# *OptiRamp* Migration Tool

Statistics & Control, Inc.

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.

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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
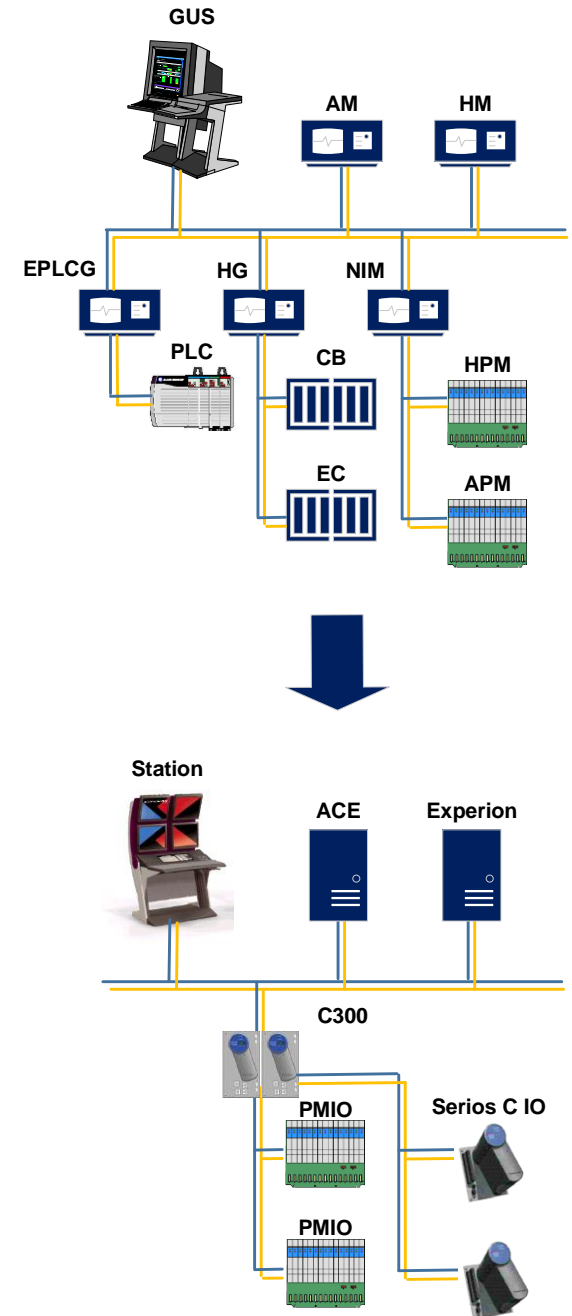
Migration Process, Data Collection

- 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

Collect and Analyze Legacy System Plant Data

Pre-Migration

Migration
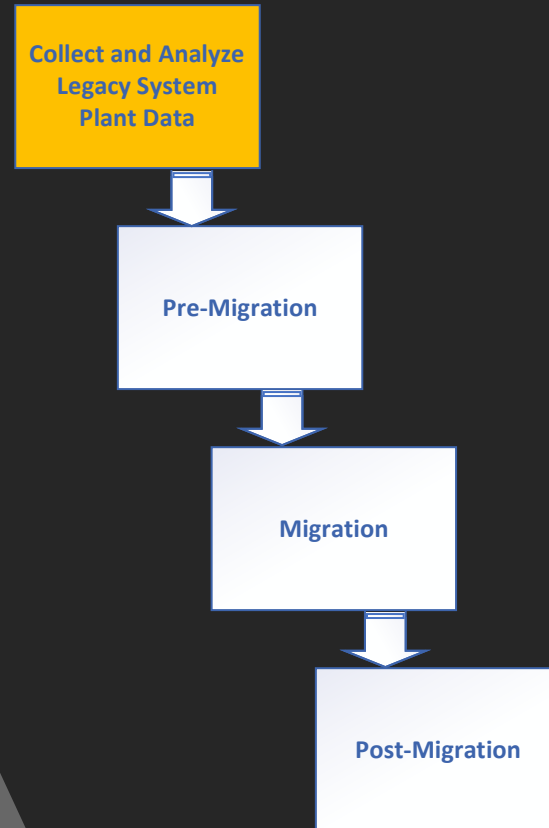
Post-Migration

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.

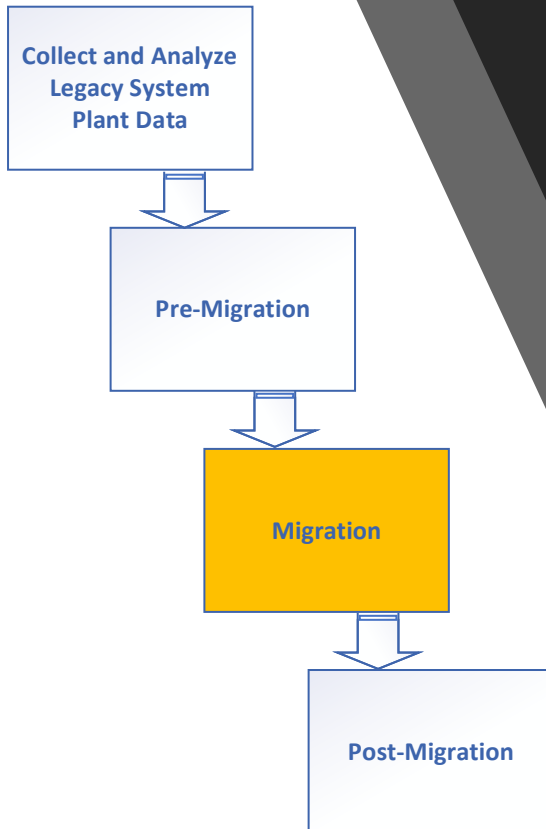# Migration Process, Pre-Migration
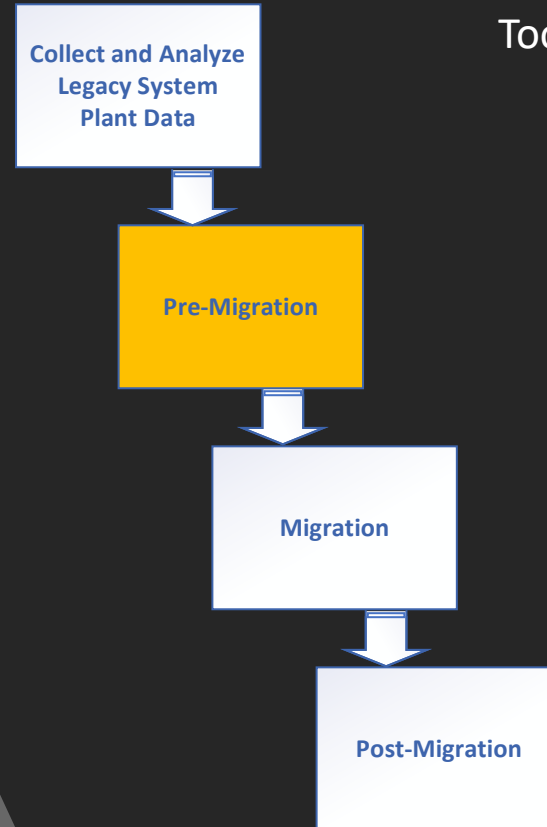
An in-depth analysis of the input data is needed to ensure any migration. The first step in the *OptiRamp* Smart Migration Tool is to complete the reports and to validate their content. Thus, the best migration path will be chosen and followed.

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┌─────────────────────┐
│ Collect and Analyze │
│   Legacy System     │
│     Plant Data      │
└─────────────────────┘
          ↓
┌─────────────────────┐
│                     │
│    Pre-Migration    │
│                     │
└─────────────────────┘
          ↓
┌─────────────────────┐
│                     │
│     Migration       │
│                     │
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┌─────────────────────┐
│                     │
│   Post-Migration    │
│                     │
└─────────────────────┘
```

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
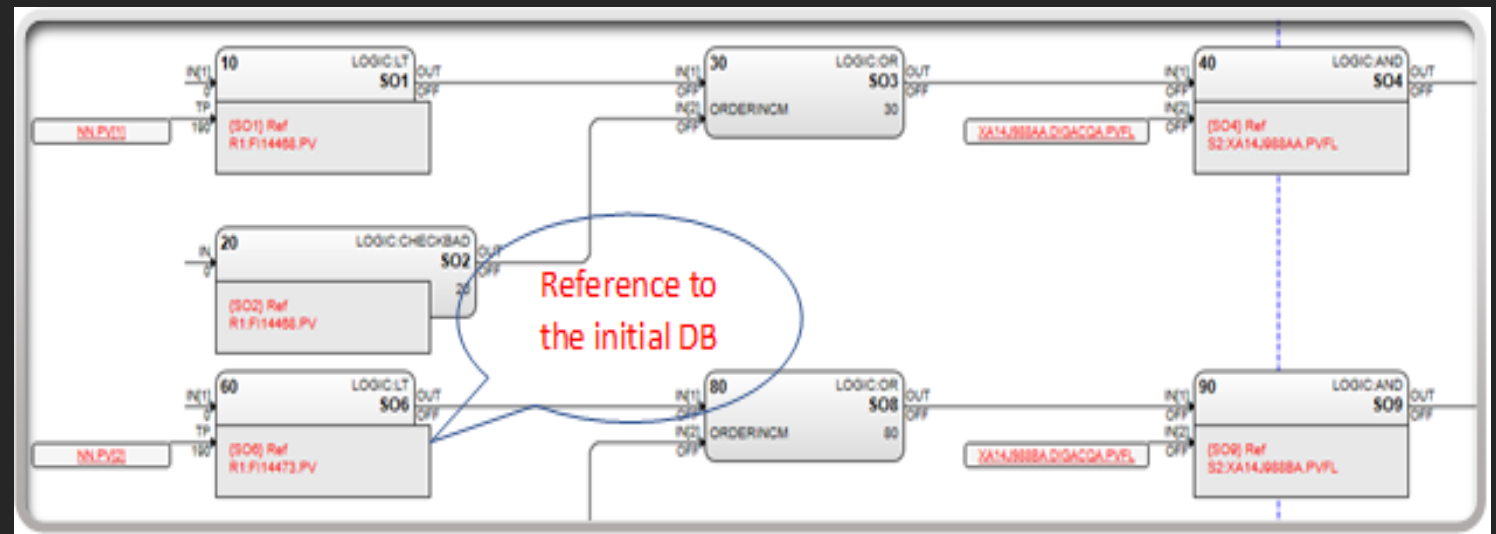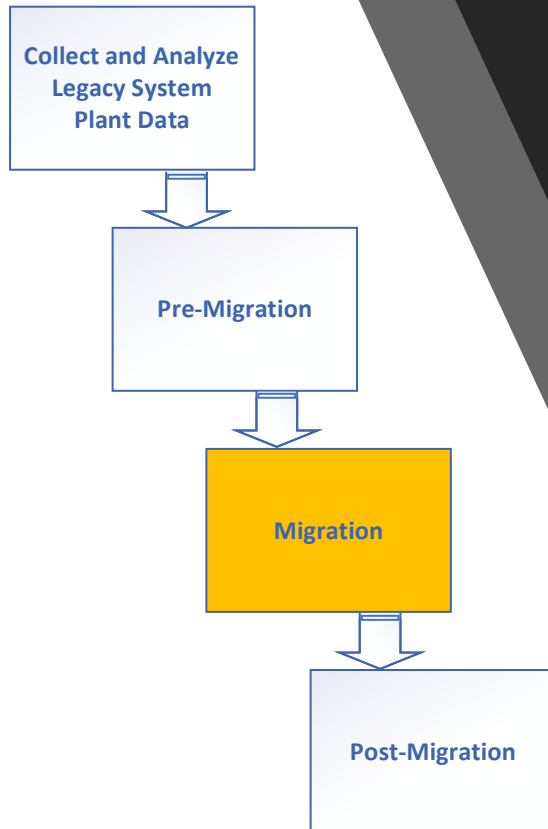

Collect and Analyze Legacy System Plant Data

Pre-Migration

Migration

Post-Migration

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.
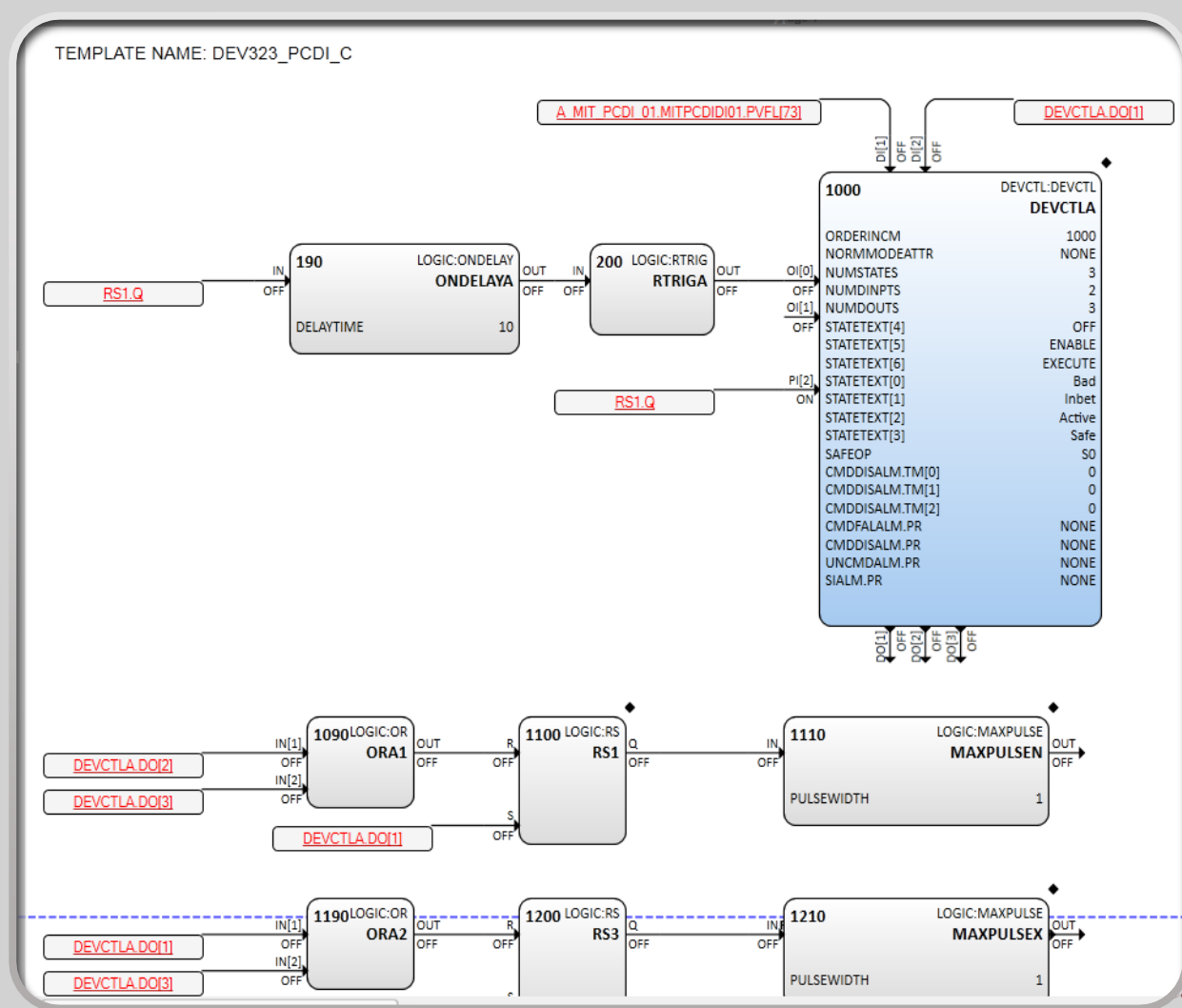
Collect and Analyze Legacy System Plant Data

Pre-Migration
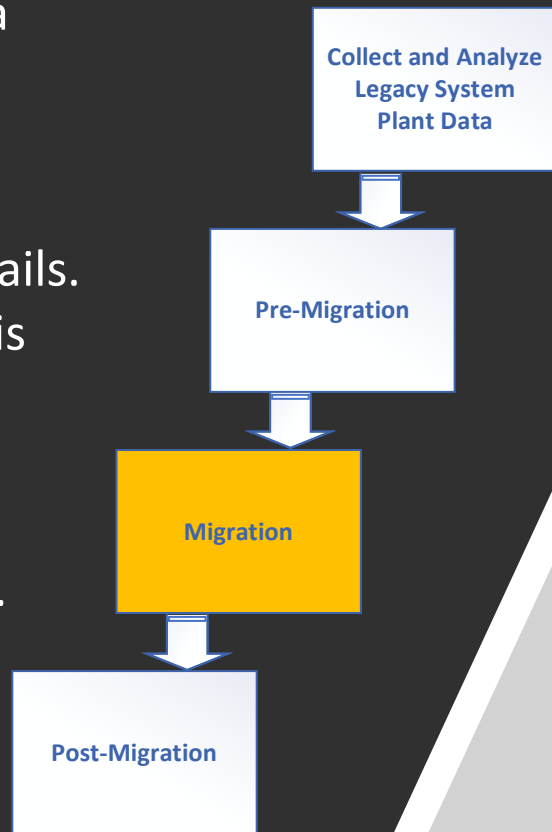
Migration

Post-Migration

Reference to the initial DB

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, Data Base Migration

Collect and Analyze Legacy System Plant Data

Pre-Migration

Migration

Post-Migration

Migrated DB before and after Link Normalization
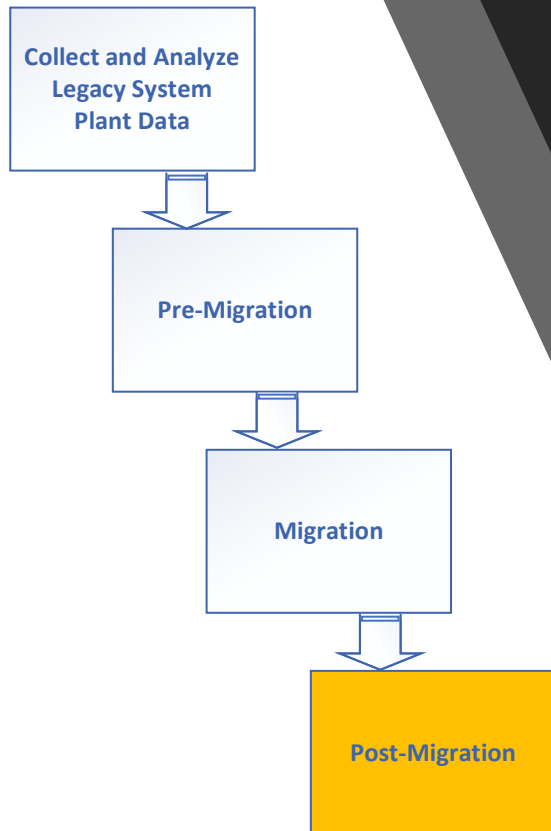
Migration Process, HMI Migration

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

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Pre-Migration

Migration

Post-Migration