



# *OptiRamp* Migration Tool

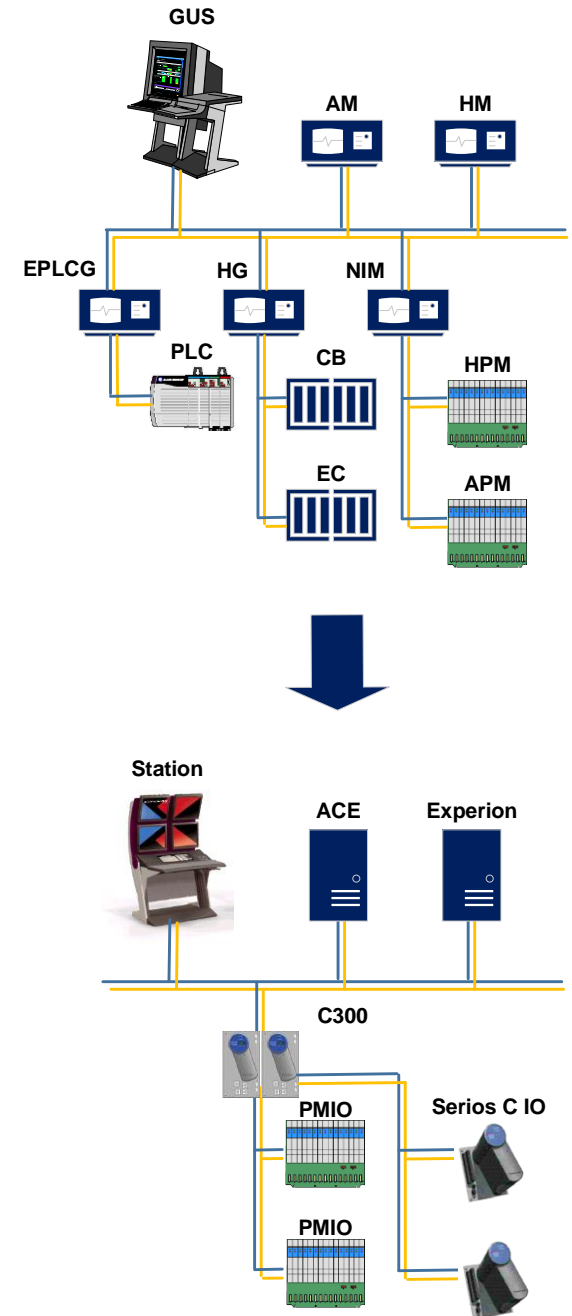
# *OptiRamp* Smart Migration Tool - Overview

Objective of the *OptiRamp* Smart Migration Tool is to support project engineering in migrating legacy DCS, reduce manual effort, and avoid human error

- *OptiRamp* Smart Migration Tool is a software package that allows users to migrate legacy Honeywell systems to the latest solutions based on the Experion EPKS platform.
- With the introduction of *OptiRamp* Smart Migration Tool, database migration is now reliable and error-proof, easier and simpler than the migrations done with other tools or manually.
- The reliability of the results has been repeatedly tested on various sites and projects and is the result of the efforts of many qualified engineers who have contributed to the development of this package.
- The package itself is intuitive and easy to use and is designed for a wide range of users like end clients, project and service engineers.

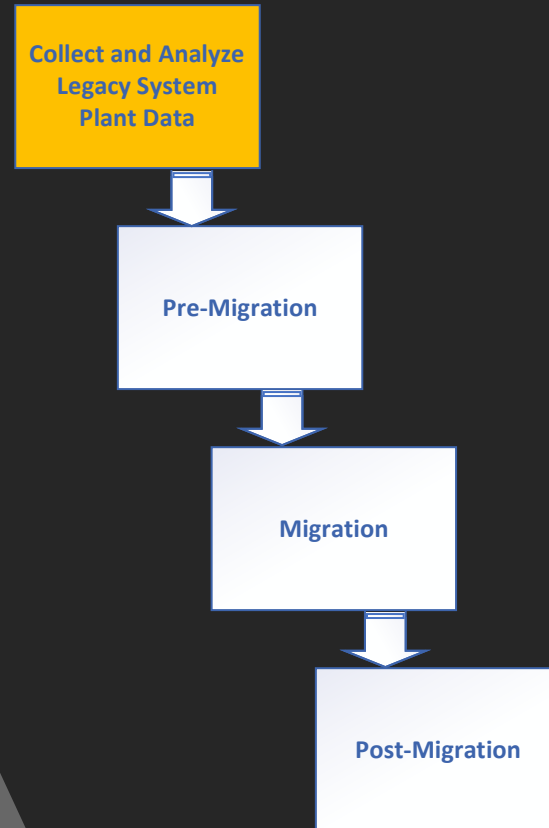
# Honeywell Legacy Controllers and Databases Migration

- High-Performance Process Manager (HPM);
- Advanced Process Manager (APM);
- Process Manager (PM);
- Application Module (AM);
- Hiway Gateway-Devices;
  - Basic Controller (CB);
  - Extended Controller (EC);
  - Multifunction Controller (MC);
  - Advanced Multifunction Controller (AMC);
  - High Level Process Interface Unit (HLPIU);
  - Low Level Process Interface Unit (LLPIU);
  - Low Energy Process Interface Unit (LEPIU);
- Native Window HMI;
- GUS HMI



# Migration Process, Data Collection

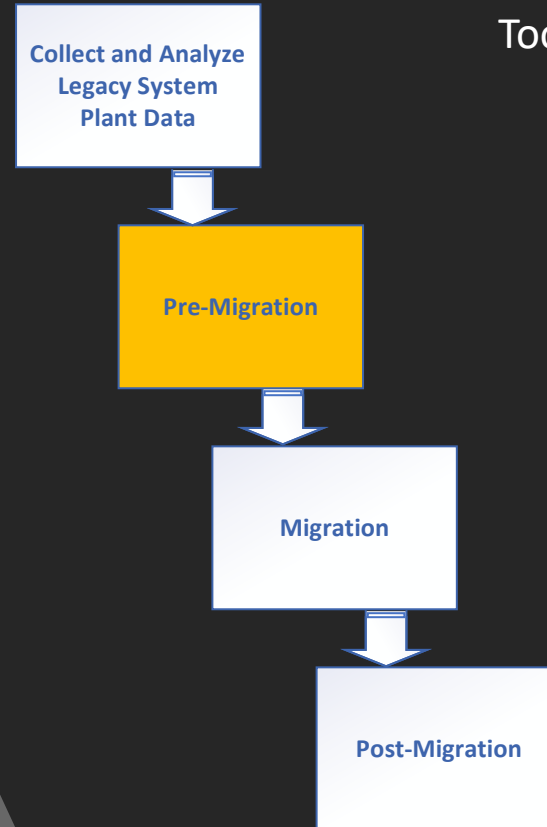
- Plant Architecture
- System Graphics
- Input / Output
- Control Loops
- Logic programs
- Peer to Peer Signals
- Interface, Scada Signals
- Archives and History Groups
- Third Party Controllers and Control Systems



*OptiRamp* Smart Migration Tool accepts the following legacy system controller database files as input data:

- EB Files for Points and Box Configuration (AM/APM/HPM/PM/HG nodes);
- LVRLOG export for Node configuration Details;
- Area Data Base as EB files;
  - CL source files.

# Migration Process, Pre-Migration



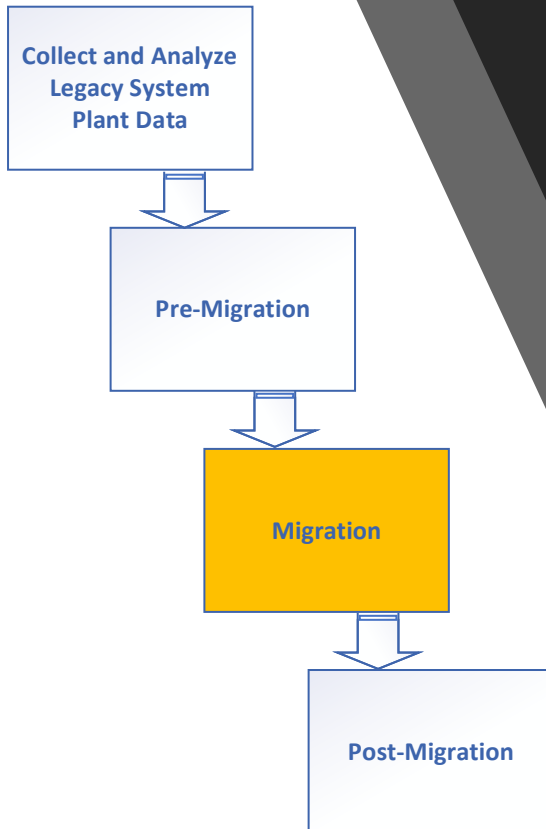
An in-depth analysis of the input data is needed to ensure any migration. The first step in the *OptiRamp* Smart Migration Tool is to complete the reports and to validate their content. Thus, the best migration path will be chosen and followed.

To support this analysis, *OptiRamp* Smart Migration Tool offers several reports prior to migration known as pre-requisite reports:

- Connection Report
- Peer to Peer report
- Inactive Point Report
- Not Supported Point report
- Cross Reference Report
- Unsupported Cross References
- Area Data Base Report
- HMI parameters and scripts report
  - AMCL report
- IO Assignment Report
- Serial Interfaces report

# Migration Process, Rules based Migration

The *OptiRamp* Smart Migration Tool is based on models and rules. Once the reports are validated the User must select migration rules i.e. Functional Block Library, Control Module Templates and HMI Shape Library and Hardware Mapping. The Hardware Mapset defines the Input/Output hardware mapping of a TPS system to its corresponding Experion system

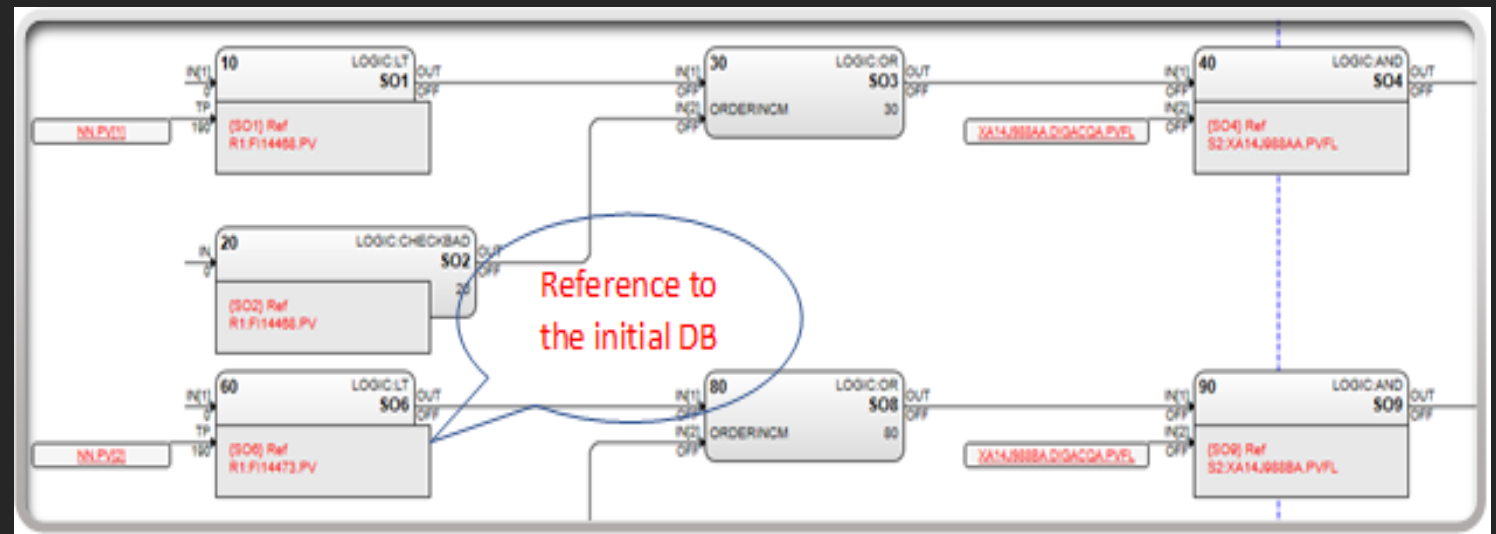
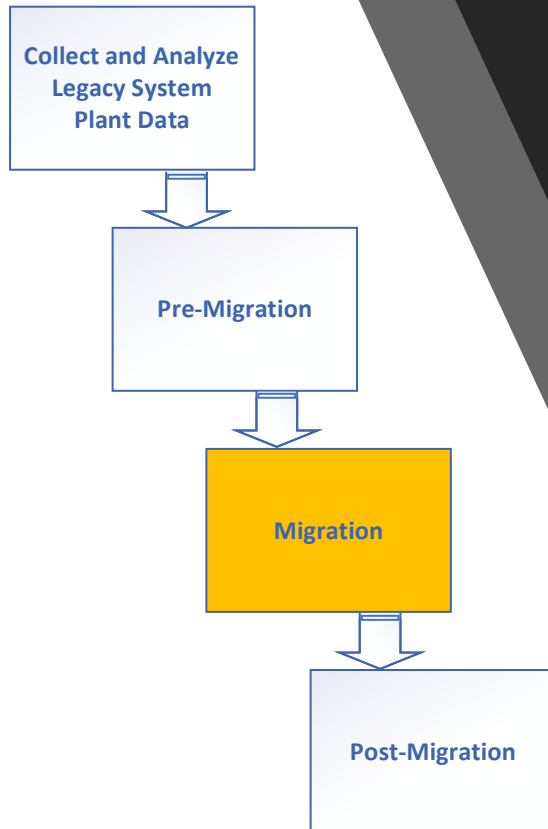


TypicalName	StrategyName	CEE	FB	New_FB	Template Name	EntityName	DESC	EUDESCKEYWOF	PAREN REF	BADPV	PIFIL	PVCHAR	PVEUH	PVEUL	PVHH#	PVHH#	PVHIAL	PVHIAL	PVLOAL	PVLOAL	PVLLAL			
AI_DACA_Tmplt	F20020	SRU_CEE_305			SYSTEM CONTROLMODULE	F20020	BFW FLOW TO CCD DEAERATR		CM															
AI_DACA_Tmplt	F20020	SRU_CEE_305	TEXTCOMMENTA	TEXTCOMMENTA	UTILITY:TEXTCOMMENT		BFW FLOW TO CCD DEAERATR																	
AI_DACA_Tmplt	F20020	SRU_CEE_305	AIREFA	AIREFA	IOREFERENCES:AIREF				F20020_AI															
AI_DACA_Tmplt	F20020	SRU_CEE_305	DACA	DACA	DATAACQ:DATAACQ																			
HCA_A_Tmplt	_FZ201534A	SRU_CEE_305			SYSTEM CONTROLMODULE	FZ201534A	SWEET GAS TO TURBINES	MSCFD	SWEET	J1			High	0	SQUARE	363200	0	None	NaN	High	200000	None	NaN	None
HCA_A_Tmplt	_FZ201534A	SRU_CEE_305	TEXTCOMMENTA	TEXTCOMMENTA	UTILITY:TEXTCOMMENT		SWEET GAS TO TURBINES																	
HCA_A_Tmplt	_FZ201534A	SRU_CEE_305	AOREFA	AOREFA	IOREFERENCES:AOREF	F20020	BFW FLOW TO CCD DEAERATR		CM	FZ201534_AO														
HCA_A_Tmplt	_FZ201534A	SRU_CEE_305	AUTOMANA	AUTOMANA	REGCTL:AUTOMAN		SWEET GAS TO TURBINES	MSCFD					High	5000	-5000	None	NaN	None	NaN	None	NaN	None	NaN	None
PID_A_Tmplt	_K201289PID	SRU_CEE_305			SYSTEM CONTROLMODULE	K201289PID	SUBSTATION 5 KVAR CONTRL	KVAR	KVAR	J1	F20020_AI													
PID_A_Tmplt	_K201289PID	SRU_CEE_305	TEXTCOMMENTA	TEXTCOMMENTA	UTILITY:TEXTCOMMENT		BFW FLOW TO CCD DEAERATR						High	0	SQUARE	363200	0	None	NaN	High	200000	None	NaN	None
PID_A_Tmplt	_K201289PID	SRU_CEE_305	AIREFA	AIREFA	IOREFERENCES:AIREF	FZ201534A	SWEET GAS TO TURBINES	MSCFD	SWEET	J1														
PID_A_Tmplt	_K201289PID	SRU_CEE_305	DACA	DACA	DATAACQ:DATAACQ		SWEET GAS TO TURBINES						High	5000	-5000	None	NaN	None	NaN	None	NaN	None	NaN	None
PID_A_Tmplt	_K201289PID	SRU_CEE_305	PIDA	PIDA	REGCTL:PID		SUBSTATION 5 KVAR CONTRL	KVAR																
PID_A_Tmplt	_K201289PID	SRU_CEE_305	AOREFA	AOREFA	IOREFERENCES:AOREF		SWEET GAS TO TURBINES	MSCFD					None	0	SQUARE	175000	0	None	NaN	None	NaN	None	NaN	None
PID_A_Tmplt	_A20050	SRU_CEE_305			SYSTEM CONTROLMODULE	A20050	CITY WATER PH NALCO J103			J103	BP													
PID_A_Tmplt	_A20050	SRU_CEE_305	TEXTCOMMENTA	TEXTCOMMENTA	UTILITY:TEXTCOMMENT		CITY WATER PH NALCO J103																	
PID_A_Tmplt	_A20050	SRU_CEE_305	AIREFA	AIREFA	IOREFERENCES:AIREF	K201289PID	SUBSTATION 5 KVAR CONTRL	KVAR	KVAR	J1														
PID_A_Tmplt	_A20050	SRU_CEE_305	DACA	DACA	DATAACQ:DATAACQ		S. PKG BLR FIRING RATE																	
PID_A_Tmplt	_A20050	SRU_CEE_305	PIDA	PIDA	REGCTL:PID	H55512	CITY WATER PH NALCO J103																	
PID_A_Tmplt	_A20050	SRU_CEE_305	AOREFA	AOREFA	IOREFERENCES:AOREF		N. PKG BLR FIRING RATE				AY20050_AO	High		5000	-5000	None	NaN	None	NaN	None	NaN	None	NaN	None

Rules Definition Table

# Migration Process, Logic Points Migration

Unlike other similar migration tools, we have proven to migrate Logic and Device Control Point. We also took care of readability of the migrated database and comparability with the source data. A special segment of the package makes sure that the connections between the function blocks are arranged and readable.

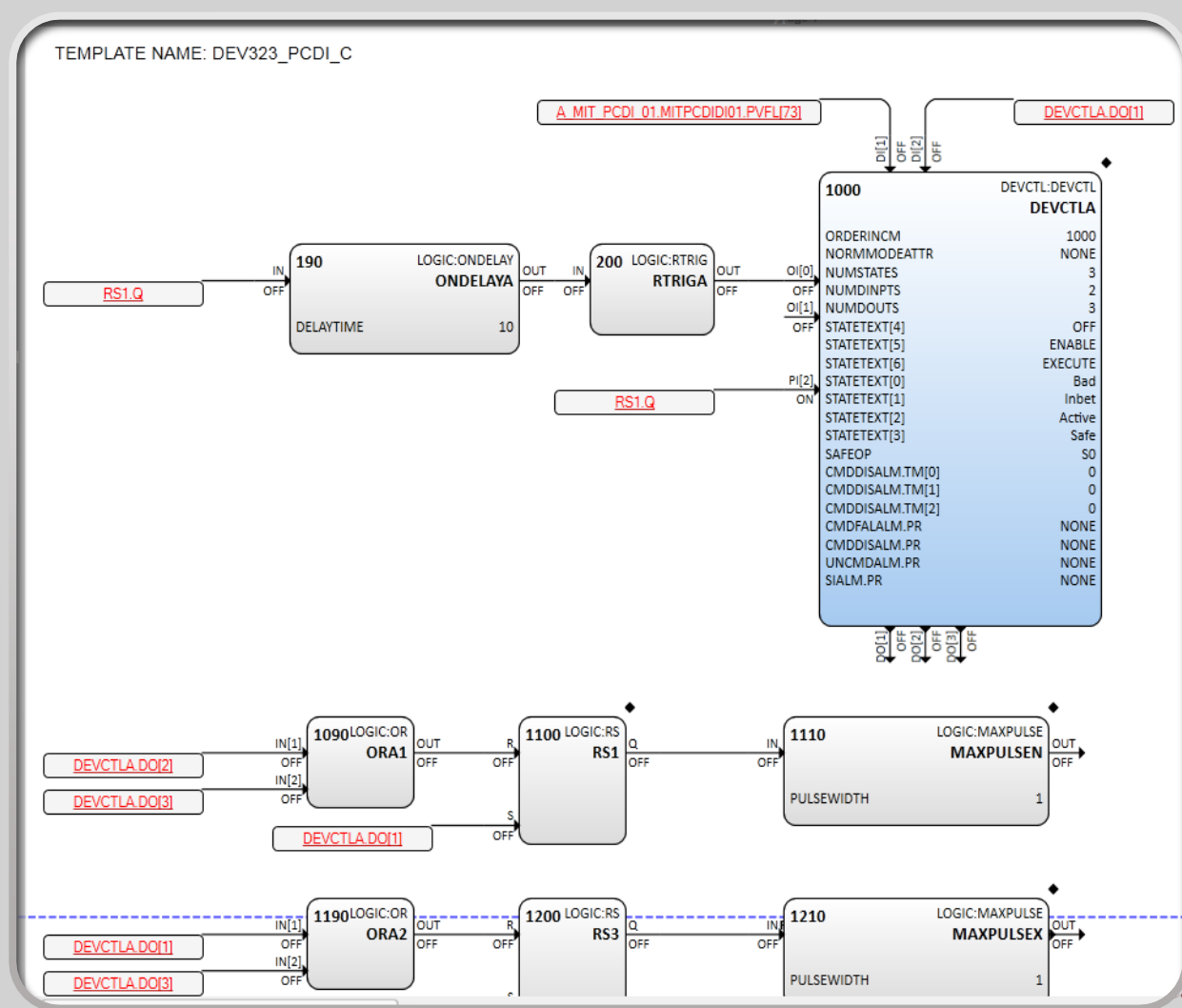
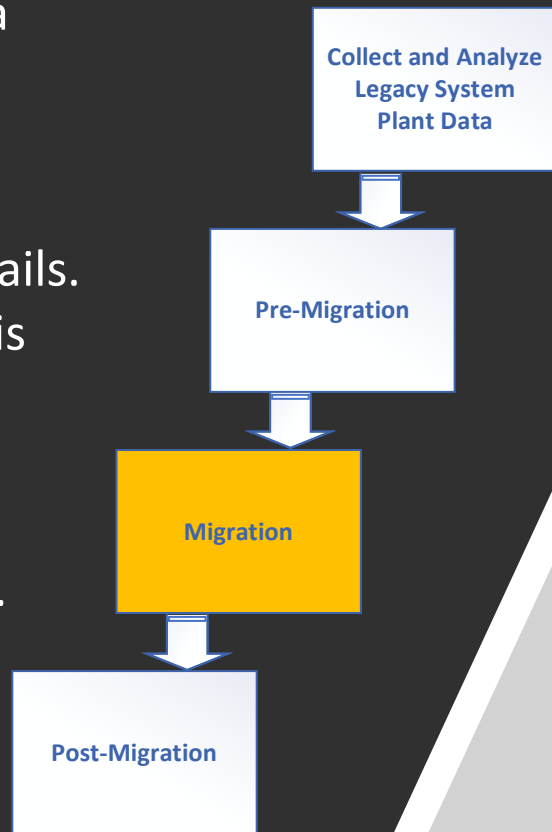


Logic Points Migration

# Migration Process, Device Control Points Migration

## OptiRamp Migration

Tool provides a database with Experion blocks and parameter details. This database is ready to be imported into Experion ControlBuilder.

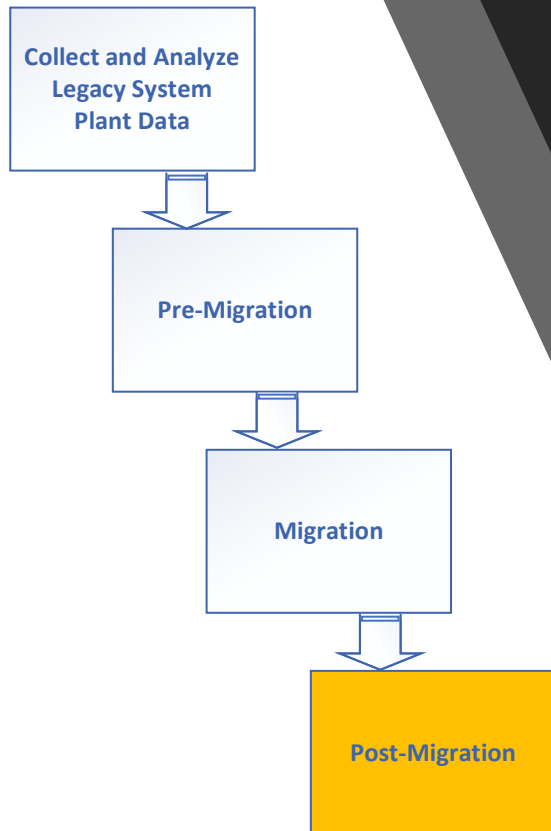








# Migration Process, Post-Migration



*OptiRamp* Smart Migration Tool offers migration of legacy system nodes and generates a migrated database in MS Access, Excel format or in xml files.

The Migrated database contains Experion equivalents of legacy system configuration.

Validation reports are automatically generated for:

- IO assignment
- Cross references
- Data Base Integrity
- Compliance report