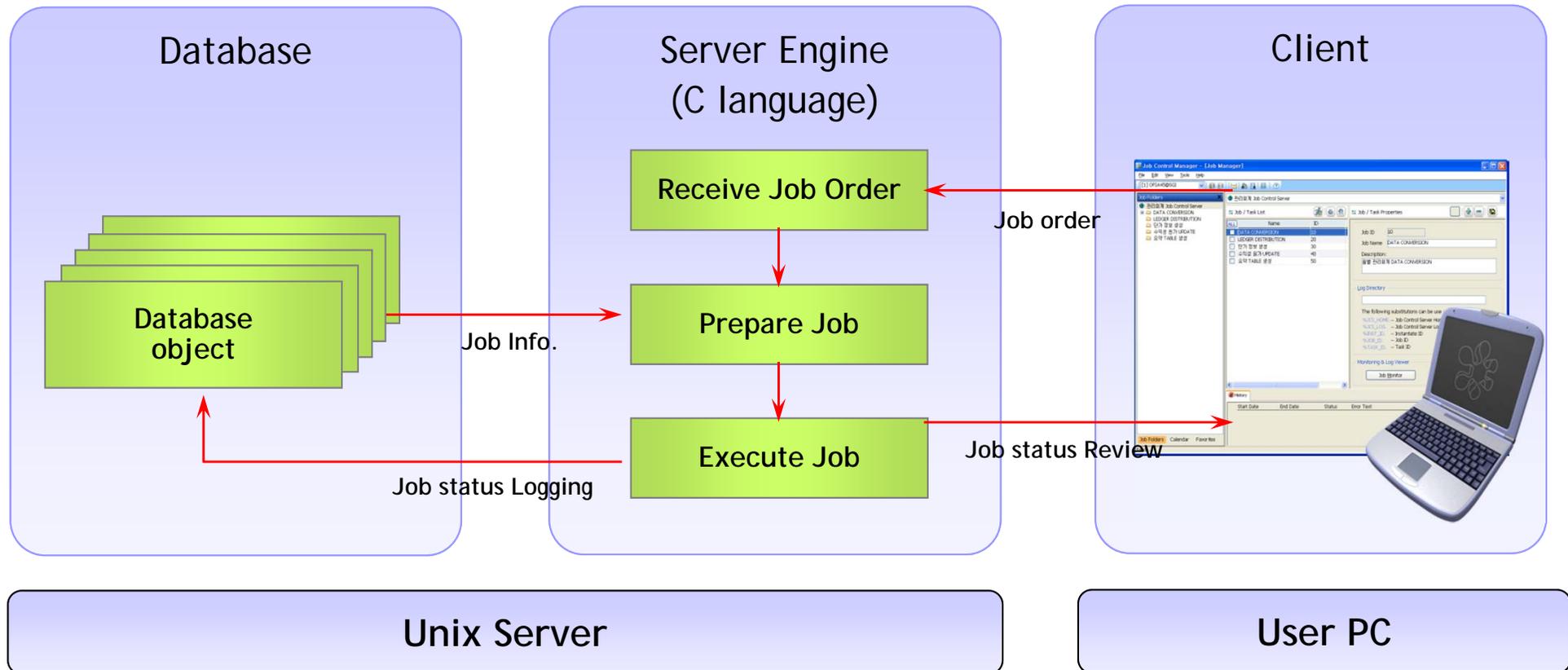
## Instrument

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 IFRS - System Architecture

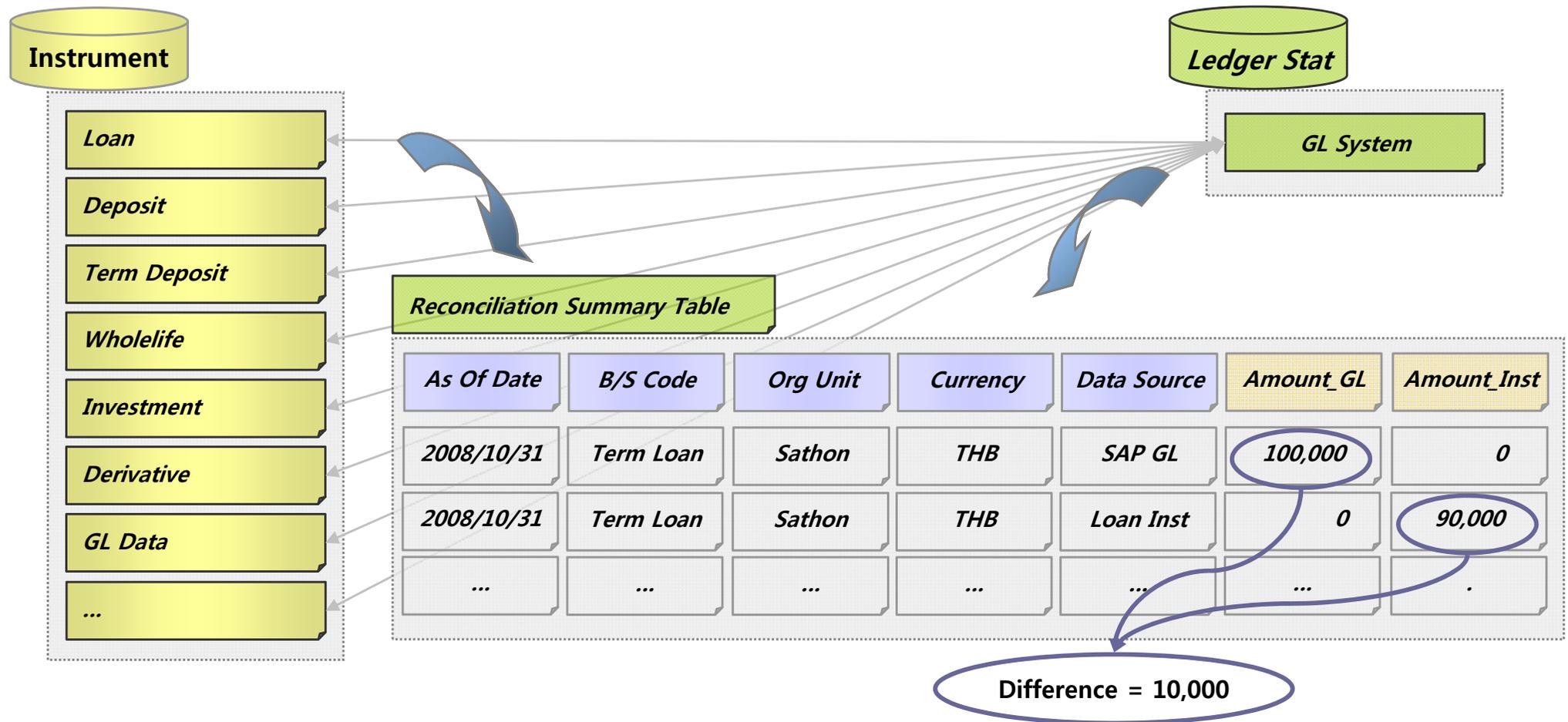
- ❑ The Amain consists of 3 parts – Client(User Interface), Server(Engine) and Database



- 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.

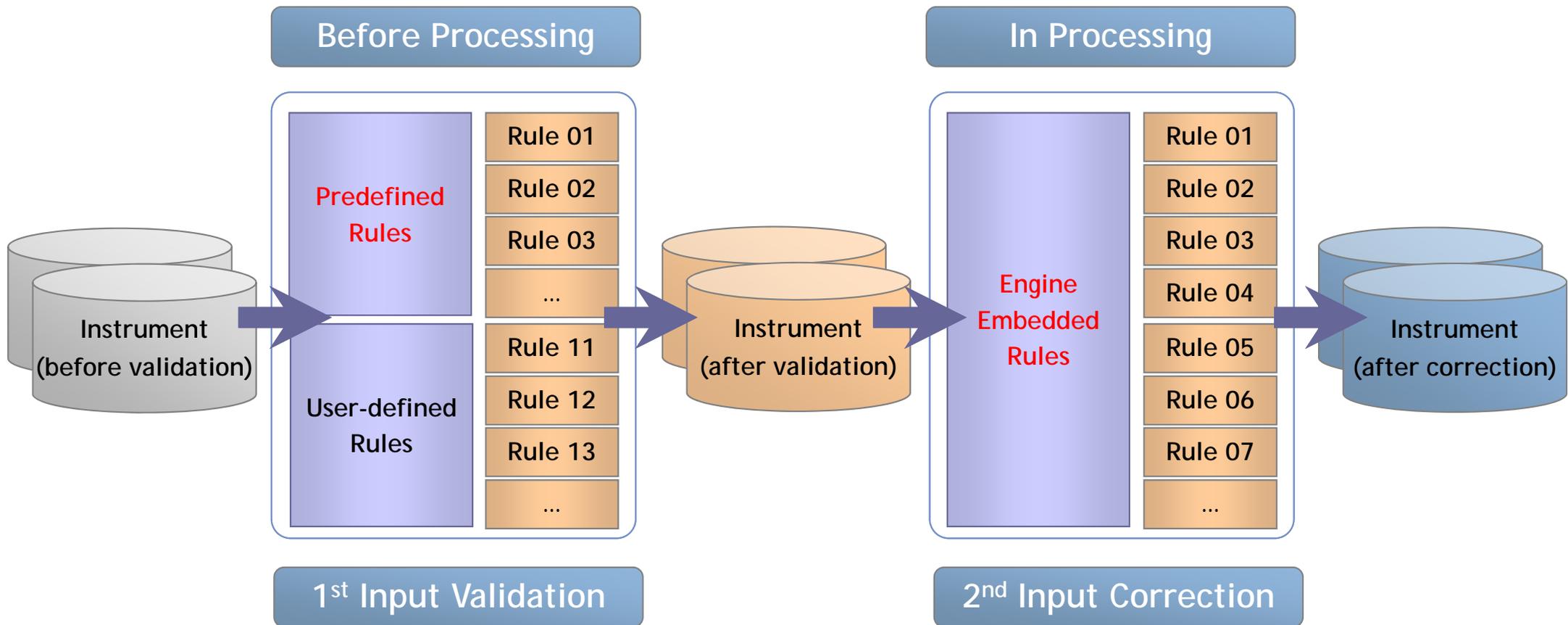
# Amain for IFRS – Detail Feature : Reconciliation

- ❑ 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.



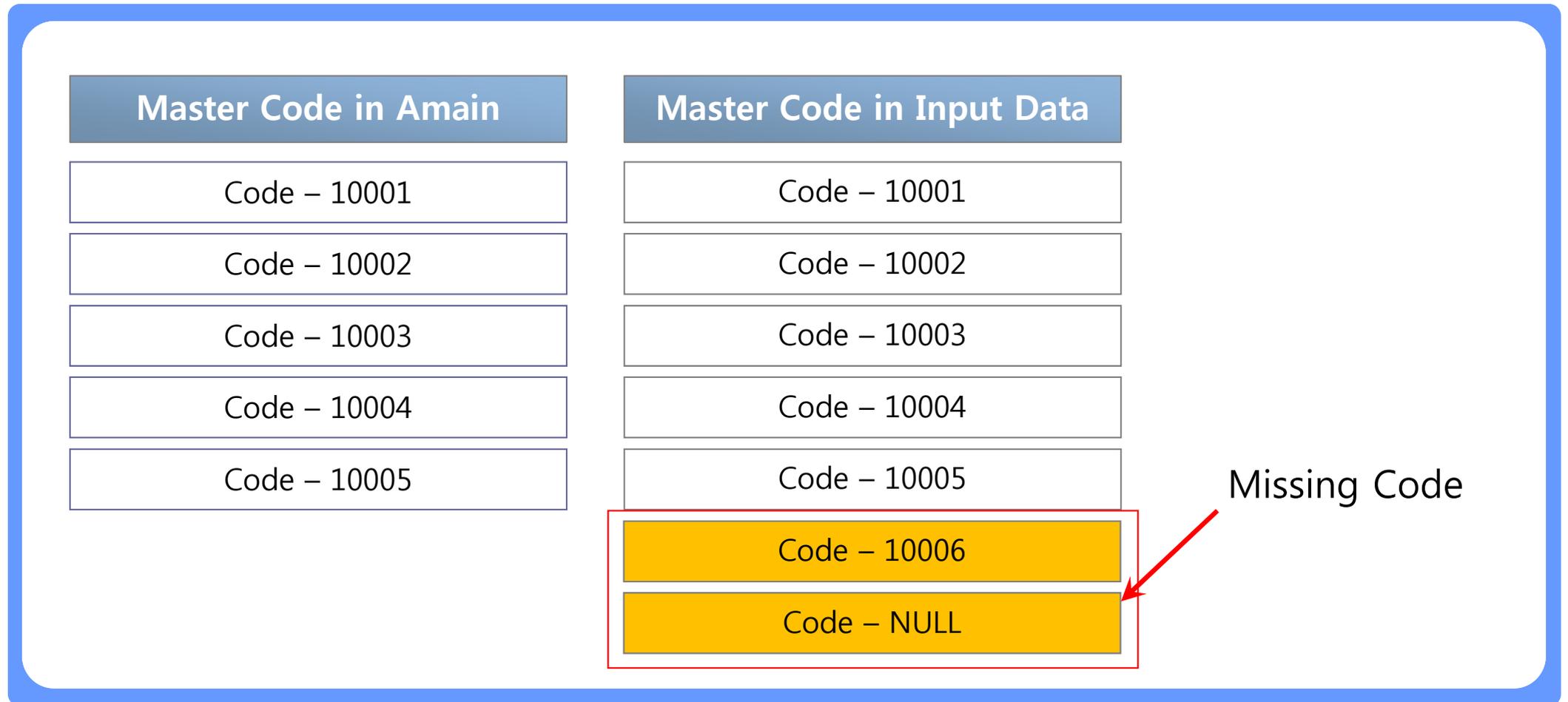
# Amain for IFRS – Detail Feature : Cashflow Column-Validation

- ❑ Amain provides Double-validation mechanism to minimize the unexpected results from erroneous input data. The input data will be checked before processing and corrected during processing respectively.



## Amain for IFRS – Detail Feature : Missing Master Code Detection

- ❑ 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 IFRS – Detail Feature : Setup Verification

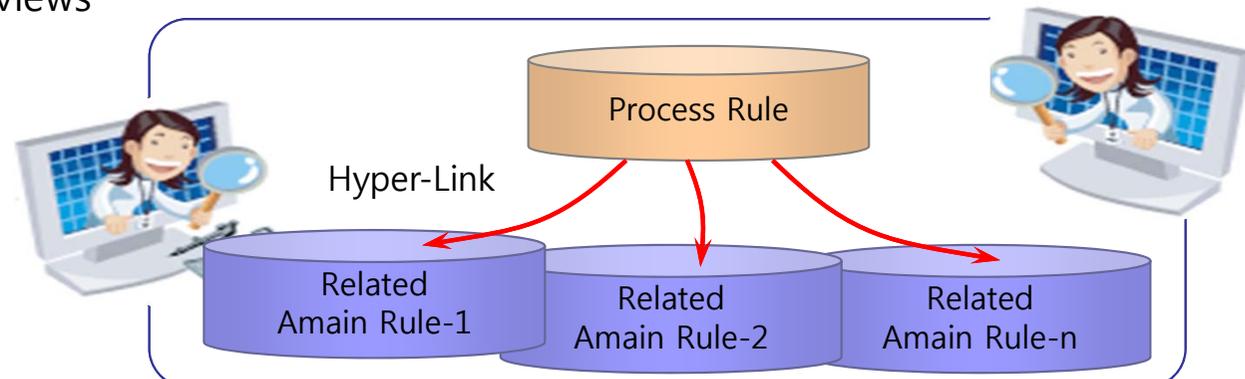
- ❑ Amain provides intuitive user interface, setup review function and hyper-link between Amain rules to help user verify the Amain setup.

**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.

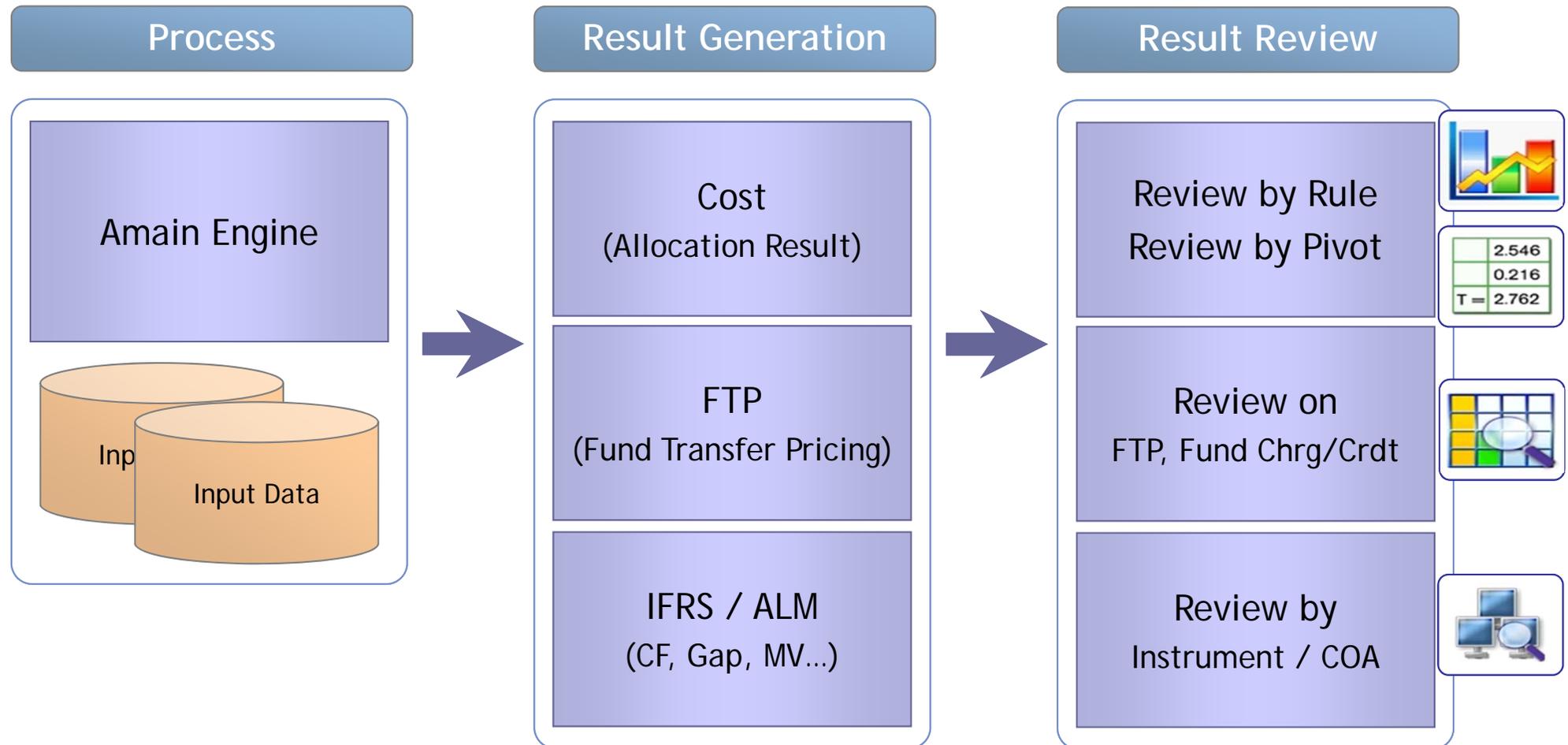
**Hyper-Link between Amain Rules** Provide a function to navigate between menus based on Hyper-Link. With this function any Rules can be reached by jumping down from Process Rule.

Verify in various point of views



# Amain for IFRS – Detail Feature : Result Validation

- ❑ 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 IFRS – Detail Feature : Result Validation

- ❑ Amain provides a function to show the results and information related to EIR & Provision Calculation so that anyone can understand and explain about the numbers from Amain process easily.

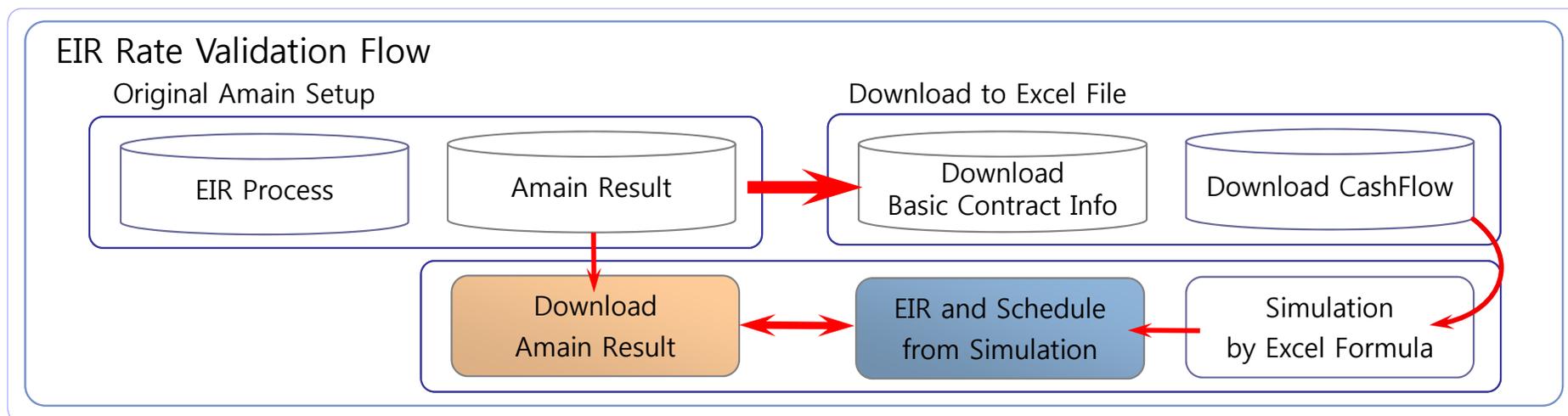
### EIR Validation

Provide a function to validate EIR Rate and Amortized schedule using excel file with embedded formula to be used to compare with Amain results

### Provision Validation

Provide 2 functions to validate allocation results.

1. Collective assessment : validate result of collective assessment using excel template generated automatically
2. Individual assessment : validate result of individual assessment using excel template with formula to simulate the calculation logic



## Amain for IFRS – 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.

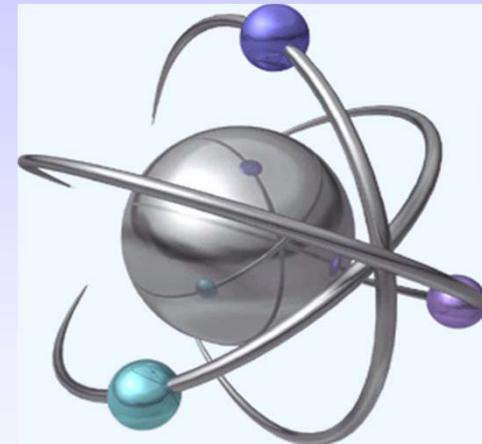
Multi Processing



C Language



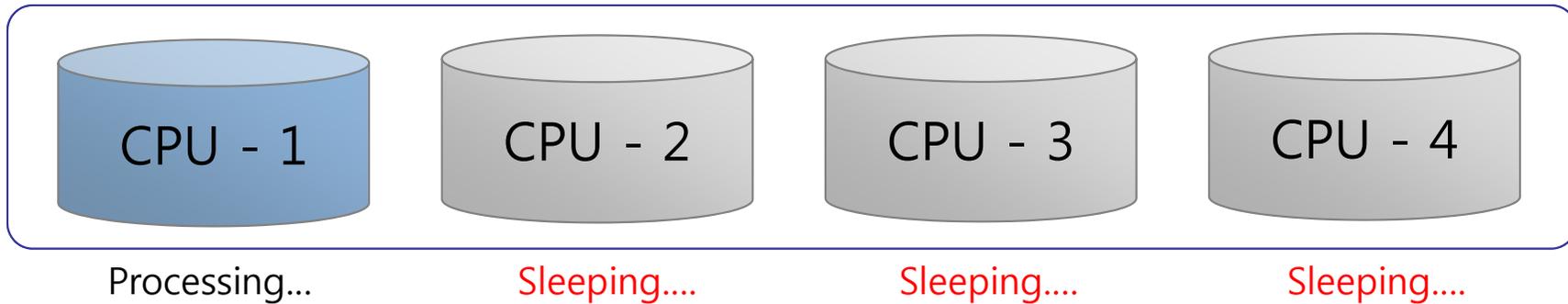
Efficient Algorithm



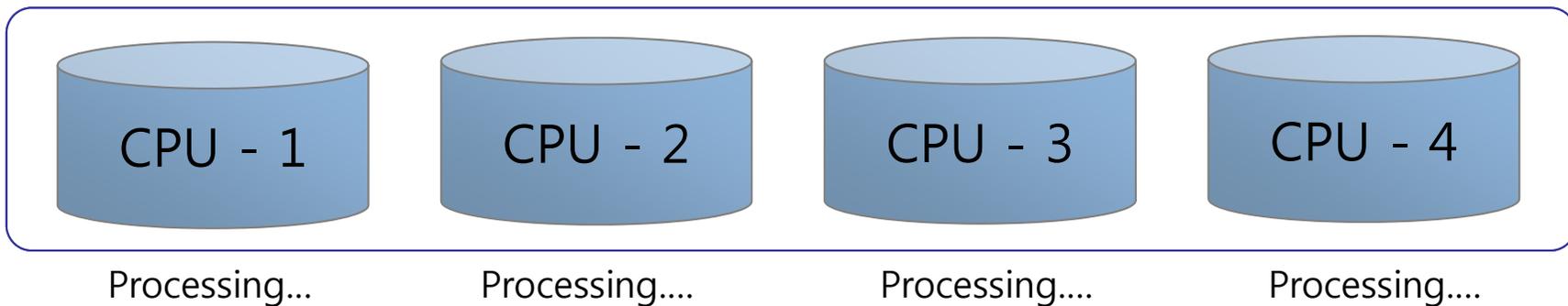
## Amain for IFRS – Detail Feature : Multi Processing

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

Before Multi Process Setup



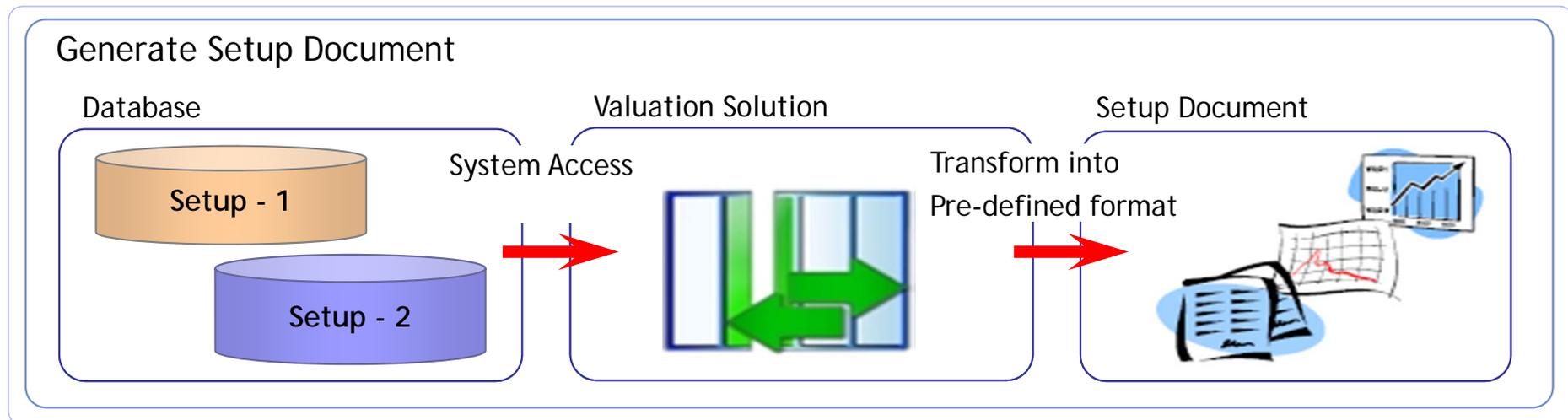
After Multi Process Setup



## Amain for IFRS – Detail Feature : Automated Documentation

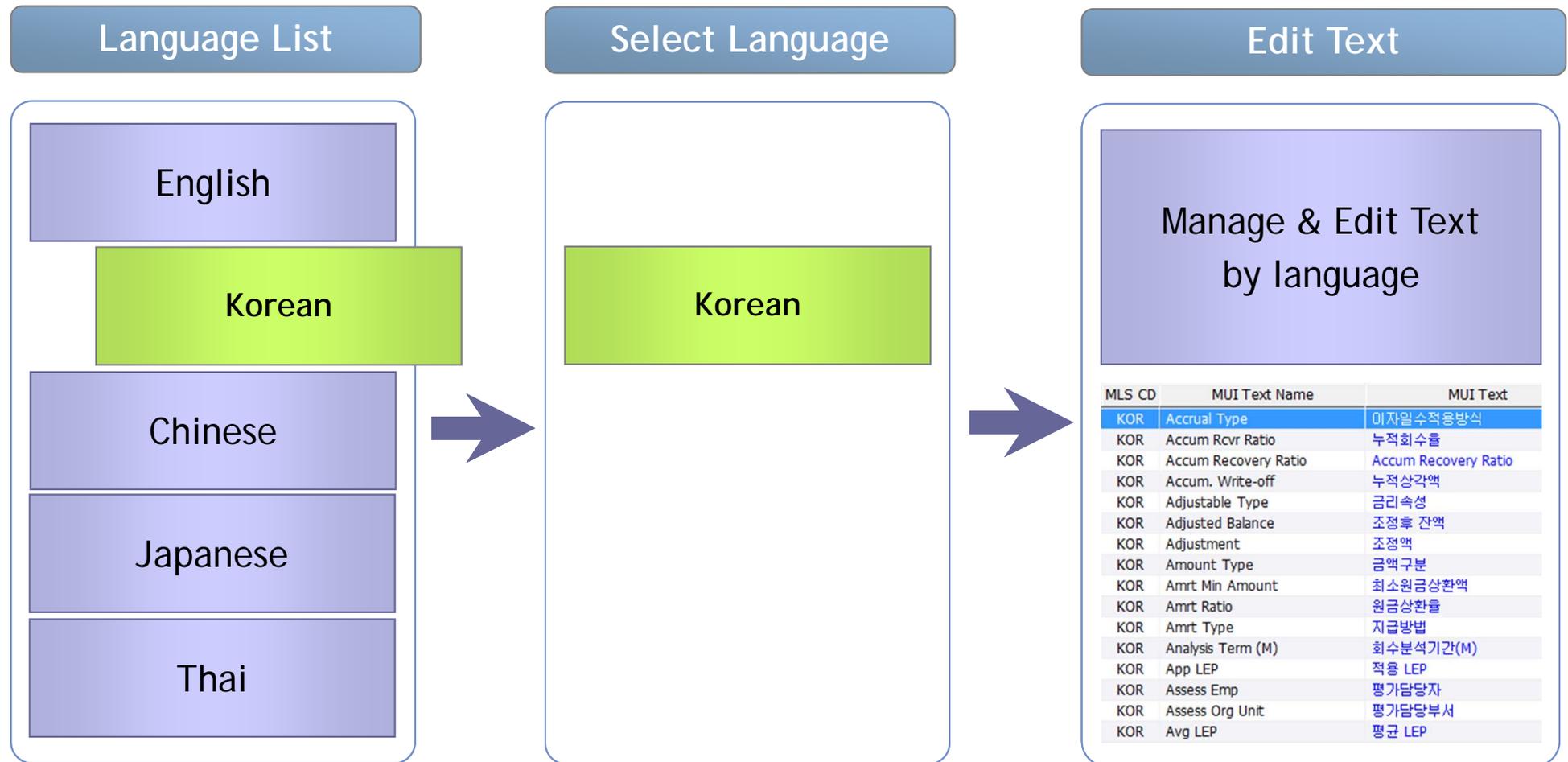
- ❑ Amain provides a function to generate Setup Document to keep the consistency between Amain system and documentation automatically.

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 IFRS – 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 IFRS – 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.

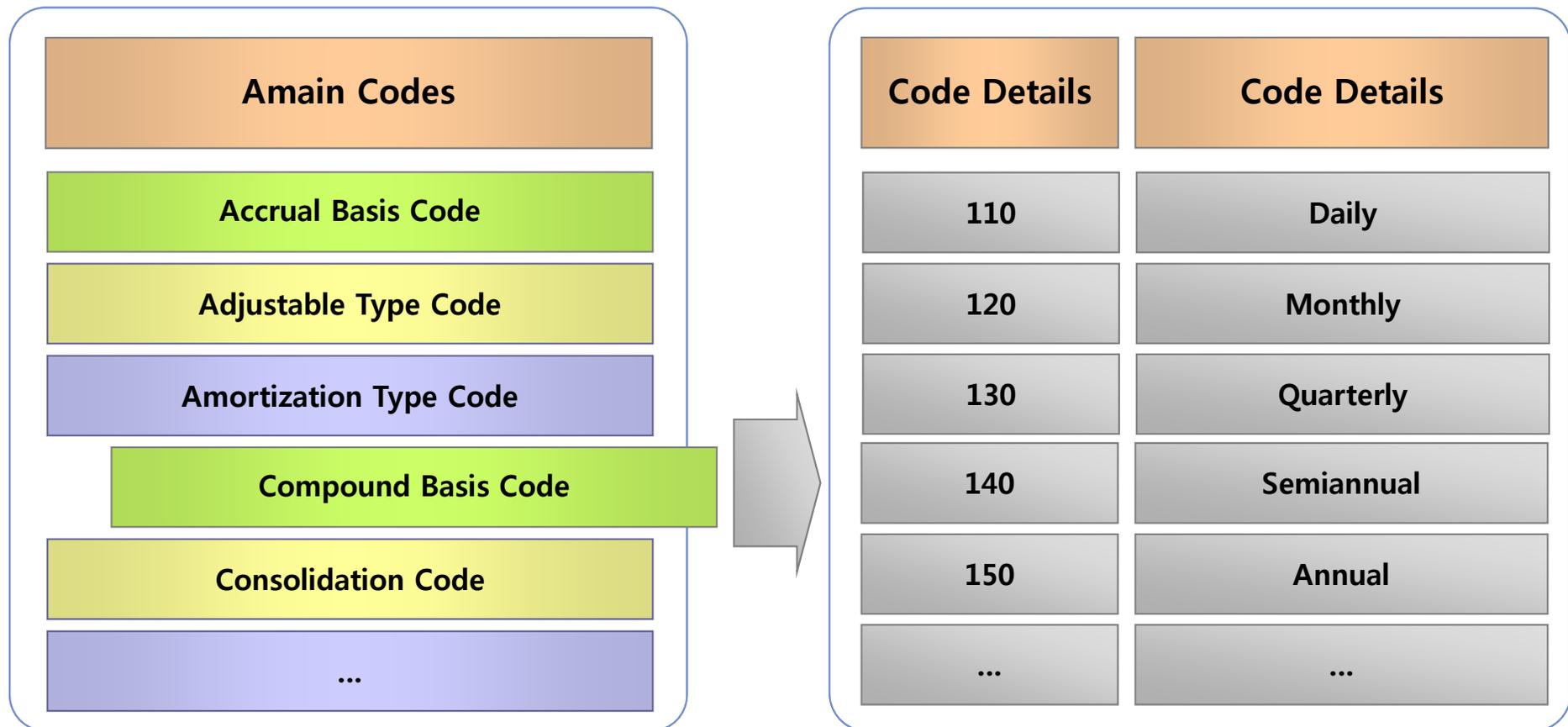
Help of specific Menu by [Shift-F1 key]

Content of Help by [F1 key]

번호	Process Rule	Process No	Folder	Calculation Element	Filter Rule	Prepay Rule	Recovery Peric
1	PR_110_원소_MOR_CALC	100009	ECF	Effective Interest Rate-Original(Fit)			RP_CF_MAIN
2	PR_120_원소_PV_CALC	100010	ECF	Fair Value-Original(Fit)			RP_CF_MAIN
3	PR_130_원소_EIR_CALC	100011	ECF	Effective Interest Rate-Original(Fit)		PP_EXP_AMRT	RP_CF_MAIN
4	PR_210_연리_MOR_CALC	100012	ECF	Effective Interest Rate-Remaining			RP_CF_MAIN
5	PR_220_연리_EIR_CALC	100013	ECF	Effective Interest Rate-Original(Cur R)		PP_EXP_AMRT	RP_CF_MAIN
6	PR_230_연리_PV_CALC	100014	ECF	Fair Value-Remaining		PP_EXP_AMRT	RP_CF_MAIN
7	PR_240_연리_LIQ_CALC	100015	ECF	Liquidity Projection			RP_CF_MAIN
8	PR_310_연리_LIQ_CFM	100349	ELP	Liquidity Projection			RP_CF_MAIN
9	PR_410_연리_PROV_CF	100016	ELP	Cash Flow-Remaining	DF_PR_BD_ASSESS		RP_CF_MAIN
10	PR_VERIFY_BNST	100288	VERIFY	Fair Value-Remaining			RP_CF_MAIN

## Amain for IFRS – 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.



## Get Reliable Results

Input data : Check and Validate Input Data

Amain Setup : **Verify Amain Setup** against User requirements

Amain Result : **Validate Amain Results by simulation**

## Get Results on Time

**Performance Tuning** : Support to get better performance

**Setup Document** : Provide function for Setup Document

Result Validation : **Automate Validation Process** of Amain Results

**Parameter Generation** : Parameters required by Risk manager

## Efficient Maintenance

**One Stop Service** : Put together all Functions for maintenance

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

Inspect Amain Setup : **Detect Amain Setup in mistake** quickly



## Agenda

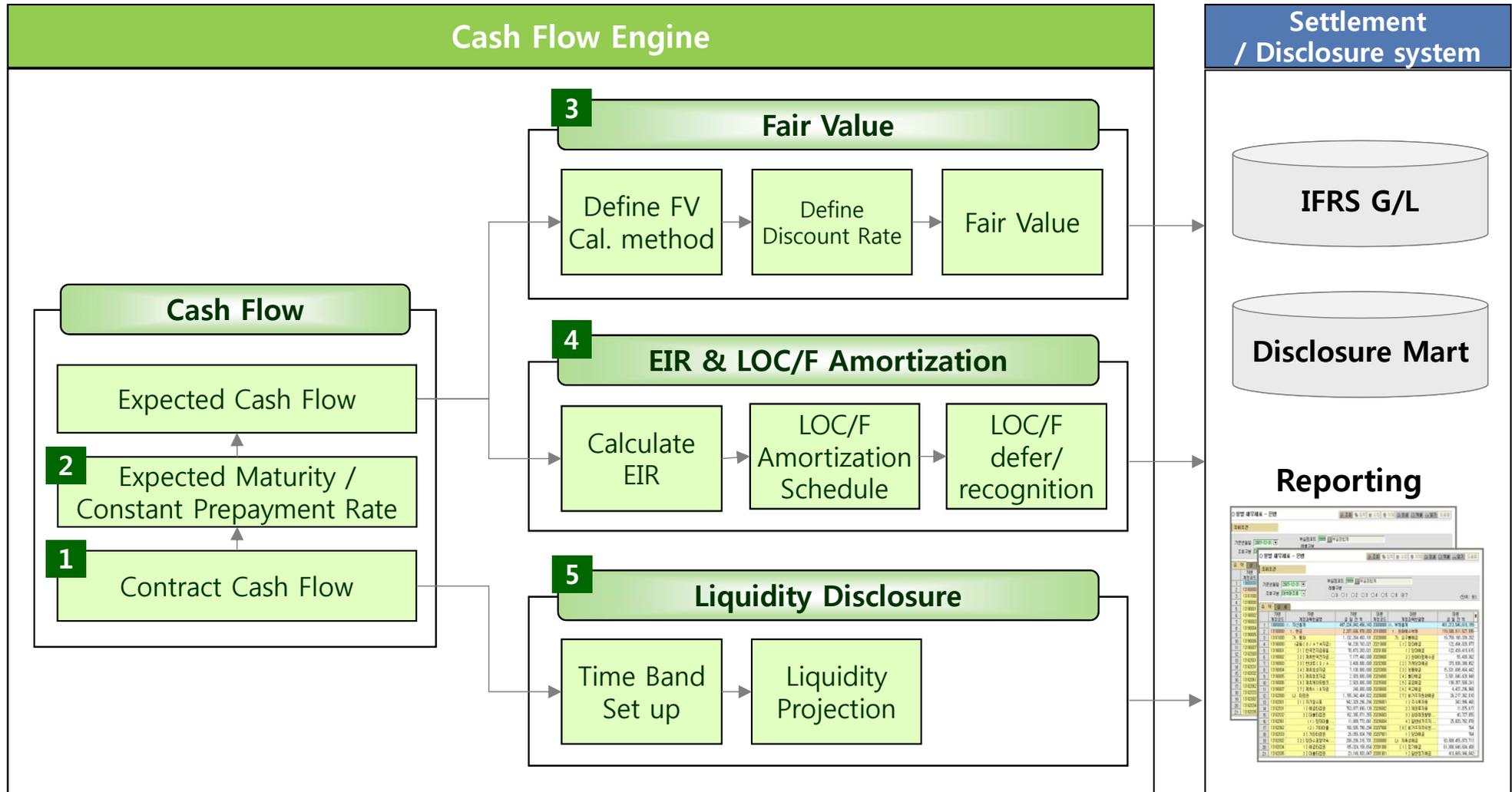
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### I. Amain for MIS

1. Introduction
2. [Amain for CashFlow](#)
3. Amain for Provision
4. Amain for Job
5. Amain for Admin

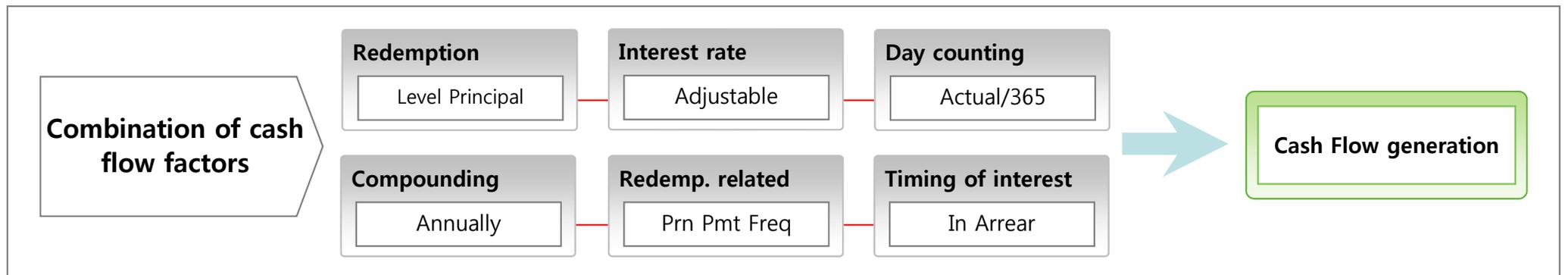
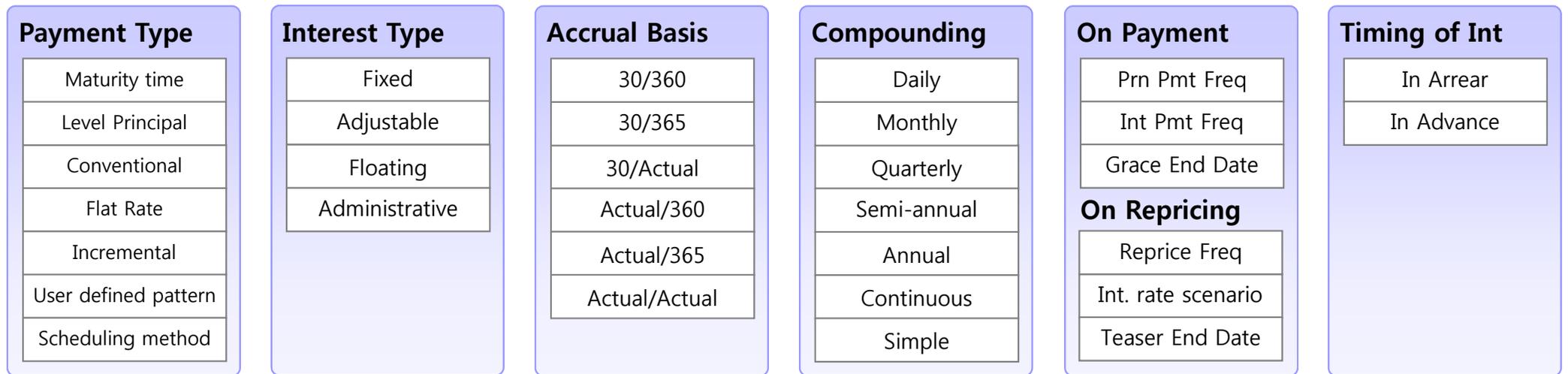
# Amain for CashFlow – Process Flow

- With strong Cashflow engine, Amain provides flexible Discount Method and generate LOC/F Amortization based on proven EIR calculation algorithm.



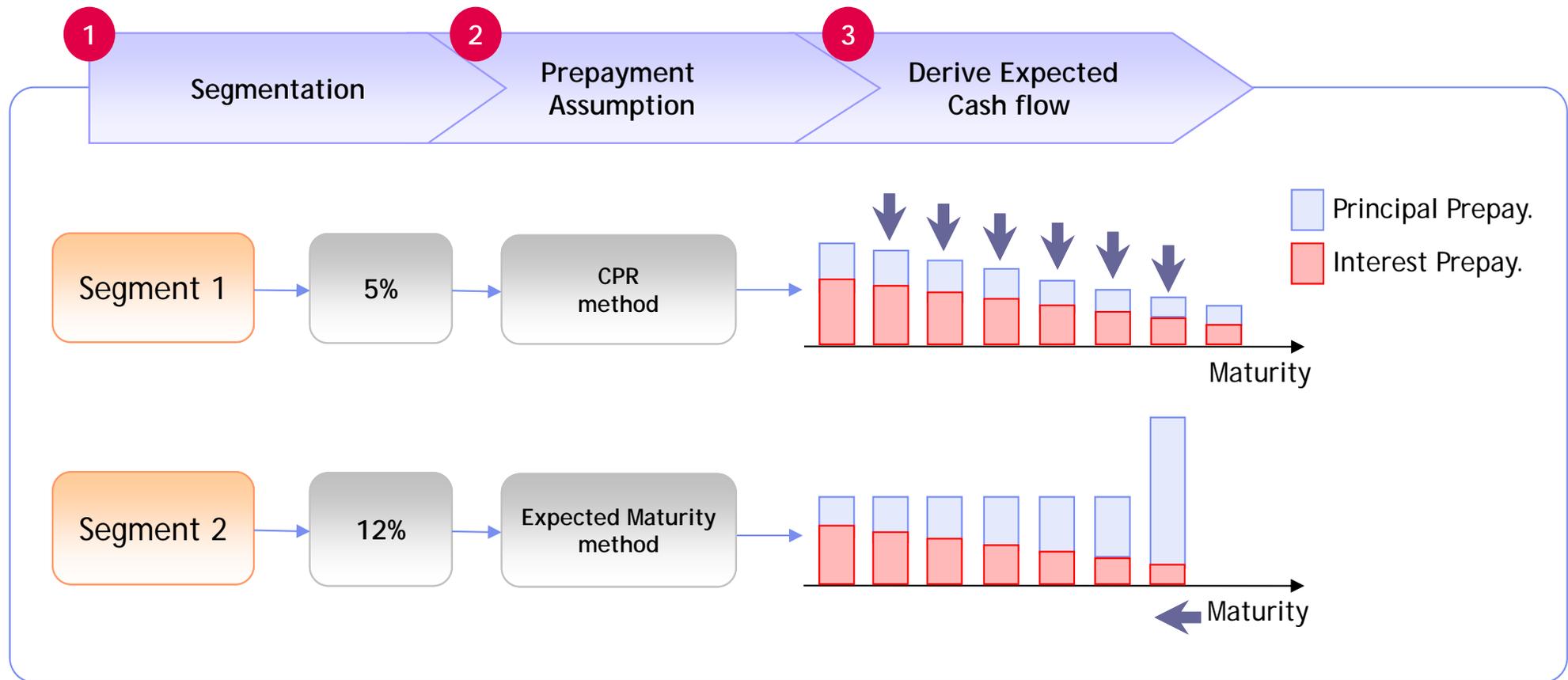
# Amain for CashFlow – Various CashFlow Factor

- ❑ 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 CashFlow – Prepayment & Expected Maturity

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

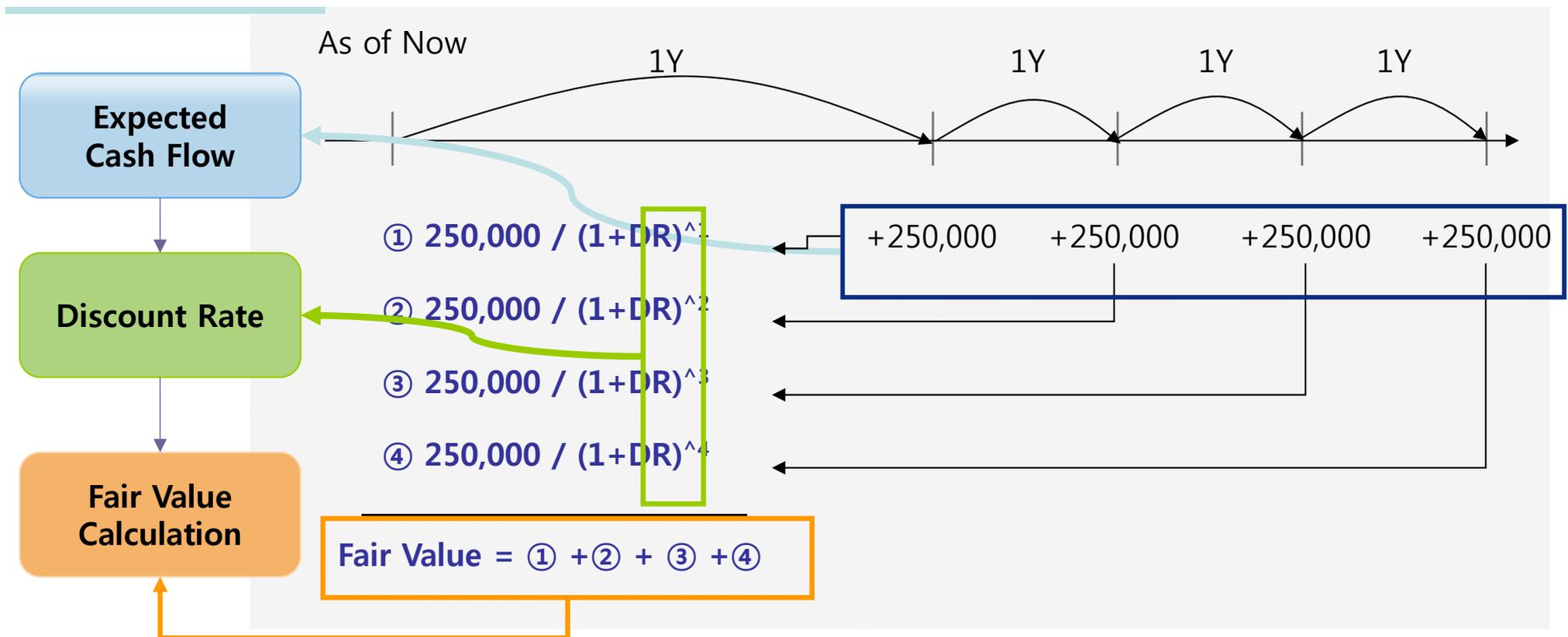


- CPR or Expected maturity assumption will be calculated based on historical data.

# Amain for CashFlow – Discount CashFlow Model

- ❑ Fair Value is calculated by discounting Cashflows with related discount rates.
- ❑ Prepayment assumptions can be applied to contract Cashflows.

## DCF Model



## Amain for CashFlow – Fair Value Method

- ❑ Fair Value method is defined by the combination of Discount method, Cash Flow type, Including of interests and interpolation

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

Fair Value Method

Discount Method: Interest Rate Code

Discount Rate Code: 10000  
KRW-FTP Base YC

Cash Flow Definition

Interest Only  
 Mature at Reprice

Spot Rate  
Discount Rate: 0

Clean or Dirty Pricing  
 Clean Price  Dirty Price

Interpolation Type

Linear Interpolation  
 Cubic Spline 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 CashFlow – Discount Yield Curve

- ❑ The Yield Curve for discount must be defined first. The historical rates for each discount rate are accumulated inside the Cashflow engine through the interface program.

The screenshot displays a financial software interface with three main sections:

- Interest Rate Code:** A list of codes and descriptions.
 

IRC	Descriptor
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
- Rates Terms:** A table defining the terms and multipliers for the rates.
 

Term	Multiplier
1 Days	
3 Months	
6 Months	
9 Months	
12 Months	
- Rates:** A table showing historical rates for a specific date range.
 

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	3.6128
2010-05-30	2.1700	2.4500	2.4215	2.6472	2.8326	3.3001	3.5192	3.5911	3.6128
2010-05-29	2.1700	2.4500	2.4215	2.6472	2.8326	3.3001	3.5192	3.5911	3.6128
2010-05-28	2.1700	2.4500	2.4215	2.6472	2.8326	3.3001	3.5192	3.5911	3.6128
2010-05-27	2.1500	2.4500	2.4011	2.6268	2.8121	3.2691	3.4987	3.5813	3.6128
2010-05-26	2.1500	2.4500	2.3705	2.6064	2.7917	3.2485	3.4887	3.5819	3.6128
2010-05-25	2.1500	2.4500	2.3705	2.5961	2.7814	3.2382	3.4784	3.5609	3.6128
2010-05-24	2.1300	2.4500	2.3705	2.5961	2.8124	3.2902	3.5304	3.6128	3.6128

# Amain for CashFlow – Process Setup for Fair Value

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

**Process Rule Setup**

**Calculation Type**

- Fair Value-Remaining
- Fair Value-Remaining(Forward)
- Fair Value-Original(Flat)
- Fair Value-Original(Forward)
- Effective Int Rate-Remaining
- Effective Int Rate-Original(Flat)
- Effective Int Rate-Original(Forward)
- Effective Int Rate-Original(Cur Rate)
- Liquidity Projection
- Cash Flow-Remaining
- Cash Flow-Remaining(Forward)
- Cash Flow-Original(Flat)
- Cash Flow-Original(Forward)

**Input Tables**

Table Name
ECFI_LOAN
ECFI_LOAN_INS
ECFI_OPR
ECFI_REAL_DEPO

**Common Setup**

Filter Condition: <None>

Recovery Period: [ECF] RP\_CF\_MAIN

Prepayment: [ECF] PP\_EXP\_AMRT

Forecast Rate: <None>

**Fair Value Setup**

**Fair Value Method**: [ECF] FV\_CF\_MAIN

**Result Dimensions**

- GL COA
- Organization Unit

**Discount Rate**

Linear 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

Cash Flow Log

# Amain for CashFlow – Validation of Fair Value Result

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

**Instrument**

GL COA	Currency	Adjustable Type	Origination Date	Maturity Date	Grace End Date	Next Repr Date
[140201010] 부동산담보대출금-개인	KRW	Variable-Adjustable	2006-06-23	2021-06-23	2011-07-05	2010-06-23

Cur Fair Value	Cur Par Bal	Cur Rate	Discount Spread	Cur MOR	Cur EL Rate	Interest Only
72,035,703	72,000,000	3.7400	0.9300	2.8100		<input type="checkbox"/>

**Fair Value Option**

Discount Method: Interest Rate Code

Cash Flow Definition:  Mature at Reprice

Discount Rate Code: 10110  
SPOT-국고채

Spot Rate Discount Rate: 0

Clean or Dirty Pricing:  Clean Price  Dirty Price

**Interest Rate**

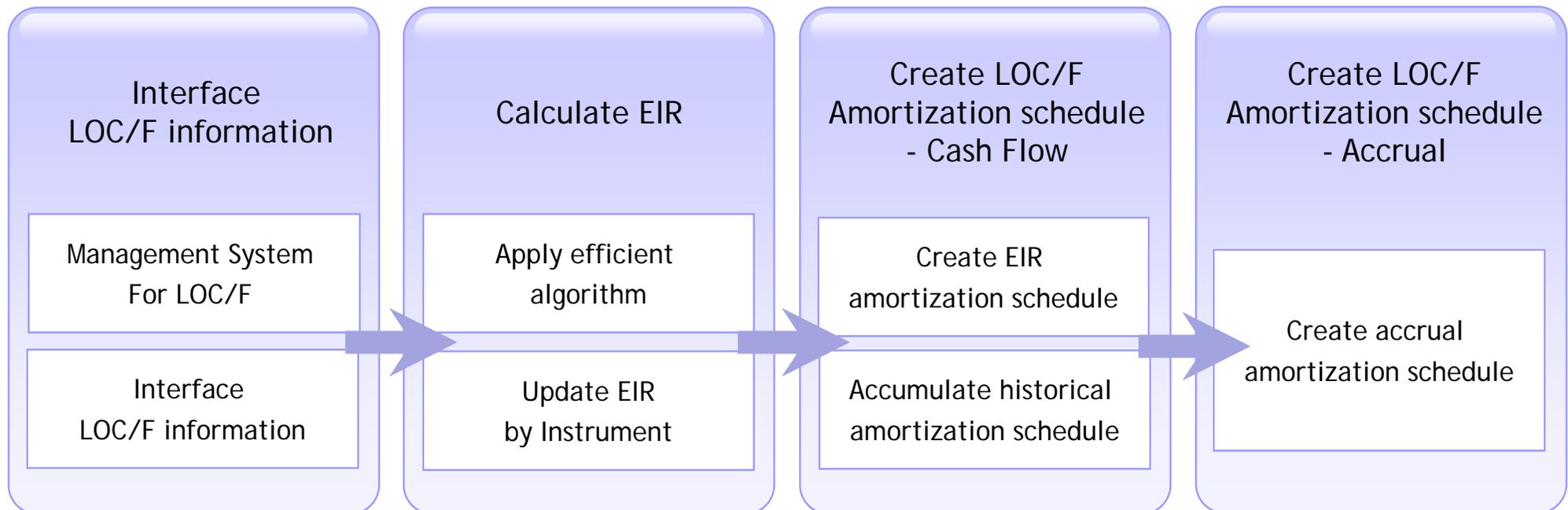
Term	Multiplier	Interest Rate	Discount Rate
1	Days	2.0000	2.9300
3	Months	2.7800	3.7100
6	Months	2.2574	3.1874
9	Months	2.4421	3.3721
12	Months	2.6273	3.5573
18	Months	3.1147	4.0447
24	Months	3.3018	4.2318
30	Months	3.6946	4.6246
36	Months	3.9730	4.9030
60	Months	4.6643	5.5943
120	Months	5.1632	6.0932

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

## Amain for CashFlow – Calculation Flow of EIR

- Based on exact LOC/F amount and Cashflow information, the Cashflow engine calculates EIR, LOC/F amortization schedule as requested.

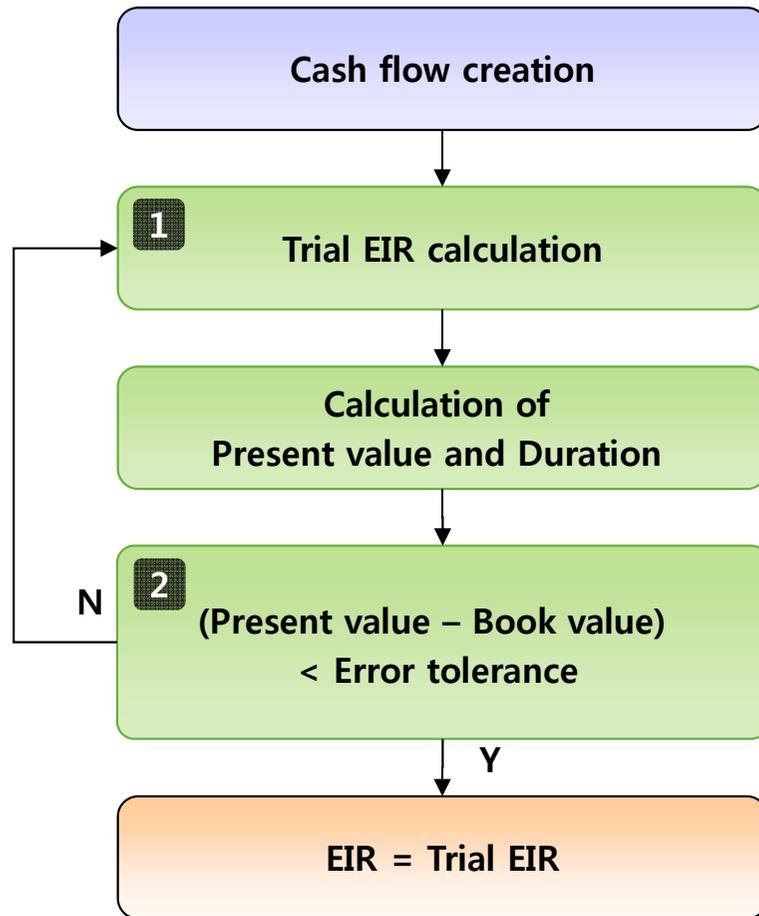
\* LOC/F: Loan Origination Cost/Fee



- In case of variable interest rate, the amortization will be executed based on initial amortization schedule.
- Re-calculated EIR will be used to handle Unwinding effect for the case of impairment.

# Amain for CashFlow – Calculation Logic of EIR

- ❑ System Performance is enhanced by embodying and applying EIR calculation logic in Trial & Error method (Newton Raphson method) verified by previous ALM experience.



## 1. Trial EIR calculation

The trial EIR starts from nominal interest rate. after that, next trial EIR will be calculated based on the formula consisting of present value and duration from previous EIR.

## 2. Setup of error tolerance

it causes trade-off between error tolerance and performance. Generally error tolerance is defined by currency as below.

- ✓ KRW/JPY:  $\pm 1$ Won
- ✓ USD/Euro/GBP:  $\pm 0.1$ Won

## Amain for CashFlow – Process Setup for EIR

- ❑ The process for EIR calculation is defined by setting up the EIR Option, Input Data and Common Setup.

The screenshot displays the 'Process Rule Setup' window for EIR calculation. It is divided into two main sections: 'Process Rule Setup' on the left and 'EIR Setup' on the right. The 'EIR Setup' section is further divided into 'Fair Value Setup', 'EIR Setup', and 'Liquidity Setup' tabs.

**Process Rule Setup**

- Calculation Type:** A list of calculation options with checkboxes. 'Effective Int Rate-Original(Flat)' is selected.
- Input Tables:** A table with the following entries:

Table Name
ECFI_LOAN_ORG
ECFI_REAL_DEPO_ORG
- Common Setup:** A series of dropdown menus:
  - Filter Condition: <None>
  - Recovery Period: [ECF] RP\_CF\_MAIN
  - Prepayment: [ECF] PP\_EXP\_AMRT
  - Forecast Rate: <None>

**EIR Setup**

- LOC/F Deferred Schedule:** Two checked options: 'Schedule Generation - Cash Basis' and 'Schedule Generation - Accrual Basis'.
- MOR Option:** 'MOR Rate Calculation' is unchecked.
- Cash Flow Option:** 'Cash Flow Log' is checked.

- In case of choosing the deferred amortization schedule option, the schedule is saved in separate result table.

# Amain for CashFlow – Validation of EIR Result

- The summary results and detail results of EIR calculation can be reviewed and verified by instrument level.

Reference No	GL COA	Org EIR
167789012488	[140251101] 신용대출금	9.6988
167789012489	[140201010] 부동산담보	4.2936
177789012470	[140251101] 신용대출금	12.2868
177789012471	[140251101] 신용대출금	10.2813
177789012472	[140251101] 신용대출금	10.2813
177789012473	[140251101] 신용대출금	11.2841
177789012474	[140201010] 부동산담보	5.3348
177789012475	[140251101] 신용대출금	12.2871
177789012476	[140251101] 신용대출금	13.2761
177789012477	[140201010] 부동산담보	5.6141
177789012478	[140251101] 신용대출금	12.2871
177789012480	[140251101] 신용대출금	12.5043
177789012481	[140251101] 신용대출금	11.7127
177789012482	[140251101] 신용대출금	14.7343
177789012483	[140251101] 신용대출금	12.7197
177789012484	[140251101] 신용대출금	11.7129
177789012485	[140251101] 신용대출금	12.7197
177789012486	[140251101] 신용대출금	11.7124
177789012487	[140251101] 신용대출금	11.7124
177789012488	[140251101] 신용대출금	12.7197
177789012489	[140201010] 부동산담보	4.7600
187789012470	[140201010] 부동산담보	4.9848
187789012471	[140251101] 신용대출금	13.2899

GL COA	Currency
[140201010] 부동산담보대출금-개인	KRW

Org EIR	Org Rate
4.2936	4.2600

GL COA	Currency	Adjustable Type
[140201010] 부동산담보대출금-개인	KRW	Variable-Adjustable

Org EIR	Org Rate	Org LOC/F Bal-Net
4.2936	4.2600	1,197,630

Start Date	End Date	DFRD LOC/F Amt-Net
2010-05-01	2010-05-31	7,926
2010-06-01	2010-06-30	33,969
2010-07-01	2010-07-31	35,141
2010-08-01	2010-08-31	35,268
2010-09-01	2010-09-30	34,191
2010-10-01	2010-10-31	35,374
2010-11-01	2010-11-30	34,339
2010-12-01	2010-12-31	35,525
2011-01-01	2011-01-31	35,650
2011-02-01	2011-02-28	32,242
2011-03-01	2011-03-31	35,649
2011-04-01	2011-04-30	34,694
2011-05-01	2011-05-31	35,892
2011-06-01	2011-06-30	34,840
2011-07-01	2011-07-31	36,045
2011-08-01	2011-08-31	36,171
2011-09-01	2011-09-30	35,067
2011-10-01	2011-10-31	36,278

CF Date	DFRD Amt FC-Net	CF Int	CF Int Eff
2010-05-25	0	0	0
2010-06-25	35,099	1,085,425	1,120,524
2010-07-25	33,978	1,049,038	1,083,016
2010-08-25	35,249	1,082,455	1,117,704
2010-09-25	35,329	1,081,026	1,116,355
2010-10-25	34,202	1,044,765	1,078,967
2010-11-25	35,481	1,078,025	1,113,506
2010-12-25	34,349	1,041,851	1,076,200
2011-01-25	35,632	1,075,003	1,110,635
2011-02-25	35,713	1,073,546	1,109,259
2011-03-25	32,148	968,334	1,000,482
2011-04-25	35,847	1,070,242	1,106,089
2011-05-25	34,704	1,034,292	1,068,996
2011-06-25	35,999	1,067,165	1,103,164
2011-07-25	34,852	1,031,303	1,066,155
2011-08-25	36,152	1,064,065	1,100,217
2011-09-25	36,233	1,062,569	1,098,802
2011-10-25	35,078	1,026,839	1,061,917

- The EIR schedule and actual cash flow information can be reviewed by double clicking the specific instrument among the instrument list.

# Amain for CashFlow – Time Band Setup

- For every product with fixed cashflow by contract or assumption, the Cashflow engine generates / summarizes the cashflows for liquidity analysis in the specific time band requested by user.

## Time Band Definition

**Time Band Rule**

Folder	Rule No	Rule Name
ECF	100001	ECF_BAND_FRST
ECF	100011	ECF_BAND_LIQ

**Time Band**

Term	Multiplier
1	Months
3	Months
6	Months
9	Months
1	Years
3	Years
5	Years

## Definition of Maturity for overdue account

CF COA	Description	Currency	Term	Multiplier
10000041	Card Revolving	KRW	3	Months
11100001	Overdraft	KRW	3	Months
11200001	Note Discounted	KRW	3	Months
11200002	Trade Bills Discounted	KRW	3	Months
11200003	Lending in Foreign Trade	KRW	3	Months
11300001	Housing Loan	KRW	3	Months
11300002	Mortgage Loan	KRW	3	Months
11400001	General Purpose Loans	KRW	3	Months
11400002	General Purpose Loans - Amort	KRW	3	Months
11500001	RP Purchased	KRW	3	Months
11600001	Loan for Gas Business	KRW	3	Months
11600002	Loan for Tour Business	KRW	3	Months
11600003	Loan for Energy Business	KRW	3	Months
21100001	Saving Deposit	KRW	3	Months
21200001	Current Deposit	KRW	3	Months
21200002	Term Deposit	KRW	3	Months
21200003	Term Deposit for Household	KRW	3	Months
21200004	Installment Deposit	KRW	3	Months
21200005	Long-term Borrowing	KRW	3	Months
21200006	Domestic Borrowing	KRW	3	Months
21300001	Certificate of Deposit	KRW	3	Months
23100001	Borrowing from Gas Fund	KRW	3	Months
23100002	Borrowing from Tourism Fund	KRW	3	Months
23100003	Borrowing from Energy Fund	KRW	3	Months

- Liquidity disclosure is intended for future principles and interests. If there are difficulties in deciding the cash flow and maturity due to the specialties of transaction, it is defined separately.

# Amain for CashFlow – Process Setup for Liquidity Disclosure

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

**Process Rule Setup**

**Calculation Type**

- Fair Value-Remaining
- Fair Value-Remaining(Forward)
- Fair Value-Original(Flat)
- Fair Value-Original(Forward)
- Effective Int Rate-Remaining
- Effective Int Rate-Original(Flat)
- Effective Int Rate-Original(Forward)
- Effective Int Rate-Original(Cur Rate)
- Liquidity Projection**
- Cash Flow-Remaining
- Cash Flow-Remaining(Forward)
- Cash Flow-Original(Flat)
- Cash Flow-Original(Forward)

**Input Tables**

Table Name
ECFI_LOAN
ECFI_LOAN_INS
ECFI_OPR
ECFI_REAL_DEPO

**Common Setup**

Filter Condition: [TEMP] DF\_PR\_NOT\_ASSESS

Recovery Period: [ECF] RP\_CF\_MAIN

Prepayment: <None>

Forecast Rate: <None>

**Fair Value Setup** | **EIR Setup** | **Liquidity Setup**

Time Band Rule: [ECF] TB\_CF\_MAIN

**Result Dimensions**

- GL COA
- Organization Unit

Cash Flow Log

# Amain for CashFlow – Validation of Liquidity Disclosure

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



- The result for Liquidity projection can be reviewed conveniently with graph or table type in Top-Down way.



## Agenda

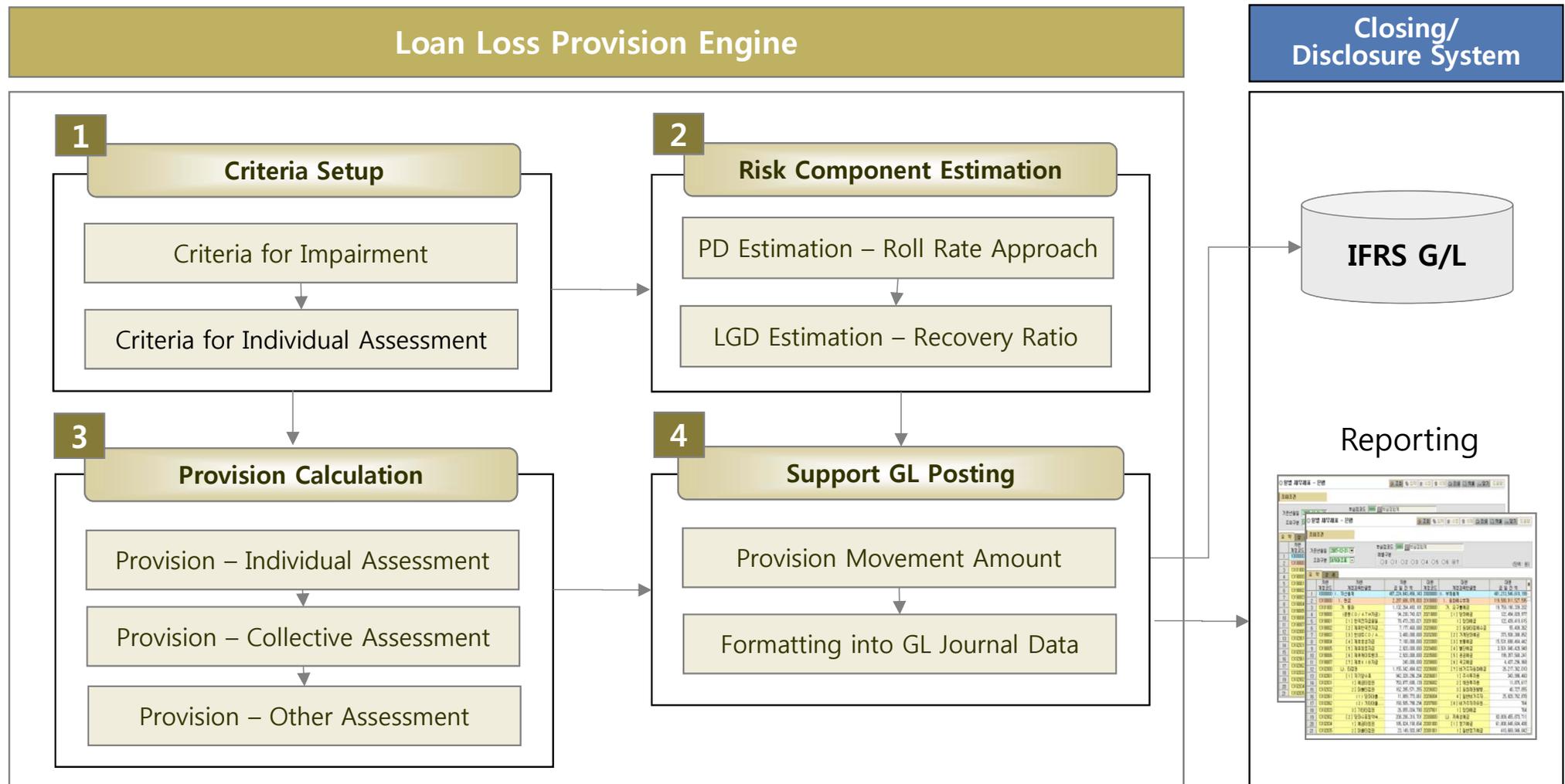
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### I. Amain for MIS

1. Introduction
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4. Amain for Job
5. Amain for Admin

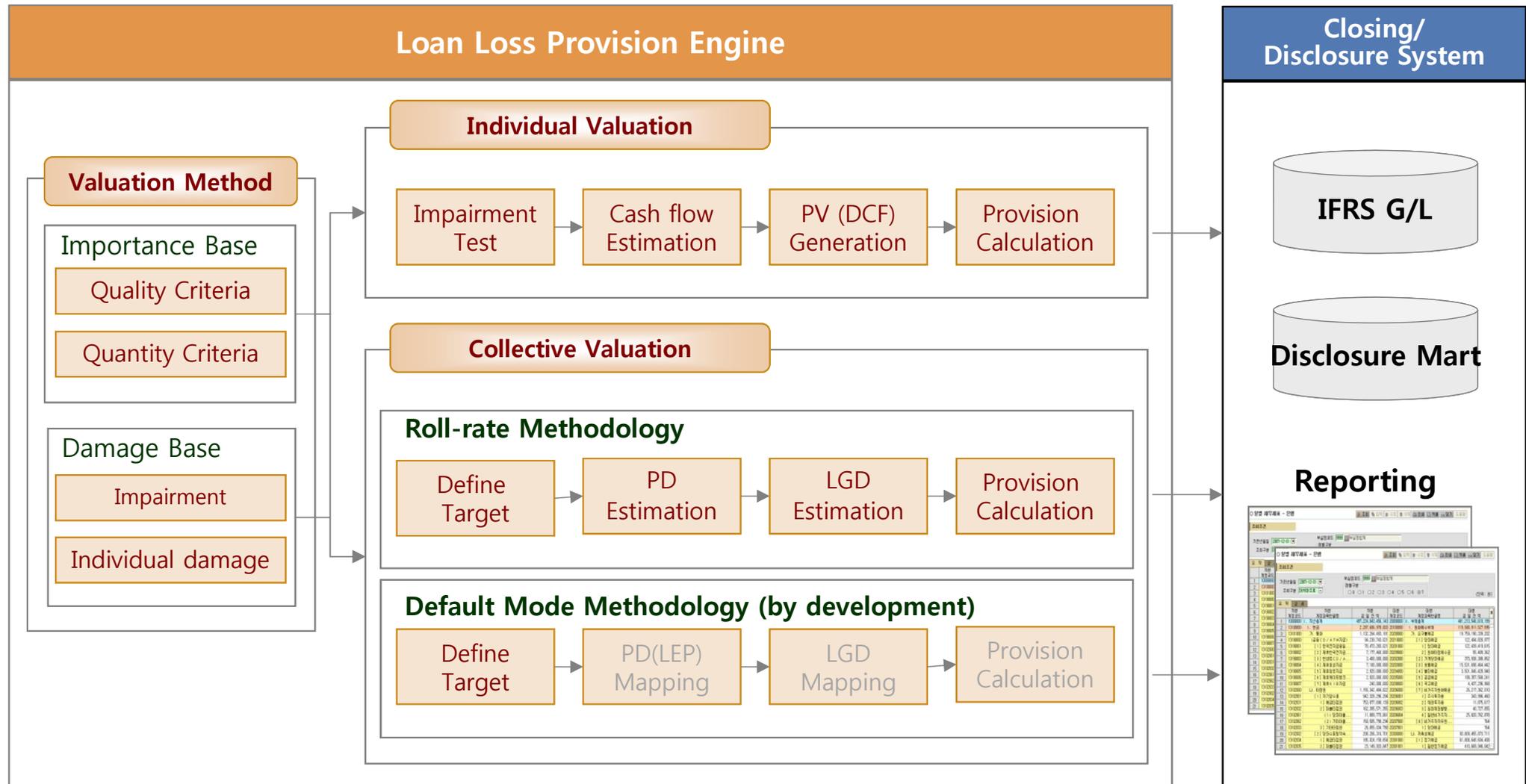
# Amain for Provision – Process Overview

- Every financial Institution has unique requirements for Loan Loss Provision in terms of internal policy, business case, data availability and status of Basel-II regulation. Further discussion is required to understand their situation and requirements before using Amain.



# Amain for Provision – Process Overview (Continued)

- ❑ Loan Loss Provision can be broken into several pieces as below in process point of view.



# Amain for Provision – Criteria Setup

- ❑ Criteria to perform the impairment test can be defined to determine the way to calculate loan loss provision individually or collectively.

**Column Setup** | **Impairment Criteria** | Quality & Quantity Criteria

Defined Criteria

No	Criteria Detail Condition	Impair Reason CD	Impair Reason Desc
1	TO_NUMBER(COND_001) > 90	110	Overdue

Reason: 110 Overdue  
Description: Overdue  
Criteria: TO\_NUMBER(COND\_001) > 90

**Column Setup** | **Impairment Criteria** | **Quality & Quantity Criteria**

Defined Criteria

No	Criteria Detail Condition	Ind Assess Reason CD	Impair Reason Desc
1	COND_002 >= 'C'	210	Under-Credit Rating

Reason: 210 Under-Credit Rating  
Description: Under-Credit Rating  
Criteria: COND\_002 >= 'C'

**Column in use**

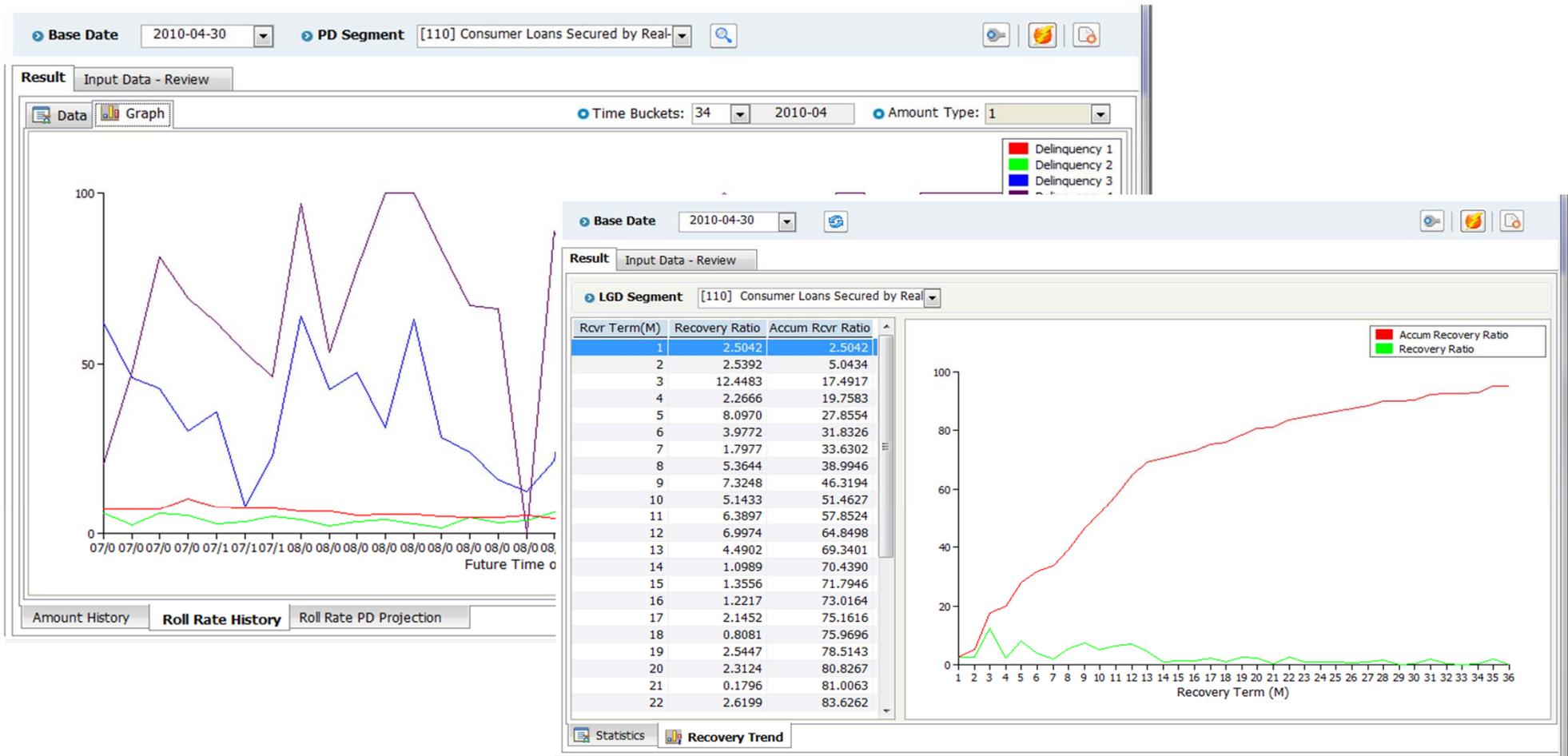
Cond No	Condition Field
COND_001	Days in Arrear
COND_002	Credit Rating

**Quantity Criteria**

通貨	Limit Amount
KRW	1,000,000,000

# Amain for Provision – Risk Component Estimation

- ❑ Risk Components are required for collective assessment.
- ❑ PD can be calculated by Roll-rate approach and LGD can be estimated by recovery ratio.



# Amain for Provision – Provision Calculation

- ❑ Provision by Individual assessment will be calculate by Discounted Cash Flow Method.
- ❑ Provision by Collective assessment will be calculated by Roll Rate Method or Default Mode.

Base Date: 2010-05-31

Customer

Cust Name	Cust No
Blue Ocean Ltd.	15289195
Chang Construction Ltd.	06298138
CMPR Ltd.	14839240
LG C&S Ltd.	14909203
Novos Ltd.	14729295
Posco Ltd.	02308345
Samsung Ltd.	15629268
SK C&C Ltd.	19589184
TrustOn Ltd.	11999154

CF by Customer

Customer	Impair	Individual Assess Reason	Individual Assess Reason Memo
[130] Corporate	<input type="checkbox"/>	[210] Under-Credit Rating	Under-Credit Rating

Contract CF

CF Type	3M	6M	9M	12M	15M
Principal	0				
Interest	65,534,247	65,			
Total	65,534,247	65,			

Estimated CF - User Input

CF Type	3M	6M
Principal	0	
Interest	30,000,000	30,
Total	30,000,000	30,

Collateral Info

Coll Cvg Type	
Specific Collateral	Real-estate

Provision by Customer

Customer	Cust Name	Cust No
(주)네트		00008337
마트정보통신		00008340
(주)델타코퍼레이		00098137
보스노래연습장		00108343
현대공사		00108345
강성원우유 수원2대리점		00198136
백궁		00198145
(주)서은경푸드포라이프		00208336
대신종합건기		00208341
레도산업		00208349
조은정보시스템		00298131
삼우상사		00298133
광성건업		00298137
서풀마크릴		00308332
호텔서해컨벤션웨딩		00308336
동원		00308339
음악미있는풍경		00308345
아반이부대찌개		00398134
쏘렌토		00398136
옛지그래픽		00408336
(주)대림시스템		00408338
삼곡제2주유소		00408342
지소림철학원		00498132

Instrument

Reference No	Provision-Total	Cur Par Bal	GL COA
766789012458 - 1	468,606	145,000,000	[140201040] Commercial Loans Secured by

Reference No	766789012458 - 1	Currency	KRW
GL COA	[140201040]	Commercial Loans Secured by Real-estate	
Provision-Total	468,606	Cur Total Bal	145,750,820
		Cur Par Bal	145,000,000
Provision-Bal + LOC/F	466,192	Cur Bal + LOC/F	145,000,000
Provision-RCVL Interest	2,414	RCVL Interest	750,820
Unwind Bal	0	Cur LOF Bal	0
Unwind RCVL Interest	0	Cur LOC Bal	0
Impair	N	Org EIR	6.9995
PD-IFRS	1.7150	LGD-IFRS	18.7470
PD	1.7150	Recovery Ratio	85.6993
PD Segment	[210] SOHO Loans Secured	LGD Segment	[210] SOHO Loans Secured

# Amain for Provision – Provide Basic Info of Journal Entry for GL Posting

- ❑ Amain generates the provision amount to be posted on GL system and formats the information into Journal style and pass them to GL system.

Base Date: 2010-05-31
Generate

Statement - Detail
Statement - Summary

GL COA: [149801101] Provision-Loans

Biz. Line	Prov Beg Bal	Write Off Amt	Write Off Rcvr Amt	Disposal Amt	Unwind Amt	Prov Change Amt	Prov End Bal
[1000] 일반계정	1,767,387,214				937,077	-15,757,111	1,750,693,026
[8100] 개인연금	23,976,260				0	278,688,986	302,665,246
[8200] 장기(유)	888,335				0	-23,664	864,671
[8300] 장기(무)	1,100,362,727						
[8310] 장기(무-공시미흡)	398,558,510						

Biz. Line: [1000] 일반계정      Write Off Amt:

Prov Beg Bal: 1,767,387,214      Write-Off Recovery Amt:

Prov End Bal: 1,750,693,026      Disposal Amt:

Base Date: 2010-05-31
Journal Info :
Create
Send
Cancel

System Key	Journal Desc	Journal Type	Transfer Y/N	Transfer Status	Journal No	Message	Org Unit	Biz Line	Item



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## Agenda

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### I. Amain for IFRS

1. Introduction
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## 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

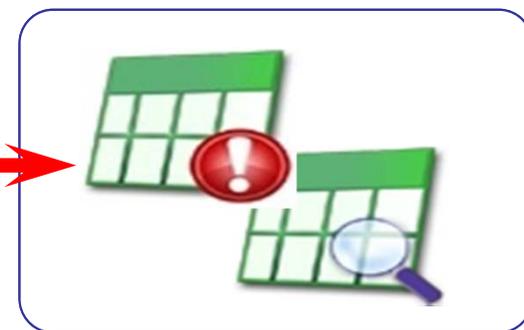
Register Job



Execute Job

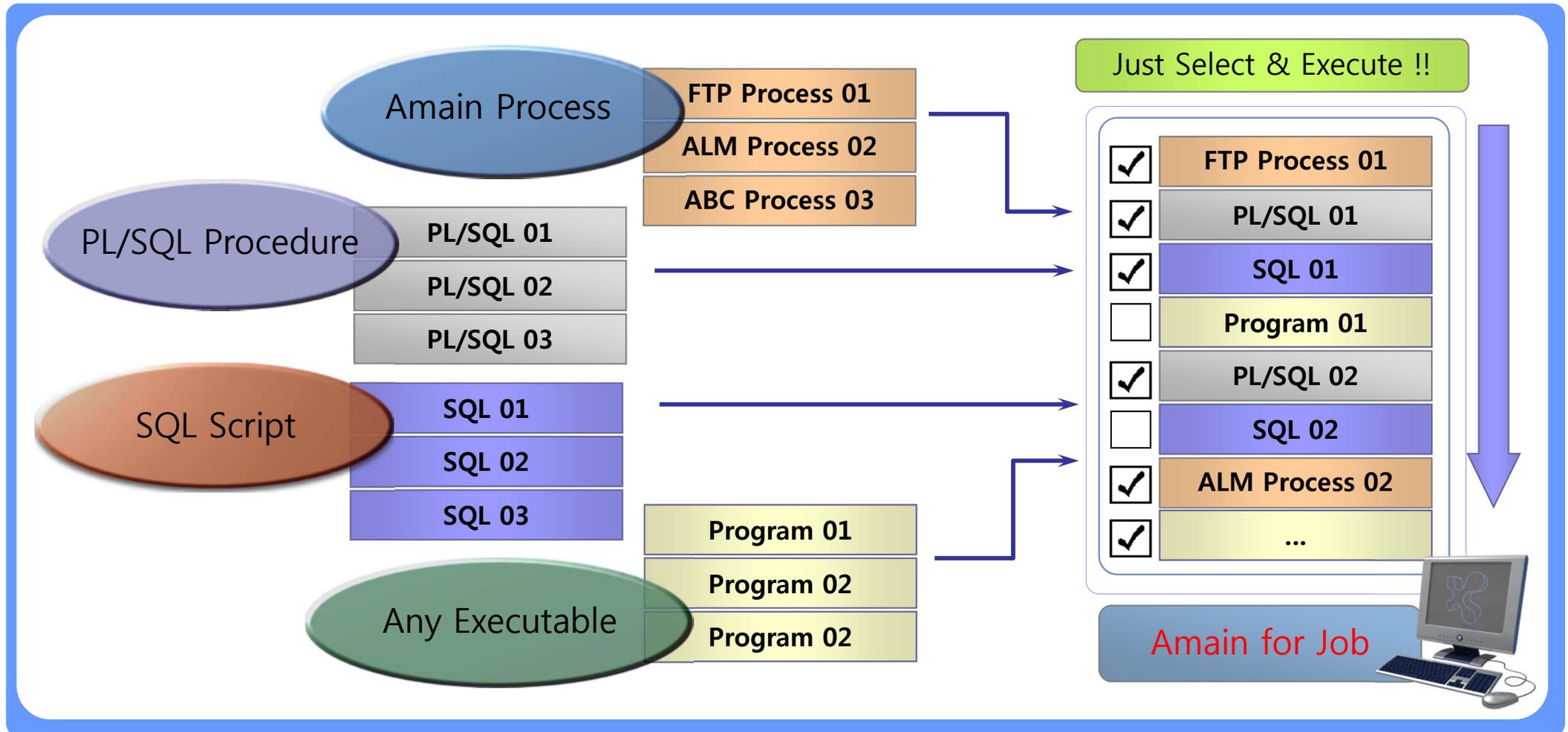


Monitor Job Status



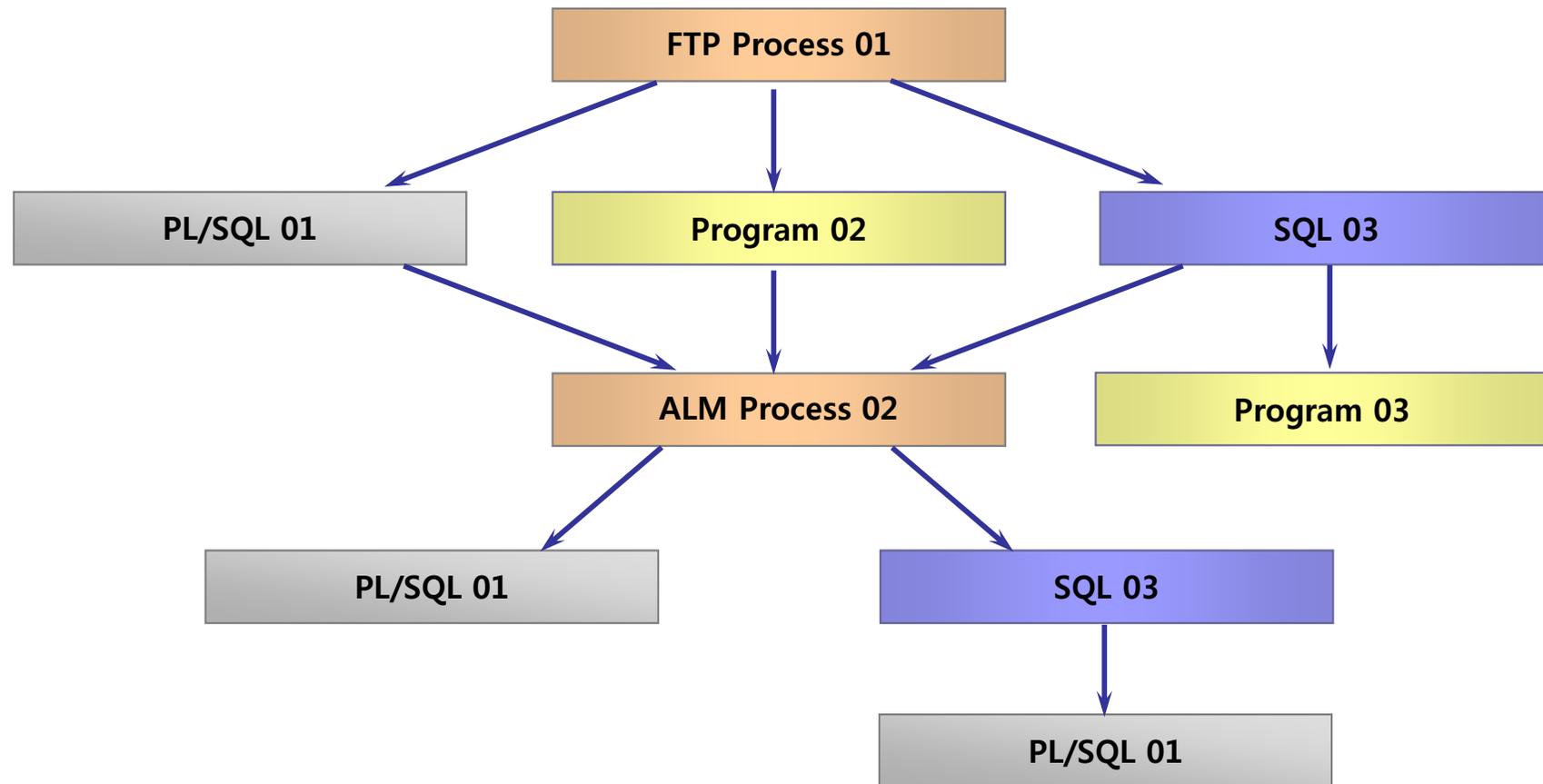
# Amain for Job - Execute All kinds of Job

- ❑ 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.



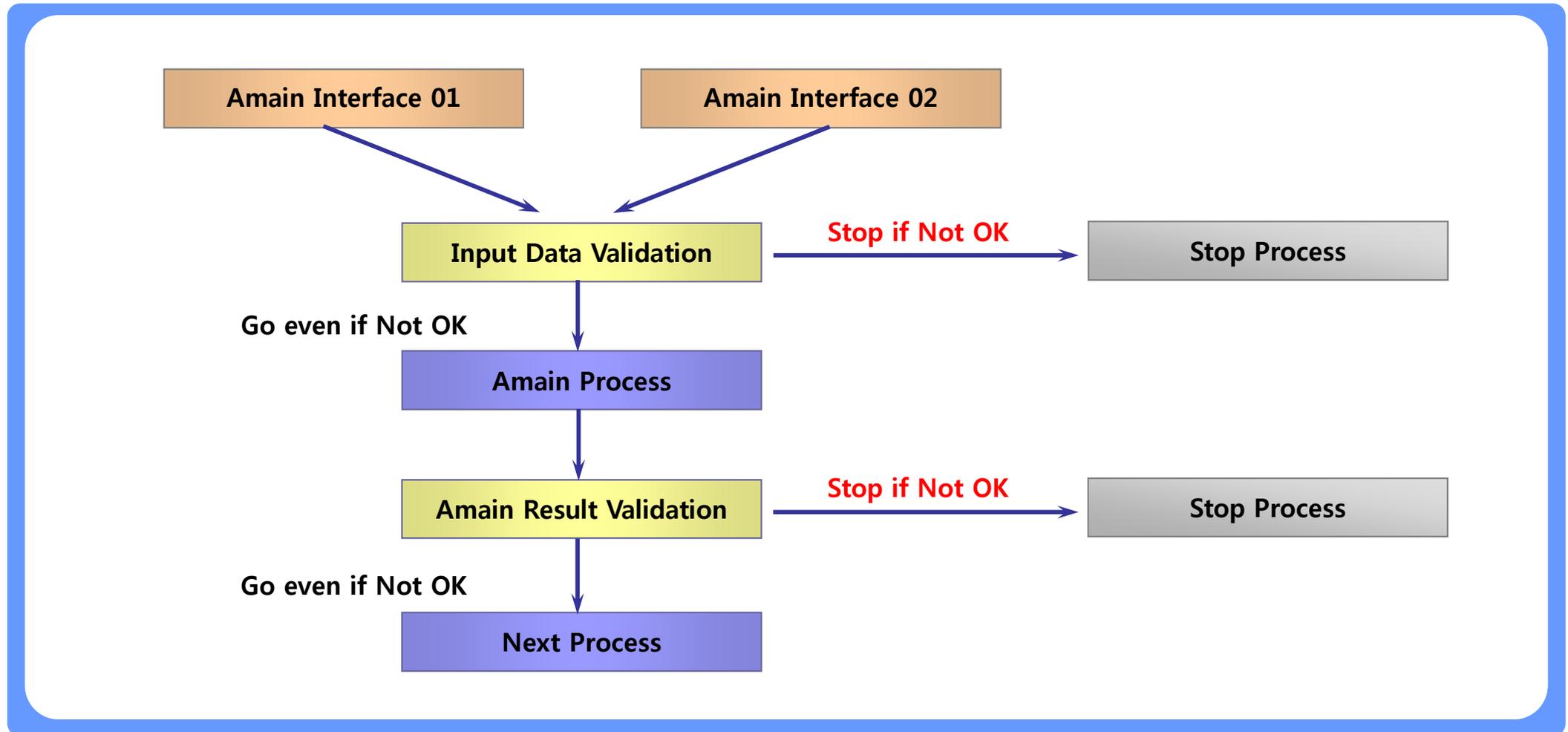
## Amain for Job – Manage Job Dependency

- ❑ 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.



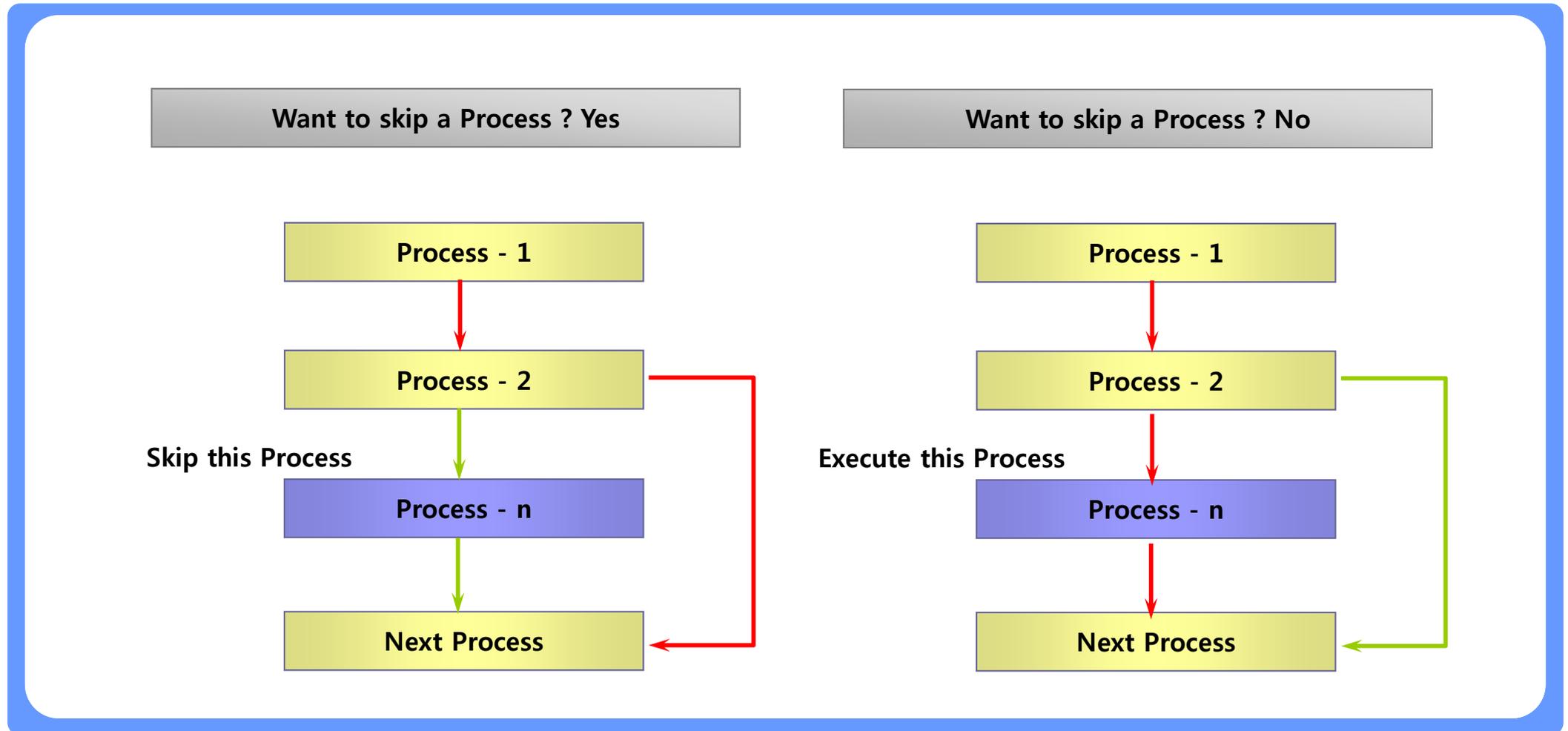
## Amain for Job – Control Sequence on Errors (Go/Stop ?)

- ❑ 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.

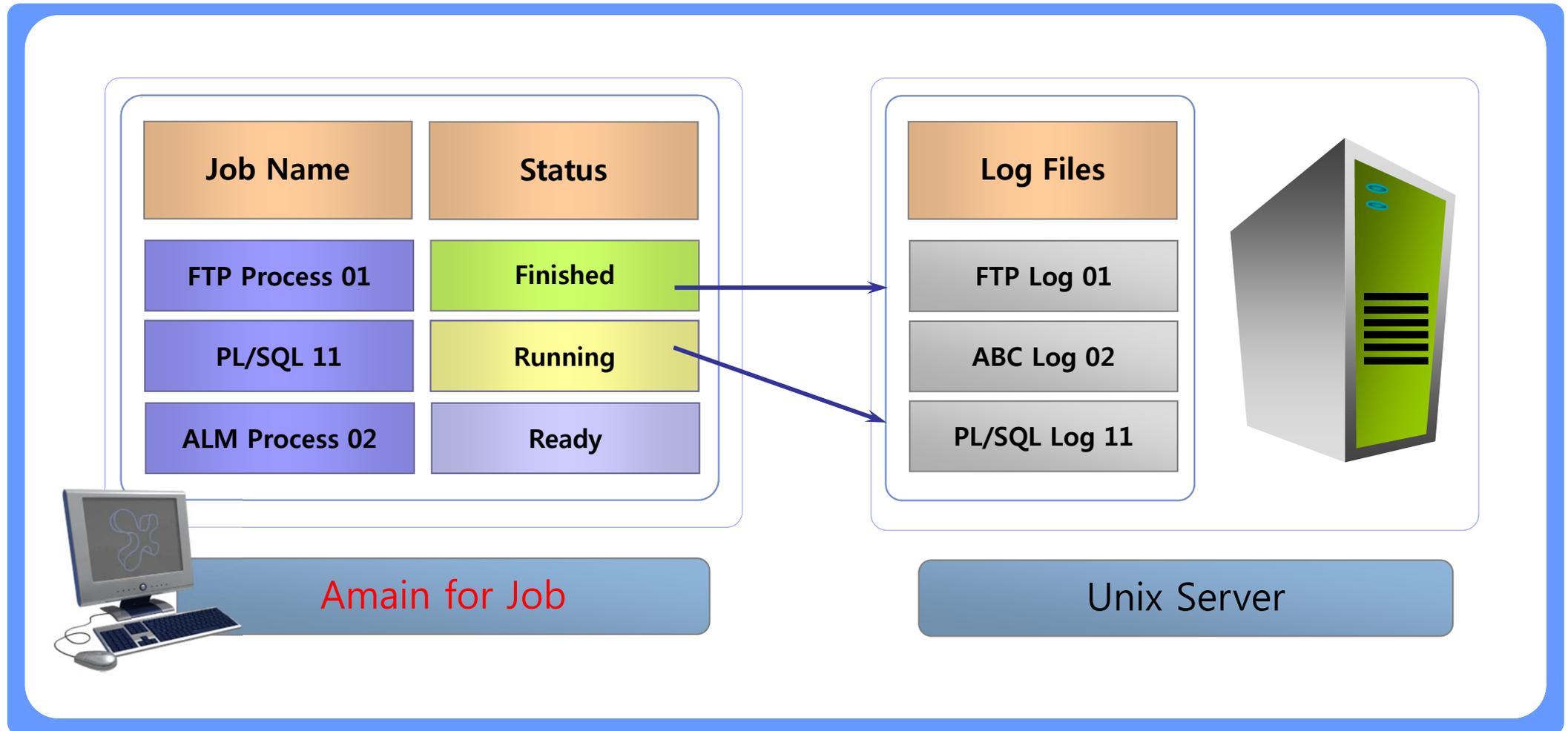
Suspend Job Resume Job Kill Job

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

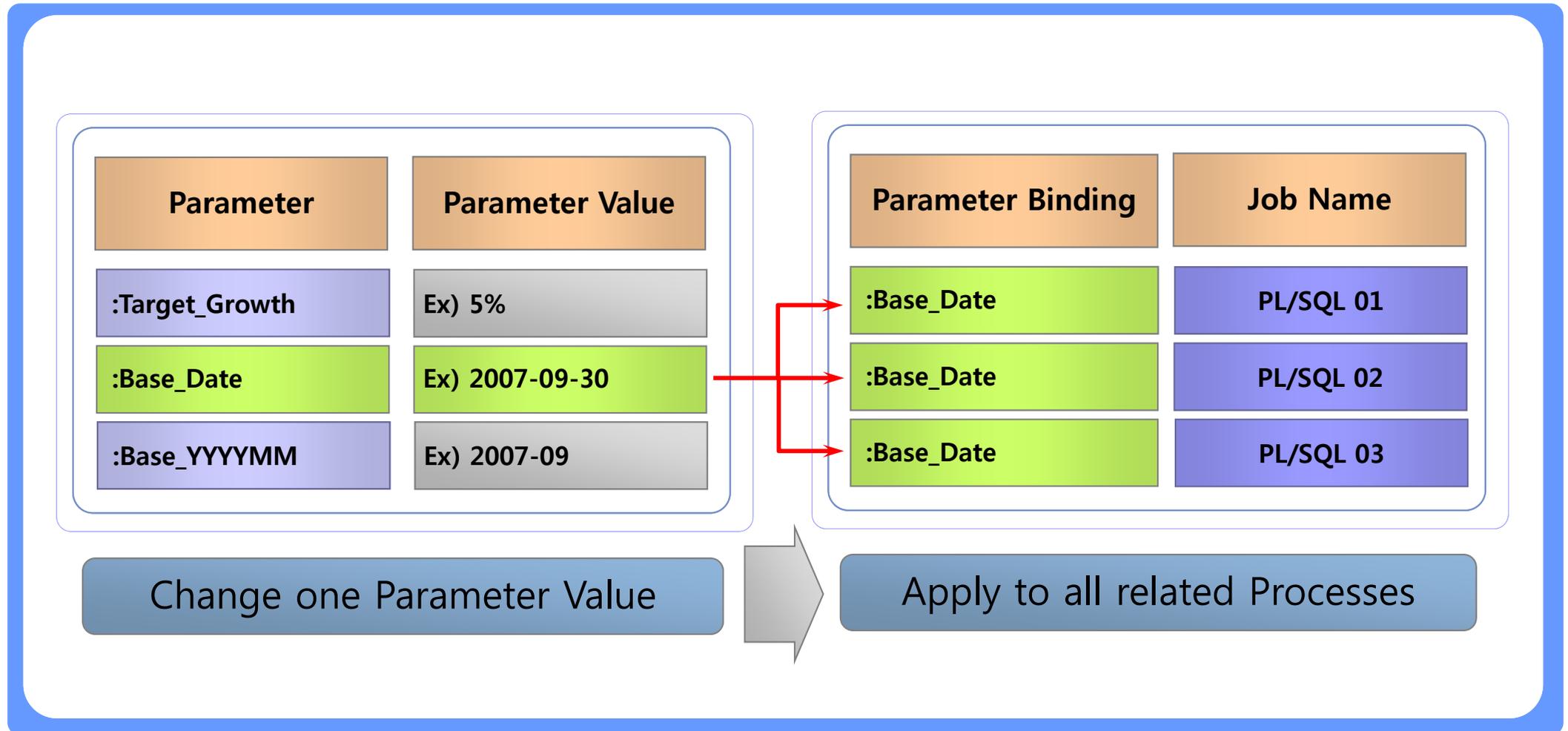
## Amain for Job – Access Log Information

- ❑ 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.



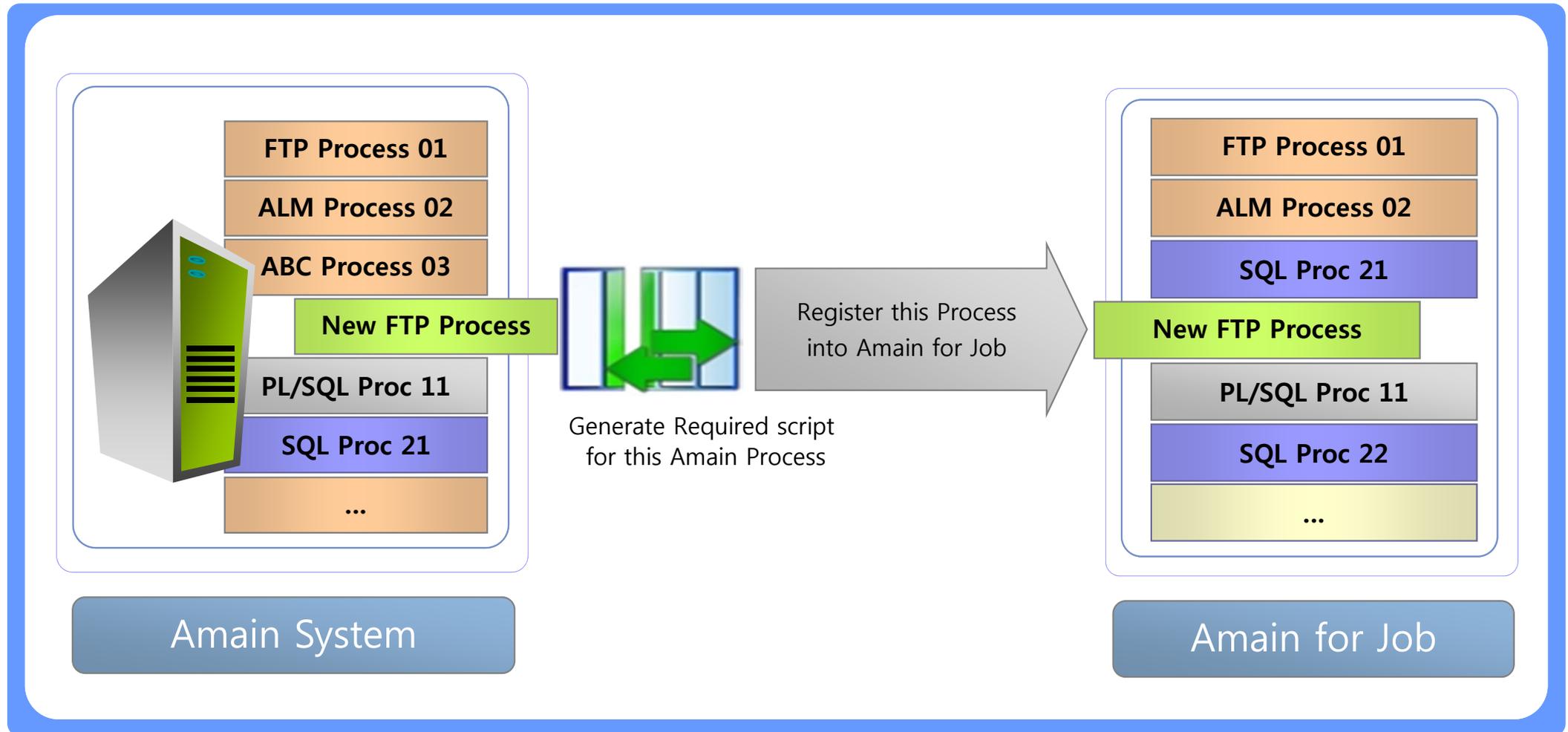
## Amain for Job – Manage Parameters

- ❑ 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.



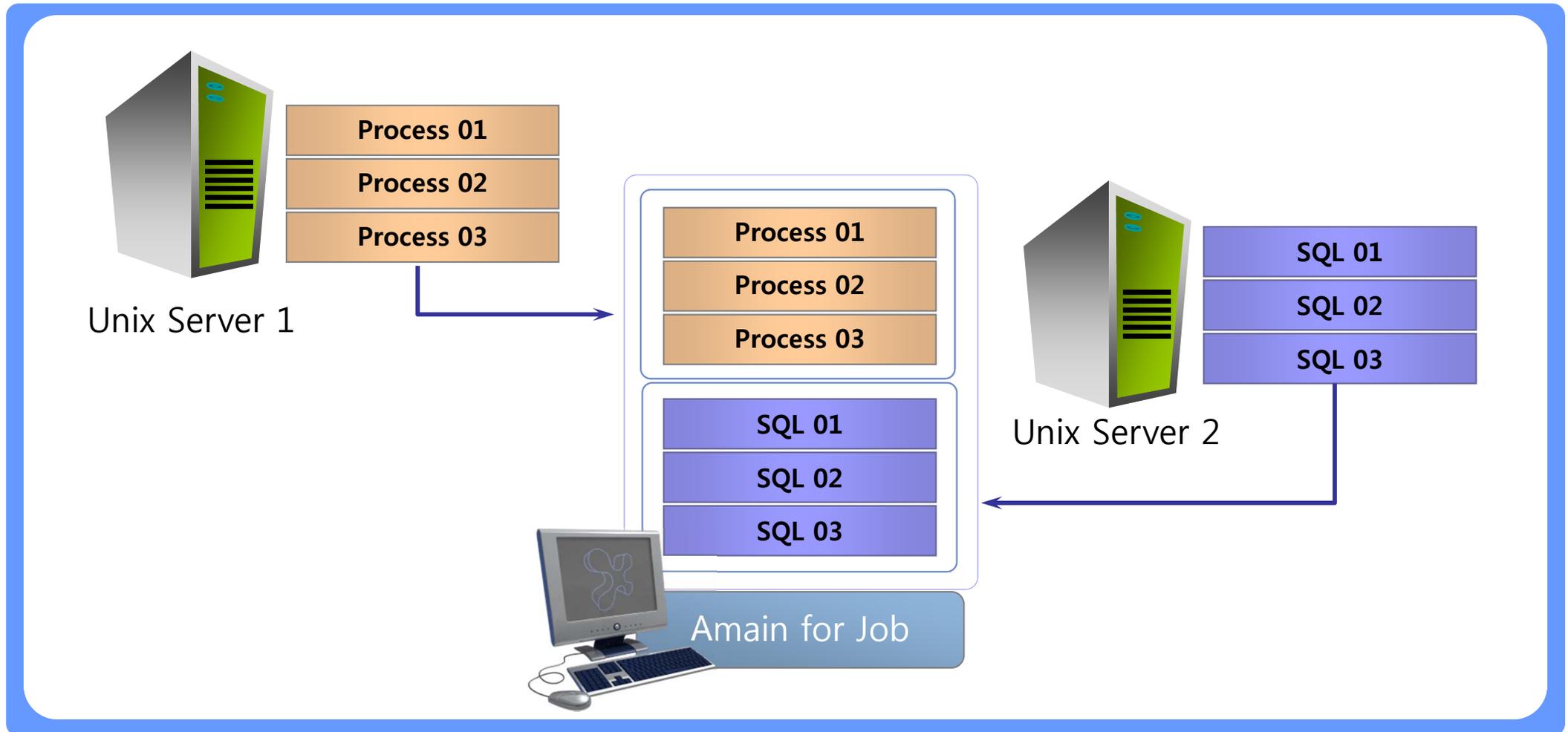
## Amain for Job – Easy Register of Amain Process

- ❑ 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



## Agenda

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## Admin - Function Summary

- ❑ Admin moduel helps you to Control Securities on Application, User, Menu and Keep records of Log information.

Assign Security

Privilege by Application

Privilege by Menu

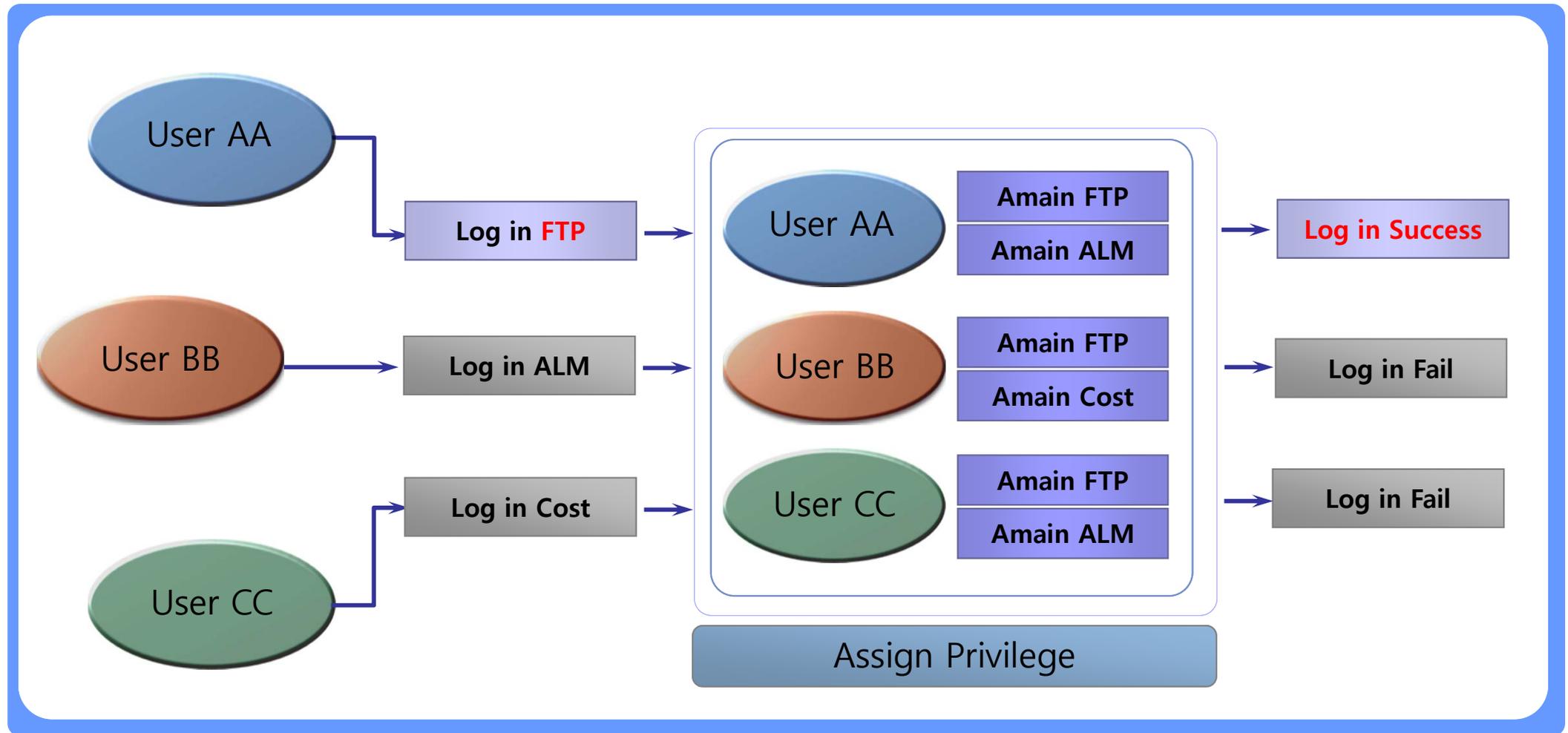
Privilege by Button

Keep records of Log Data

Log for Amain for MIS

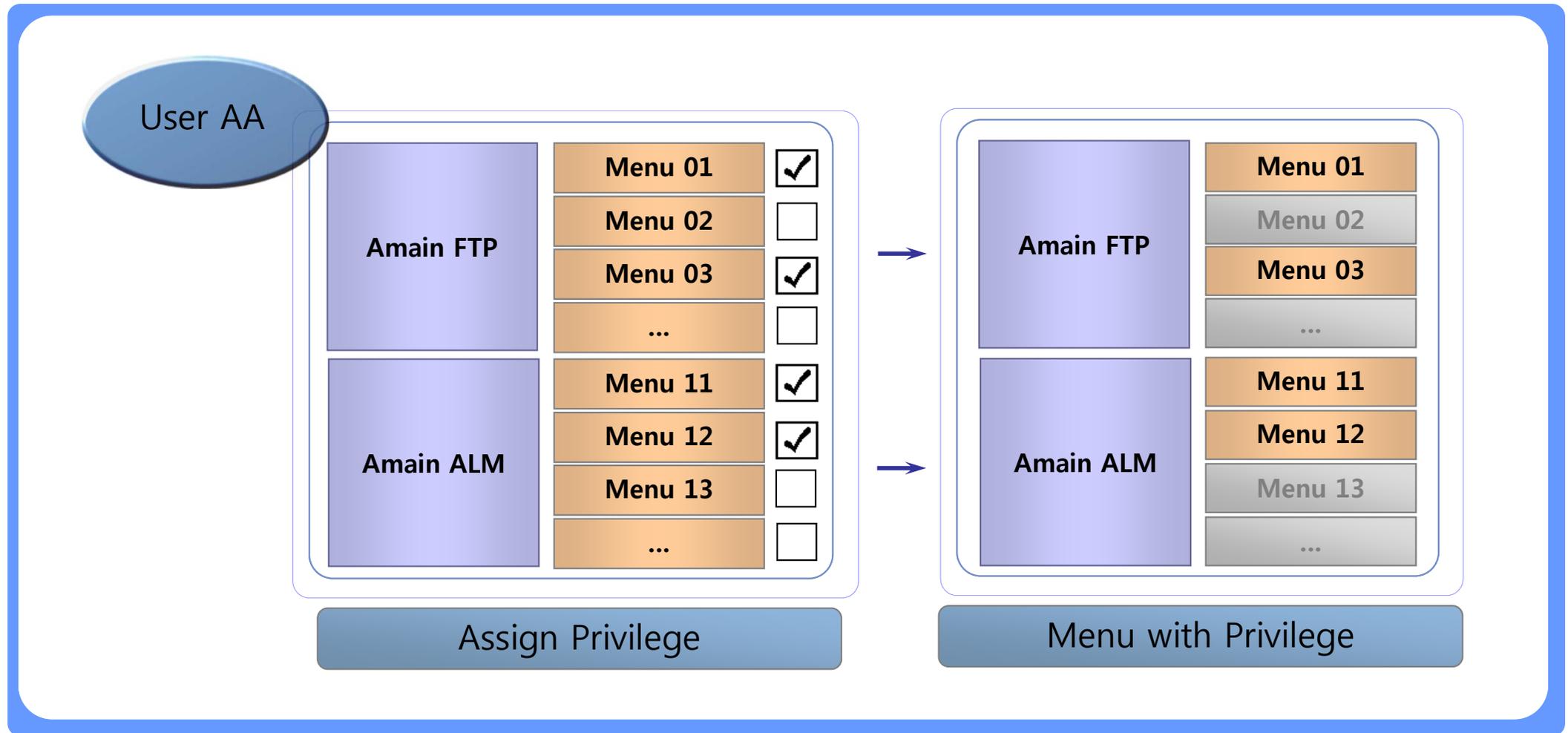
## Admin – Privilege by User

- ❑ Privilege of accessing applications can be assigned for each user.
- ❑ Only the user having privilege can login and use the functions in Amain for MIS.



## Admin – Privilege by Menu

- ❑ Privilege of using menus in each applications can be assigned for each user.
- ❑ Only the user having privilege can perform specific operations within each application.



## Admin – Keep Record of Log Data

- ❑ Log Data will be generated in Amain for MIS for your audit or review later. In case that you want to know who did specific operation for the last time, you can check this log data.

Retrieval Condition	Target User	Target Period	...	
User	Menu	Start Time	End Time	Button
User AA	Menu 01	2007-09-12 10:12:04	2007-09-12 10:27:09	Button 01
	Menu 03	2007-09-12 10:12:04	2007-09-12 10:27:09	Button 21
	Menu 21	2007-09-12 10:27:10	2007-09-12 10:27:09	No Button
	Menu 02	2007-09-12 10:27:10	2007-09-12 10:27:09	Button 11
	...	...	...	...



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