

# Where SPI Can Fit in an Owner/ Operator Environment

Safety Lifecycle Management



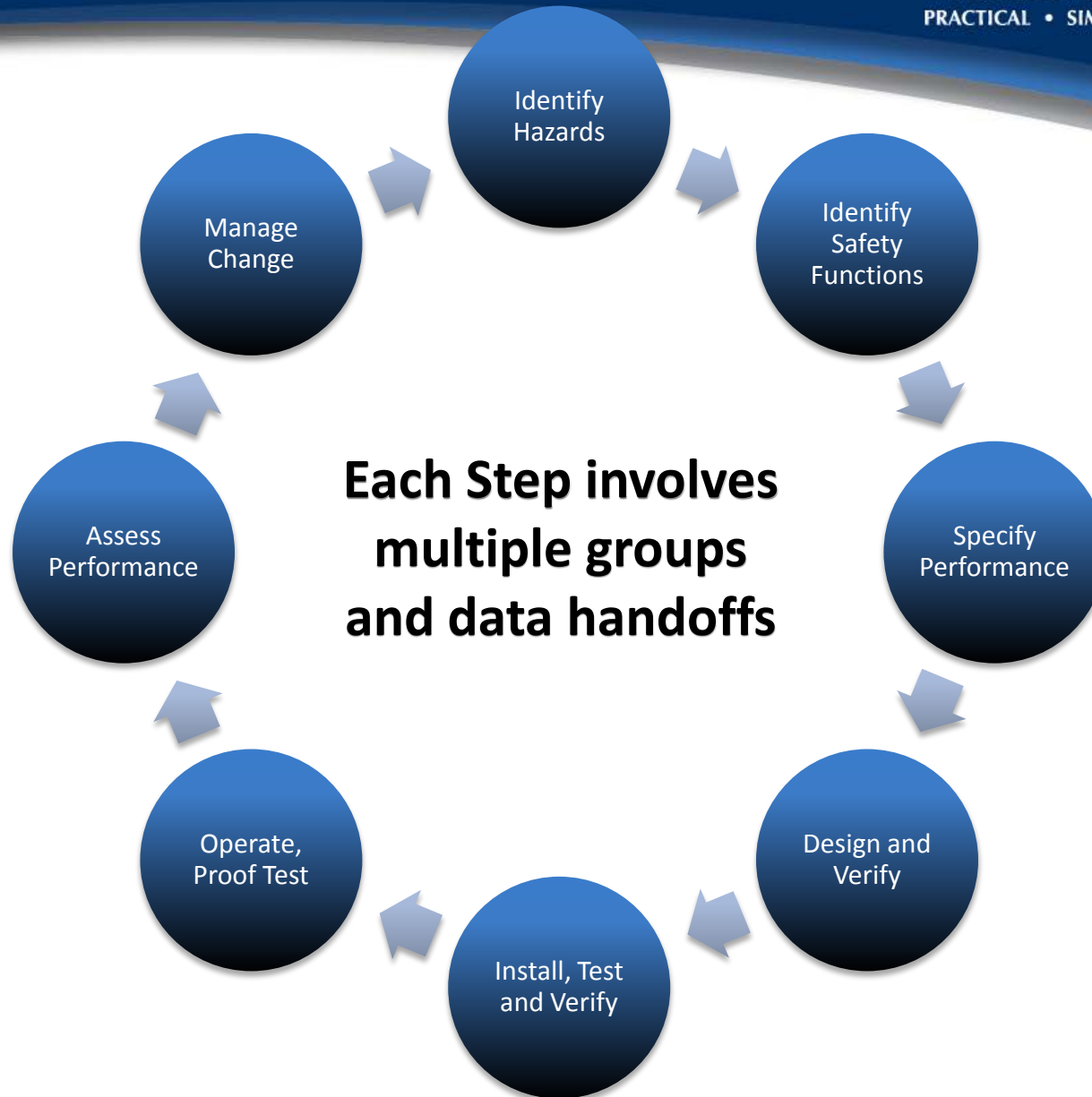
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# Today's Topics



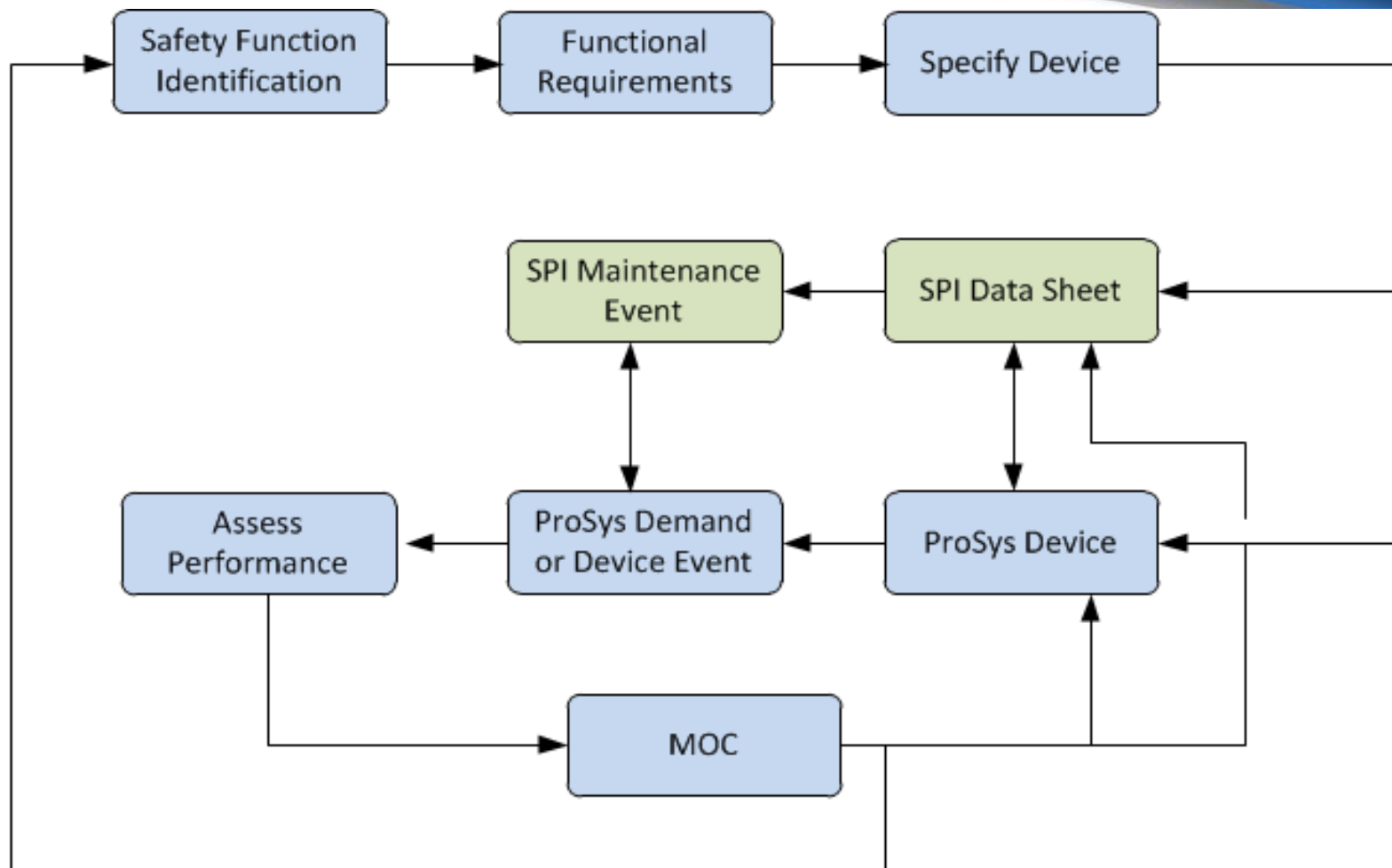
- Overview of Safety Life Cycle
- Managing Safety Life Cycle Data
- Linking SPI Data into the Life Cycle

# Safety Life Cycle Requirements



- Identification of required Safety Functions
- Define Functional Requirements
- Physical Design/Procurement
- Installation, Testing, Validation and FSA
- Operate/Maintain – Track and analyze performance
- Management of Change

# Device Life Cycle

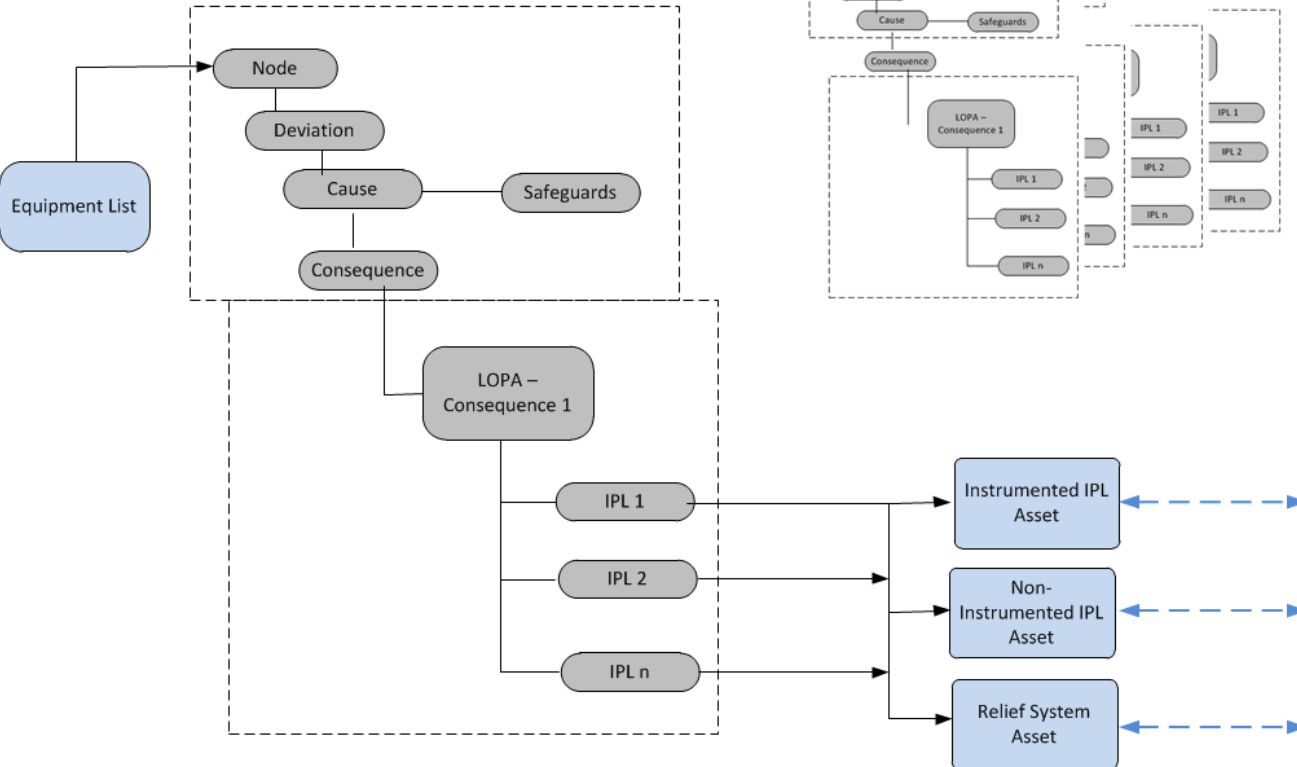


- HAZOP/LOPA
- Instrumented Functions
- Non-Instrumented Functions
- Relief Systems
- Functional Safety Assessments (FSA)
- Operate/Maintain/Integrity

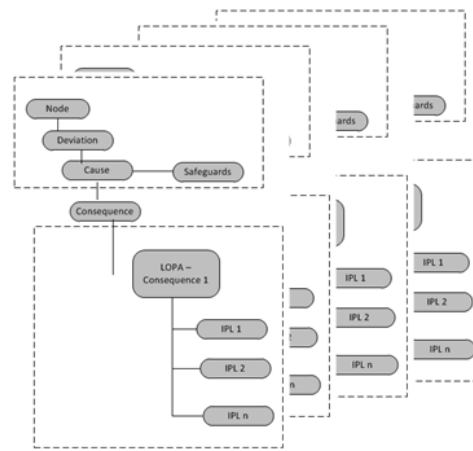
# HAZOP/LOPA

## PHA/LOPA

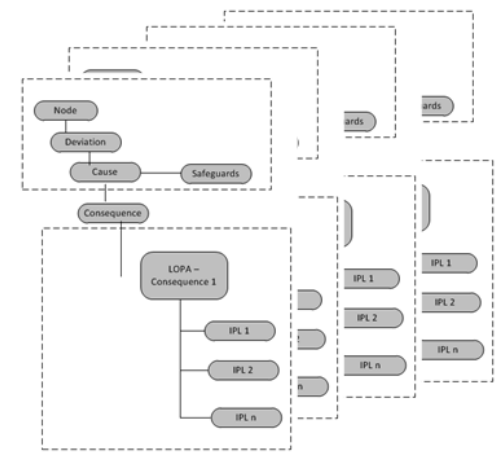
HAZOP and LOPA's of Record



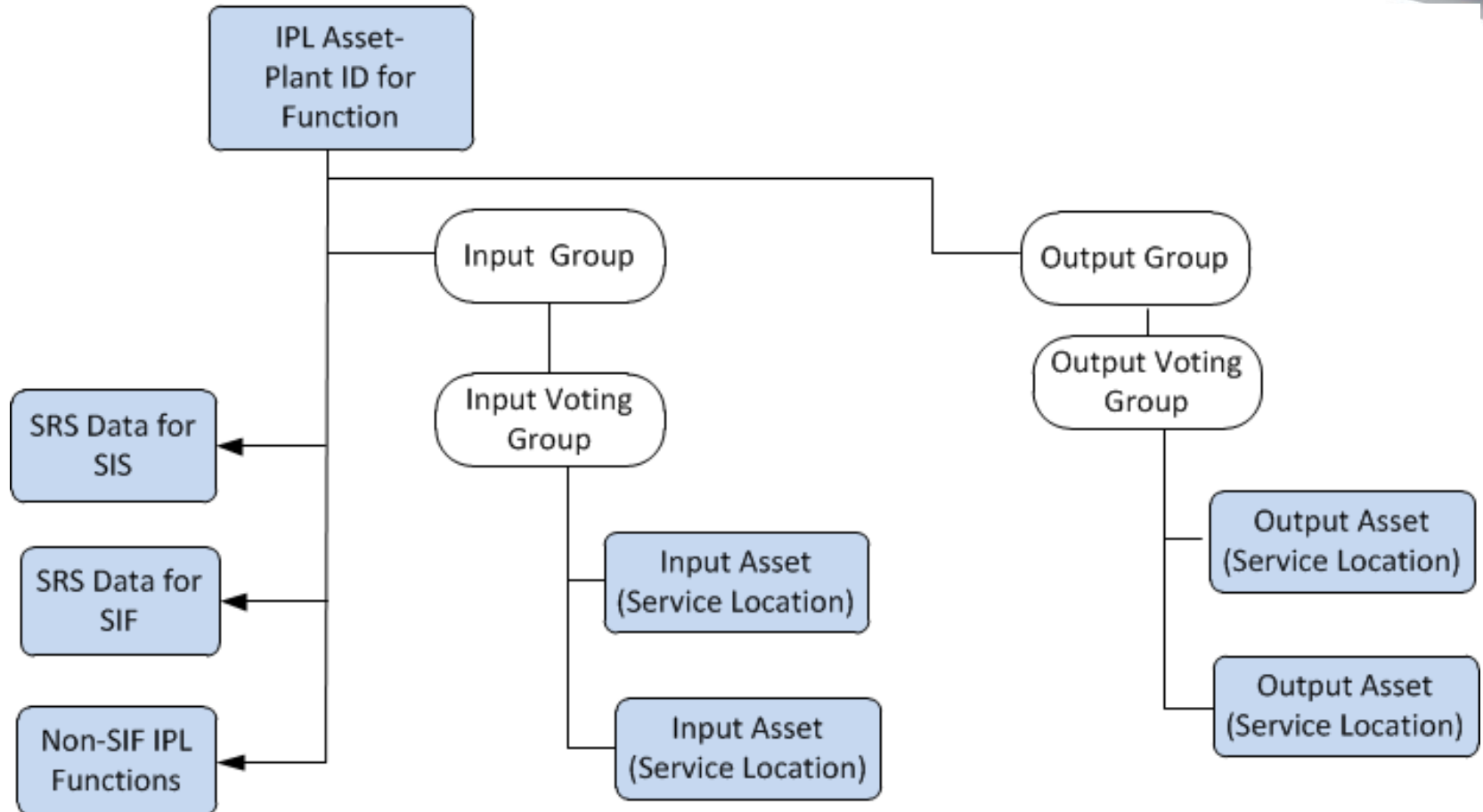
Project HAZOP's and LOPA's



Archive HAZOP's and LOPA's

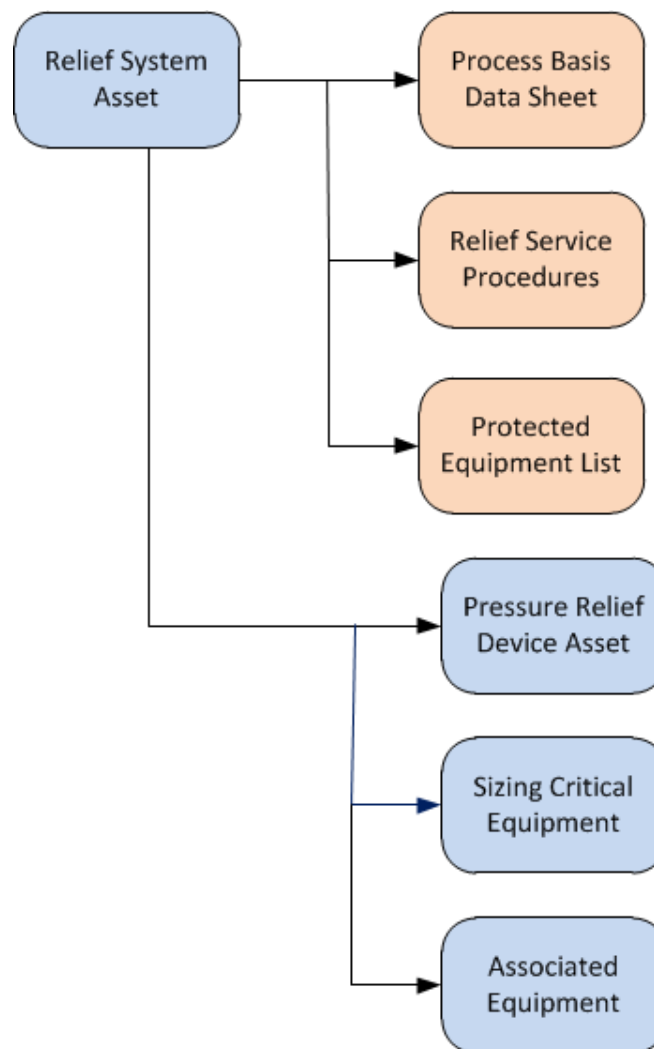


To Functional Requirements  
and Operate Maintain  
Functions





# Relief Systems



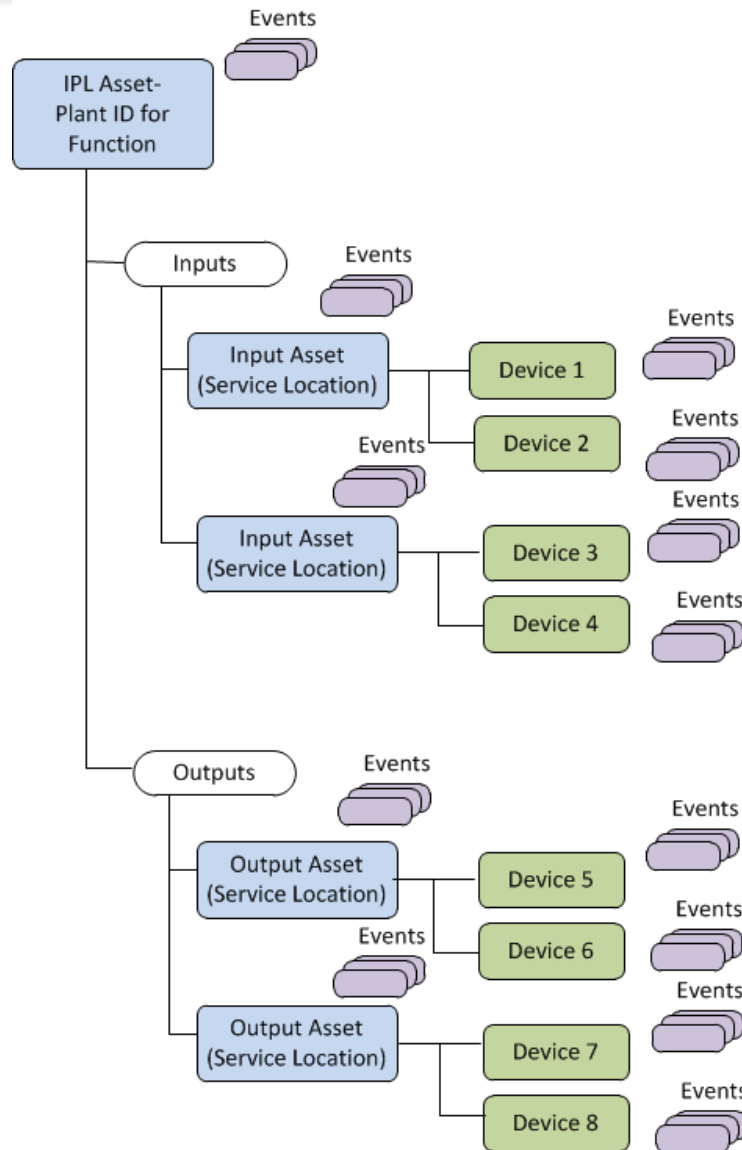
- May include multiple procedures
- Lock List
  - Valid line-up of multiple devices
  - Operating restrictions

- Required curbs, walls, drainage
- Fire insulation
- Process interlocks
- Restriction orifices and valve limit stops
- HIPPS

Note – Some of these items may be credited as LOPA IPL's

- Block valves under relief devices
- Lift or flow sensors
- Rupture disk monitoring

# Operate/Maintain



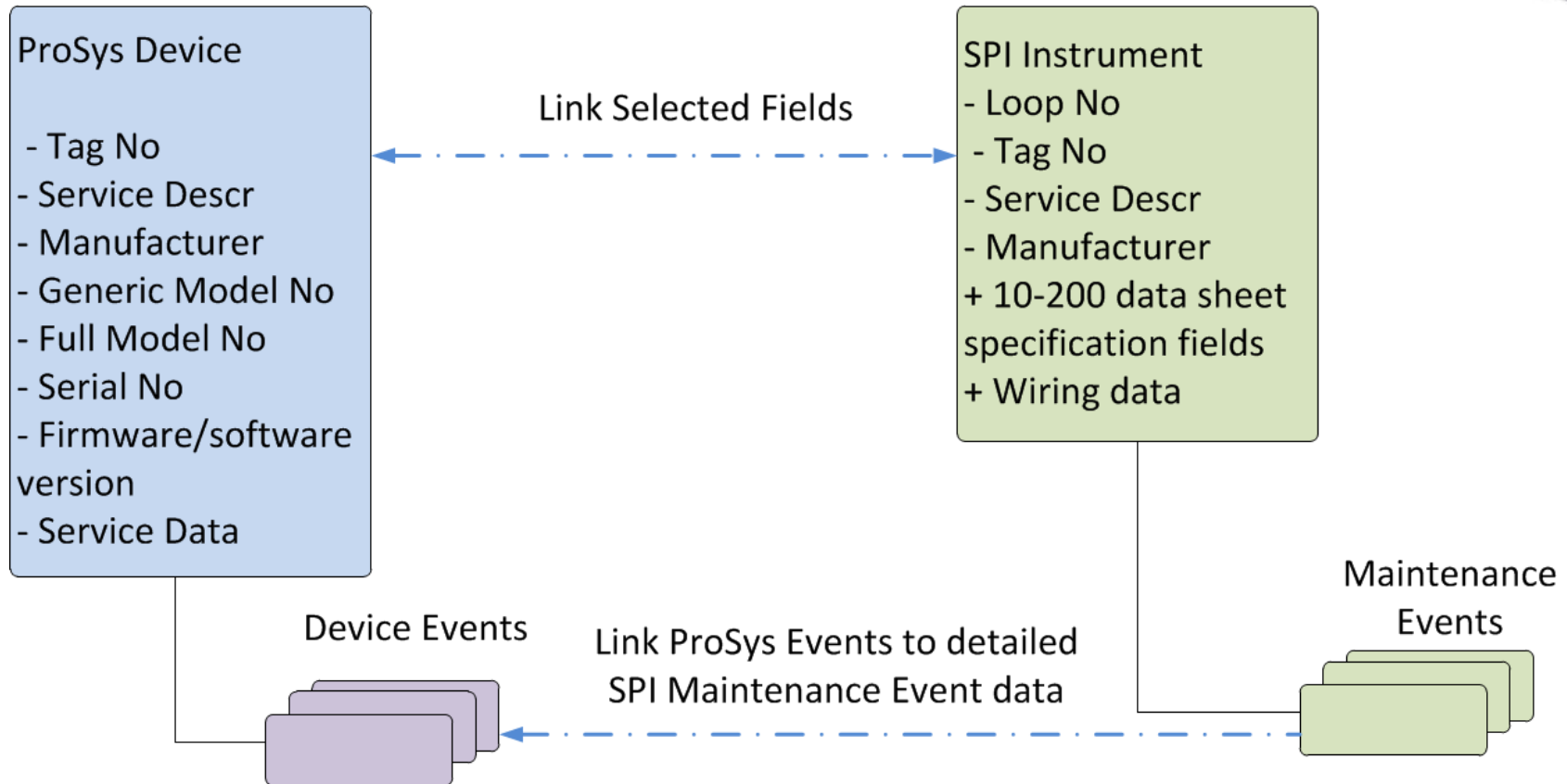
- Integrated Data Base
- HAZOP Scenarios related to LOPA's and LOPA IPL's
- LOPA IPL's related to plant assets
- Plant IPL assets related to I/O or other service assets
- Plant assets related to physical devices
- Events related to assets and/or devices

# Where Does SPI Fit?

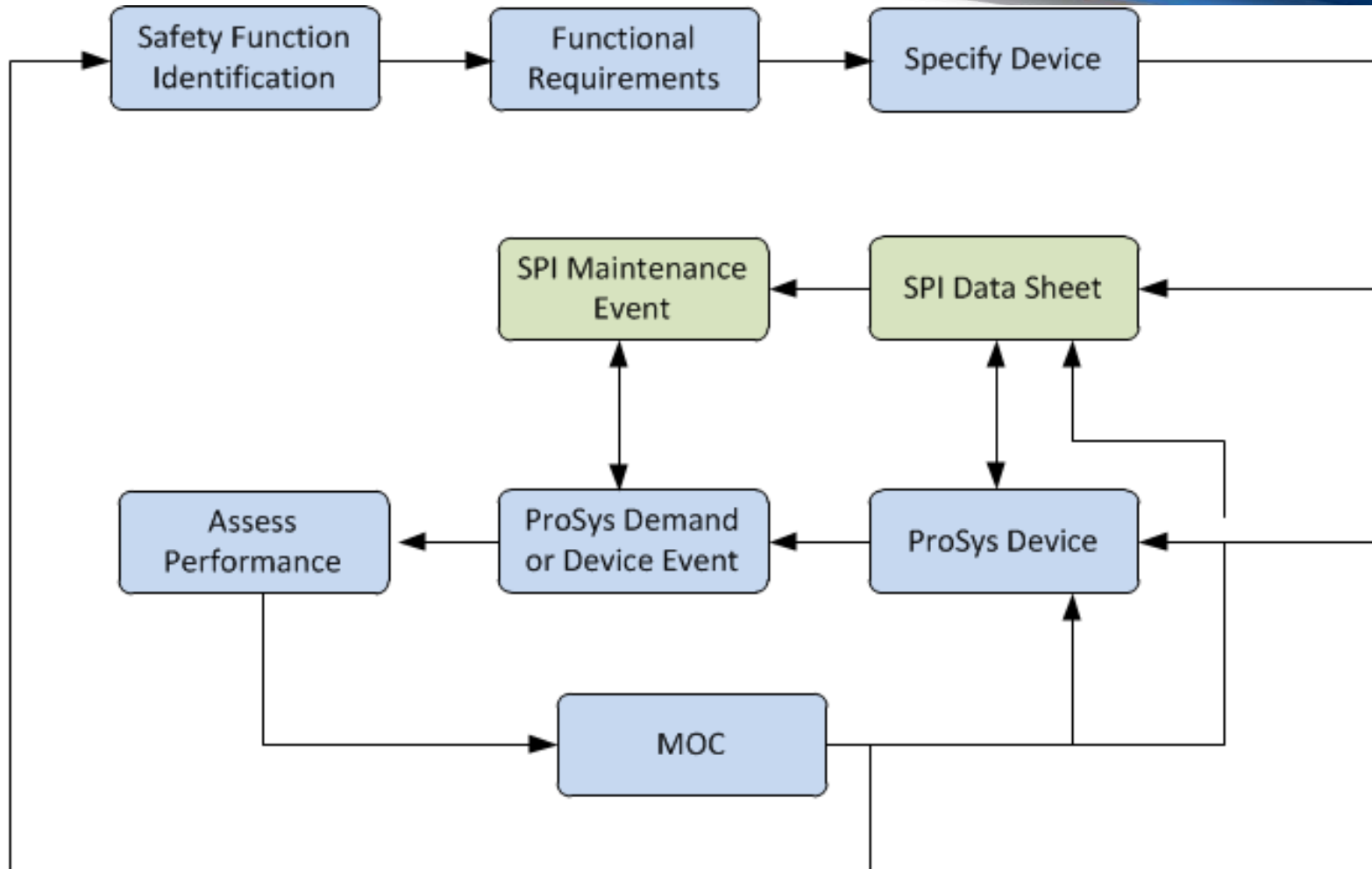


- SPI is a primary tool for documenting all instrumentation, including safety related data
- Can use SPI Categorization to identify safety related instruments
- SPI has a poor maintenance module, but it can be adapted to capture of detailed maintenance records
- SPI does not have much functionality when it comes to functions, systems or non-instrumented systems
- Leverage value of ProSys and SPI by linking data

# ProSys/SPI Device Data



# Device Life Cycle





# Questions?

