

## Session 2.2

# Kneat Product Session: Entities & CSV

Lorna Whelan & Dan Tobin



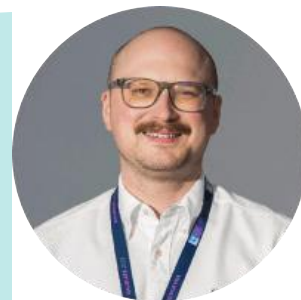
# Speakers



**Lorna Whelan**

Senior Product Manager

**Kneat**



**Dan Tobin**

Senior Product Owner

**Kneat**

# Agenda

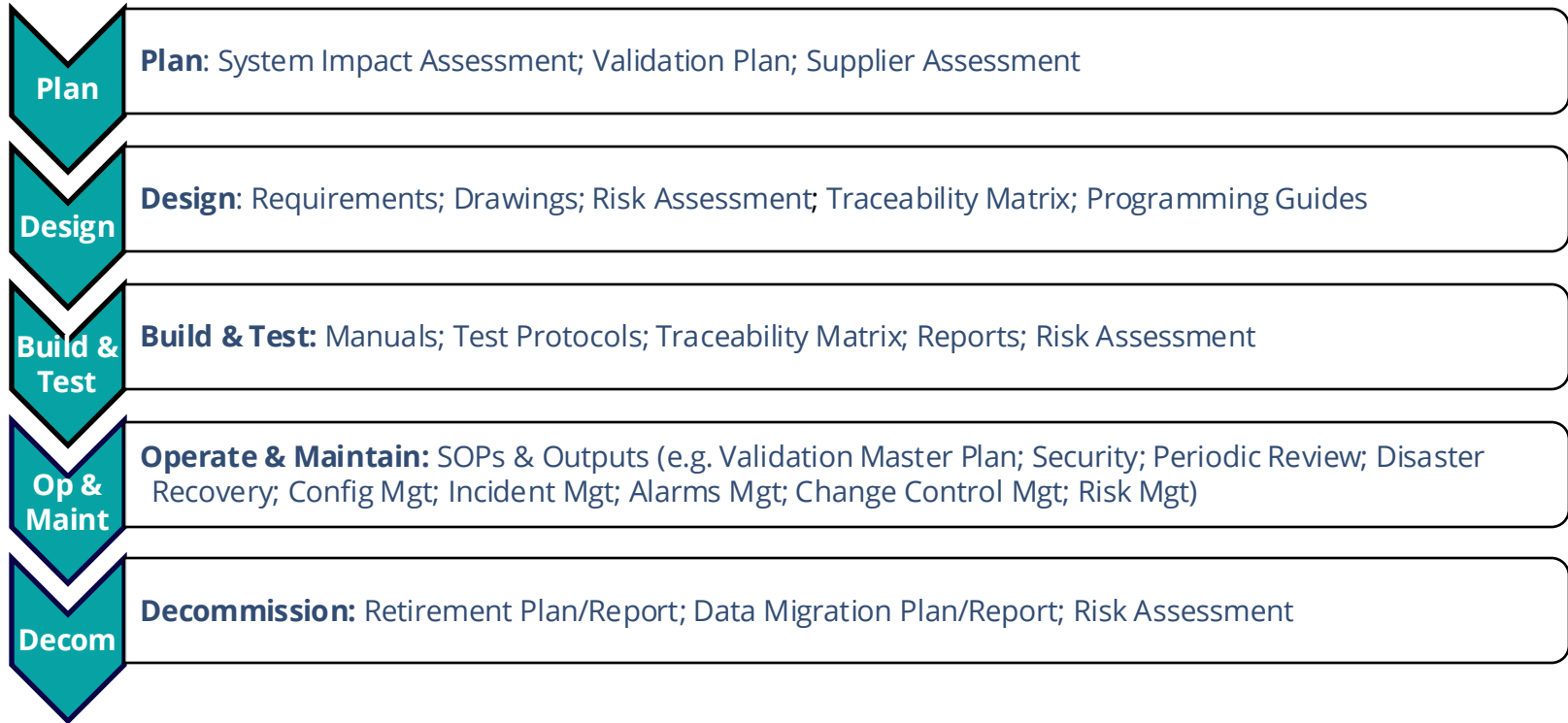
- CSV/CSA Data
- Kneat Entity Data Model
- Demo
- Next Steps



# CSV/CSA Data



# CSV Deliverables



\*Mgt= management

# Risk part of all Phases



# CSA Risk-based Approach

## Computer Software Assurance Guidance

### Why issued?

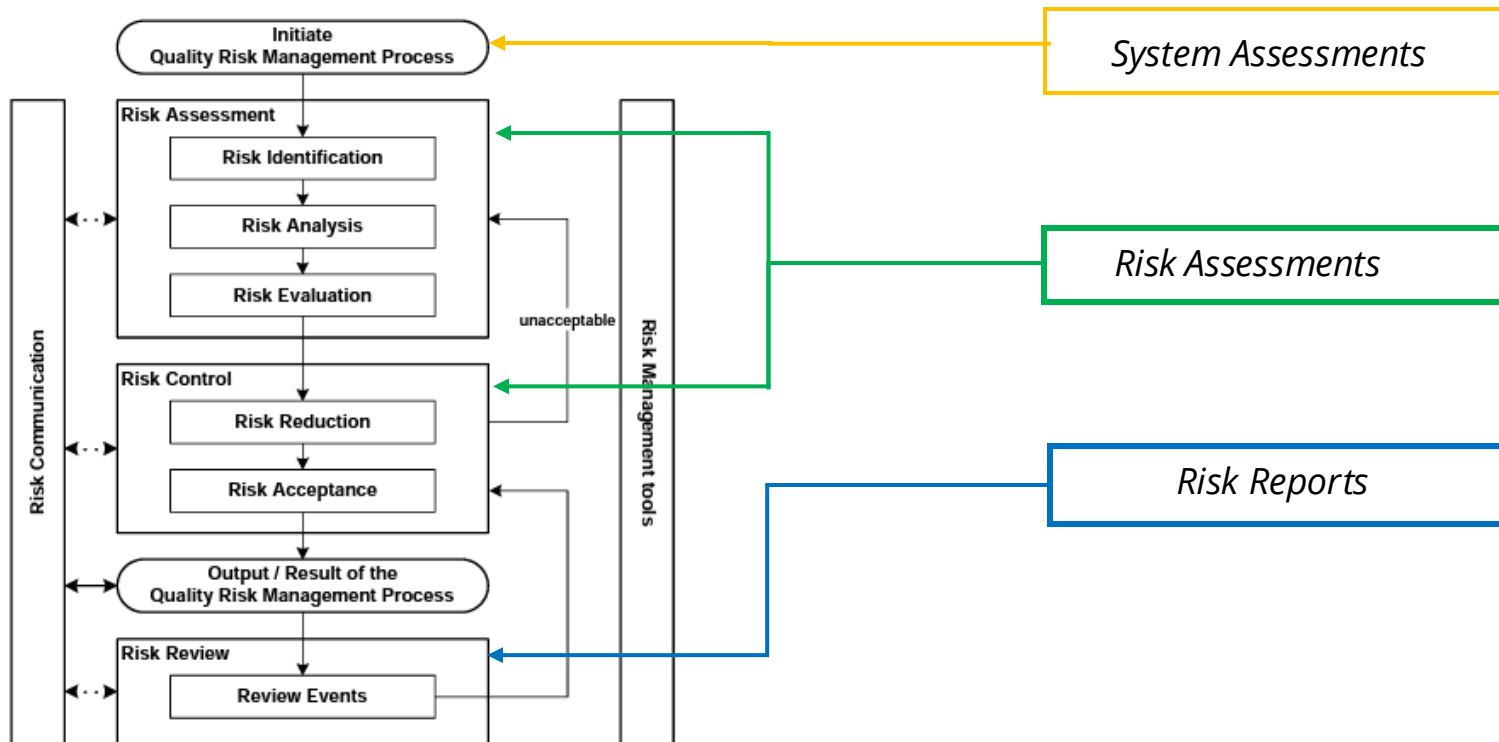
FDA wants industry to use automation, but industry was reluctant due to the perceived high **level of validation effort & thus high \$**

### What is it?

CSA is a **framework**, with worked examples, on how to use Quality Risk Management (QRM) to focus CSV effort.



# QRM Framework (ICH Q9)



ICH = The International Council for Harmonisation (ICH), formerly the International Conference on Harmonisation (ICH)

# Example of Risk Level driving Testing Approach

## Functional Risk Assessment on GxP URS Reqs

| Risk Level    |             | Testing Approaches                                                                                                                                      |
|---------------|-------------|---------------------------------------------------------------------------------------------------------------------------------------------------------|
| High Risk     | High Risk   | (Robust) Scripted testing<br>Detailed test steps & expected results<br>( <b>higher \$</b> to develop/execute)                                           |
| Not High-Risk | Medium Risk | (Limited) Scripted testing<br>Limited detail & expected results<br>( <b>lower \$</b> to develop/execute)                                                |
|               | Low Risk    | Unscripted testing (e.g. Ad hoc)<br>High level objective; no expected results;<br>summary filled in by tester<br>( <b>lowest \$</b> to develop/execute) |

Appropriate records should incl the intended use; Risk assessment; test results; issues; conclusion, who/when; R/A

# CSA - Five Things You Need To Know

1

Risk is based on the impact to patient safety and product quality measured against requirement complexity



2

It calls for the least burdensome documentation approach



3

It can reduce paper-work by 80% with unscripted testing



4

It results in fewer issues encountered in Production



5

FDA & ISPE supported



- ✓ Improved Quality and Efficiency
- ✓ Validation Effort Reduced by 30%
- ✓ Spending More Time Challenging System

# Kneat Entity Data Model

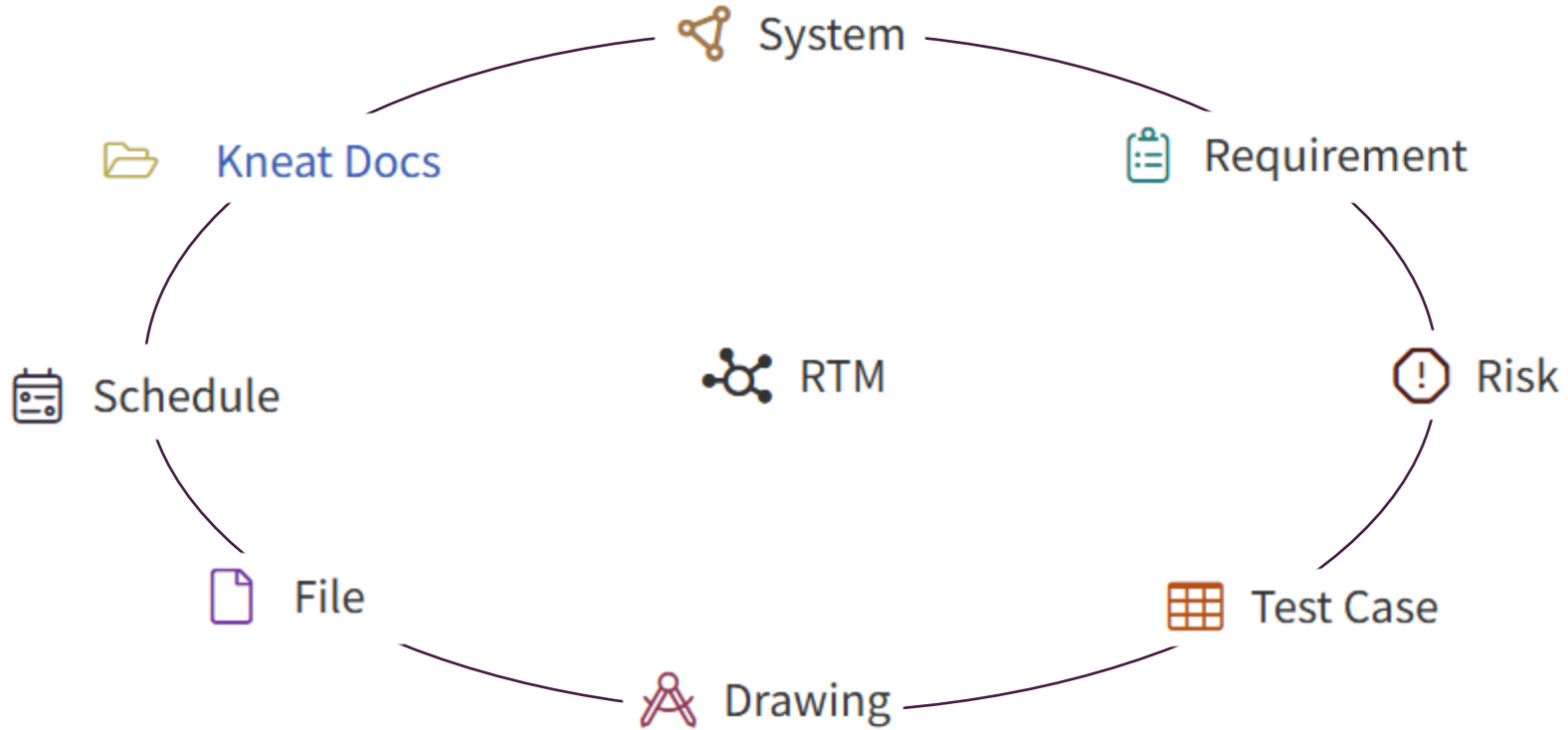


# CSV Deliverables

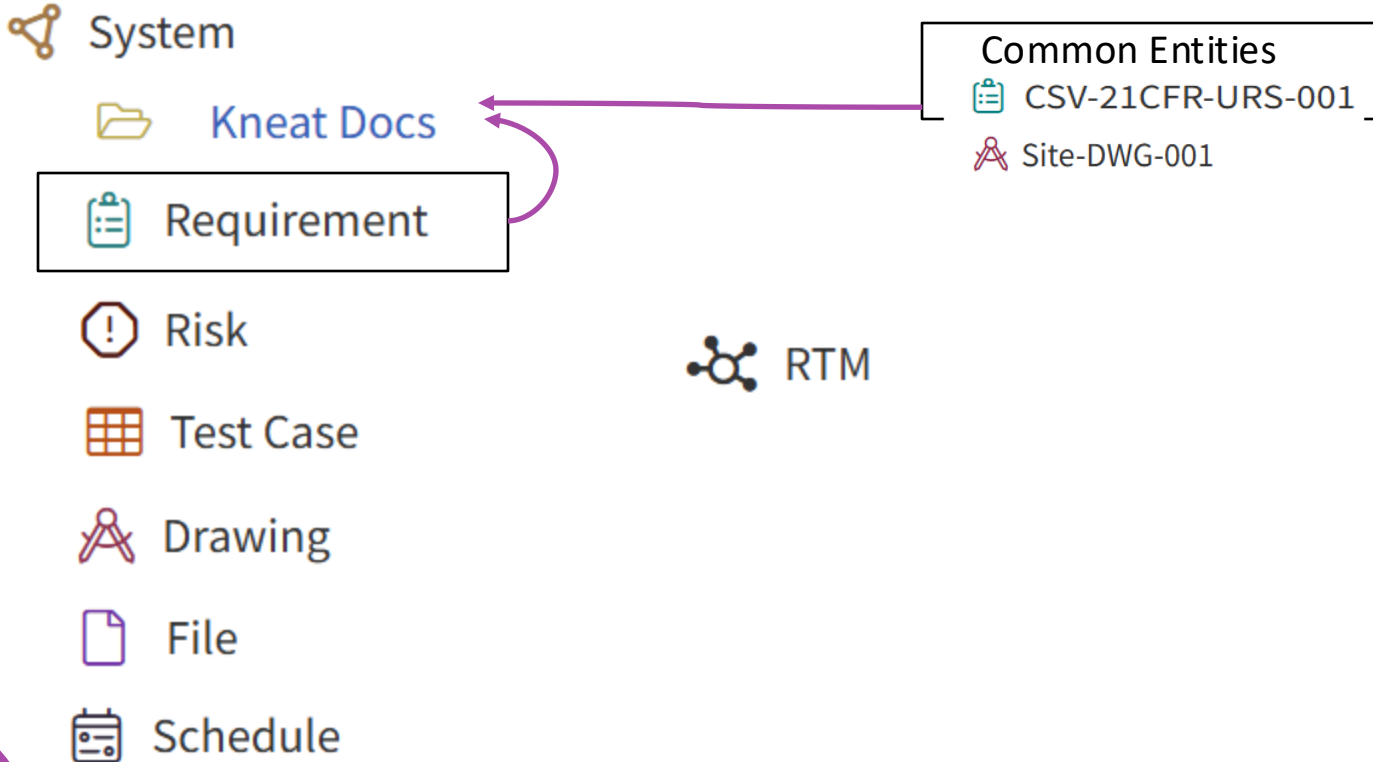


\*Mgt= management

# CSV Data – from Deliverables



# CSV Data – from Deliverables



# Plan Phase - System Impact Assessment

## System Impact Assessment Document

|        |                                                                                  |    |
|--------|----------------------------------------------------------------------------------|----|
| GxP-11 | Is the system used for quality trending, quality matrices and or product review? | No |
| GxP-12 | Is this system used to maintain records of training of personnel?                | No |
| GxP-13 | Is the system used for product disposition? (Release /Reject/Disposal)           | No |
| GxP-14 | Is the system used for employee identification and access?                       | No |

If ANSWER of any above Question is "Yes", then system is "GxP - Direct Impact " If all ANSWER of above Question is "No", then system is "Non Impact" and further assessment is not required

**Impact**  
PLC-Steriliser-Line1 PDI (Direct Impact)

|            |                                                                                                                                       |
|------------|---------------------------------------------------------------------------------------------------------------------------------------|
| Category 4 | Configurable Software Packages (Configurable COTS)<br>[Note: If the answer to question 4 and 6 is Yes, then category 4 is applicable] |
| Category 5 | Custom (Bespoke) Software<br>[Note: If the answer to question 7 is Yes, then category 5 is applicable]                                |

**Software Category**  
PLC-Steriliser-Line1 PCategory 4

|        |                                                                                  |    |
|--------|----------------------------------------------------------------------------------|----|
| GxP-11 | Is the system used for quality trending, quality matrices and or product review? | No |
| GxP-12 | Is this system used to maintain records of training of personnel?                | No |
| GxP-13 | Is the system used for product disposition? (Release /Reject/Disposal)           | No |
| GxP-14 | Is the system used for employee identification and access?                       | No |

If ANSWER of any above Question is "Yes", then system is "GxP - Direct Impact " If all ANSWER of above Question is "No", then system is "Non Impact" and further assessment is not required.

**Impact**  
PLC-Filter-Line1 PNi (No Impact)

## System

| Core System Characteristics                       |                    |   |          |
|---------------------------------------------------|--------------------|---|----------|
| Attribute                                         | Value              |   | Status   |
| <b>System Impact</b><br><i>Core attribute</i>     | DI (Direct Impact) | ✓ | Approved |
| <b>Software Category</b><br><i>Core attribute</i> | Category           | ✓ | Approved |

GxP System so **do** perform a Quality RA

Not GxP System so **do not** perform a Quality RA

# Design Phase - Risk Entity

Lorna WS2 > (2) Computer Systems Validation > PLC-1 > PLC-1 Risks

+ New

Risk FMEA

▼

| Entity Information                          | Entity Details                                                      |                                                                              |                                                                                                                            | General Data                                                              |                           |
|---------------------------------------------|---------------------------------------------------------------------|------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------|---------------------------|
| Entity status & version                     | <div>⬆️</div> <div>Risk ID</div> <div>Required core attribute</div> | <div>⬆️</div> <div>Function (being assessed)</div> <div>Core attribute</div> | <div>⬆️</div> <div>ID of Function (being assessed)</div> <div>Core attribute</div>                                         | <div>⬆️</div> <div>Potential Failure Mode</div> <div>Core attribute</div> | <div>⬆️</div> <div></div> |
| <div>○</div> <div>↺↻ Not Approved (0)</div> | PLC1-Risk-001                                                       | Report data temporarily stored on PLC before being sent to EBR               | <div> <div> <div>PLC1-URS-001</div> <div>Workspace: Lorna WS2</div> <div>✕</div> </div> <div>Add relationship</div> </div> | Report data is deleted/modified prior to being sent to EBR                | Some PLCs, regist both    |

# Design Phase – Risk Assessment in Kneat

## 2 Risk Assessment

SYSTEM: PLC-1 PLC to control Steriliser

Product Affected: Product xxx

Leader: Jane Doe

Prepared By: John Smith

Team Members: John Doe; Jane Smith; Larry Smith

| Risk ID         | Function (being assessed) | ID of Function (being assessed) | Potential Failure Mode        | Potential Effects of Failure                           | Current Controls                                                                                                        | Severity | Occurrence | Detection | RPN | Overall Risk Level | Recommended Action Item | Occurrence (After mitigation) | Detection (After mitigation) | RPN (after mitigation) | Overall Risk Level (After mitigation) |
|-----------------|---------------------------|---------------------------------|-------------------------------|--------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------|----------|------------|-----------|-----|--------------------|-------------------------|-------------------------------|------------------------------|------------------------|---------------------------------------|
| PLC1 - Risk-001 | Report data               | PLC1-URS-001                    | Report data is deleted        | Question on quality of product (as missing EBR data)   | <ul style="list-style-type: none"> <li>Control 1</li> <li>+</li> <li>Control 2</li> <li>+</li> <li>Control 3</li> </ul> | 5        | 2          | 1         | 10  | Medium             | Action 1                | 1                             | 1                            | 5                      | Low                                   |
| PLC1 - Risk-002 | Report data               | PLC1-URS-001                    | Report data is modified       | Question on quality of product (as incorrect EBR data) | Control 4                                                                                                               | 5        | 2          | 1         | 10  | Medium             | Action 2                | 1                             | 1                            | 5                      | Low                                   |
| PLC1 - Risk-003 | Control XXX               | PLC1-URS-002                    | Temperature is not controlled | Product is not sterilised                              | <ul style="list-style-type: none"> <li>Control 5</li> <li>+</li> <li>Control 6</li> </ul>                               | 5        | 1          | 1         | 5   | Low                | N/A                     | N/A                           | N/A                          | N/A                    | N/A                                   |

- Develop Tests – level of detail based on Risk Level in RA

# 1 Installation Security Checks

Test information:

| Test ID                              | Test Description             | Assessment Criteria                                                                                   | Specification Reference | Risk Assessment Reference |
|--------------------------------------|------------------------------|-------------------------------------------------------------------------------------------------------|-------------------------|---------------------------|
| <b>Overall Test ID:</b> <b>10001</b> | Installation Security Checks | Installation security checks are complete. All issues raised successfully and all operations correct. |                         |                           |

Test Script:

| Step No. | Test Instruction                                                                                                                                                   | Expected Result                                                            | Actual Result | Pass/Fail | Deviation | Abandonment | Performed by |
|----------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------|---------------|-----------|-----------|-------------|--------------|
| 1        | Check that the Default application pool has read access to nodes folder. Select the C:\Program Files\Boson\Boson\Right click and select Properties Select Security | The default application pool has read access permission                    |               |           |           |             |              |
| 2        | Check that files defined for application in ES                                                                                                                     | Files shall be deployed under Binaries Application                         |               |           |           |             |              |
| 3        | Check the Application settings. Open the SAP-EC Configuration-Applcation settings using file in Notepad                                                            | Application Settings shall be correct (see Configuration Settings)         |               |           |           |             |              |
| 4        | Check the connection settings. Open the SAP-EC Configuration-Connect settings using file in Notepad                                                                | Database connection settings shall be correct (see Configuration Settings) |               |           |           |             |              |
| 5        | Check that authorization settings are the same for the application and import service. Open web.config and settings again in Notepad                               | Issuer and SecurityKey are the same                                        |               |           |           |             |              |
| 6        | Check the Web application settings. Open the Web.config file                                                                                                       | Web Application settings shall be correct (see Configuration Settings)     |               |           |           |             |              |
| 7        | Check that the application launched                                                                                                                                | The sign pages shall be deployed                                           |               |           |           |             |              |

## Test Summary

| Overall Pass/Fail | Comments & Deviations |
|-------------------|-----------------------|
| Passed            |                       |

Signed by: \_\_\_\_\_

Signature Capacity \_\_\_\_\_

Reviewed by: \_\_\_\_\_

Approved By: \_\_\_\_\_

## Test Sign-Off

| Signature |
|-----------|
| _____     |

## 2.1.1 Installation Security Checks

| Test ID              | Test Description             |
|----------------------|------------------------------|
| <b>SAPSEC-PROJ02</b> | Installation Security Checks |

| Step No. | Test Instruction                                                                                                                                                                                          | Expected Result                                 |
|----------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------|
| 1        | Check that the Default application pool has read access to <b>SAP-BOSON-Enterprise</b> folder. Select the C:\Program Files\ <b>SAP-BOSON-Enterprise</b> Right click and select Properties Select Security | The application pool has read access permission |

| 2.1.1 Installation Security Checks |                                                                                                                                                                                                                                                              |                                                                                                        |                                                |           |                                                             |
|------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------|------------------------------------------------|-----------|-------------------------------------------------------------|
| Test Information                   |                                                                                                                                                                                                                                                              |                                                                                                        |                                                |           |                                                             |
| Test ID                            | Test Description                                                                                                                                                                                                                                             | Acceptance Criteria                                                                                    |                                                |           |                                                             |
| SAPSH-PROD-02                      | Installation Security Checks                                                                                                                                                                                                                                 | Installation security checks are complete.<br>All steps passed successfully and all deviations closed. |                                                |           |                                                             |
| Installation Security Checks       |                                                                                                                                                                                                                                                              |                                                                                                        |                                                |           |                                                             |
| Step No.                           | Test Instruction                                                                                                                                                                                                                                             | Expected Result                                                                                        | Actual Result                                  | Pass/Fail | Performed by                                                |
| 1                                  | Check that the Default application pool has read access to <b>SAPSH-Exchange\ExchangeMailBays\...</b> folder<br>Select the C:\Program Files\ <b>SAP</b> <b>Resource\Exchange\Resource\...</b> folder<br>Right-click and select Properties<br>Select Security | The default application pool has read access permission                                                | Deviation Found<br><b>ID: SAPSH-PROD-02-01</b> | Fail      | <b>Mark Foley</b><br>(Mark.Foley)@sap.com<br>09.11.24 (UTC) |
|                                    |                                                                                                                                                                                                                                                              |                                                                                                        |                                                |           |                                                             |
|                                    |                                                                                                                                                                                                                                                              |                                                                                                        |                                                |           |                                                             |

| Attribute                                                                                                                          | Value                                                                                                                                      | Status          |
|------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------|-----------------|
|  <b>Test Case Id</b><br>Required core attribute | PLC1-Test-001                                                                                                                              | Not Approved    |
|  <b>Description</b><br>Core attribute           | Test the transfer of Report data from PLC to ArchestrA  | Unsaved changes |
|  <b>Test Type</b><br>Core attribute             | Scripted                                                                                                                                   | Not Approved    |

# Build & Test Phase – Traceability Matrix

Reset  
> PLC-1 > PLC-1 Risks  
Include sub folders for selected items ☒  

- Lorna WS2
  - (1) Equipment Qualification
    - (2) Computer Systems Validation
    - PLC-1
      - Kneat Docs
      - PLC-1 Drawings
      - PLC-1 REQs
      - PLC-1 Risks**
        - PLC1-Risk-001
        - PLC1-Risk-002
        - PLC1-Risk-003
      - PLC-1 Tests
        - PLC1-SCHEDULE-001
      - (3) eLogbooks

## Requirement traceability matrix (RTM)

Traceability relationships (+3)

Report last updated: 15-Apr-2026 08:53:26 (UTC-05:00, CDT)

| Unique identifier                                            | Entity type | Description                                                    | Traceability relationships                                                                               | Traceability relationships (+1)                                                                                                                                                                                                           | Traceability relationships (+2)                                                                                                                                                                                                                  | Traceability relationships (+3)                                                                           |
|--------------------------------------------------------------|-------------|----------------------------------------------------------------|----------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------|
| <b>PLC1-Risk-001</b><br>Not Approved<br>Workspace: Lorna WS2 | Risk FMEA   | Report data temporarily stored on PLC before being sent to EBR | <ul style="list-style-type: none"> <li>PLC1-URS-001<br/>Not Approved<br/>Workspace: Lorna WS2</li> </ul> | <ul style="list-style-type: none"> <li>PLC1-Risk-002<br/>Not Approved<br/>Workspace: Lorna WS2</li> <li>PLC1-Test-001<br/>Not Approved<br/>Workspace: Lorna WS2</li> </ul>                                                                |                                                                                                                                                                                                                                                  |                                                                                                           |
| <b>PLC1-Risk-002</b><br>Not Approved<br>Workspace: Lorna WS2 | Risk FMEA   | Report data temporarily stored on PLC before being sent to EBR | <ul style="list-style-type: none"> <li>PLC1-URS-001<br/>Not Approved<br/>Workspace: Lorna WS2</li> </ul> | <ul style="list-style-type: none"> <li>PLC1-Risk-001<br/>Not Approved<br/>Workspace: Lorna WS2</li> <li>PLC1-Test-001<br/>Not Approved<br/>Workspace: Lorna WS2</li> </ul>                                                                |                                                                                                                                                                                                                                                  |                                                                                                           |
| <b>PLC1-Risk-003</b><br>Not Approved<br>Workspace: Lorna WS2 | Risk FMEA   | TX Steri Boundary (start & end)                                | <ul style="list-style-type: none"> <li>PLC1-URS-003<br/>Not Approved<br/>Workspace: Lorna WS2</li> </ul> | <ul style="list-style-type: none"> <li>PLC1-FS-002<br/>Not Approved<br/>Workspace: Lorna WS2</li> <li>PLC1-Test-004<br/>Not Approved<br/>Workspace: Lorna WS2</li> <li>PLC1-URS-002b<br/>Not Approved<br/>Workspace: Lorna WS2</li> </ul> | <ul style="list-style-type: none"> <li>PLC1-DDS-002<br/>Not Approved<br/>Workspace: Lorna WS2</li> <li>PLC1-Test-005<br/>Not Approved<br/>Workspace: Lorna WS2</li> <li>PQ-001<br/>In Pre-Approval (Current)<br/>Workspace: Lorna WS2</li> </ul> | <ul style="list-style-type: none"> <li>PLC1-Test-006<br/>Not Approved<br/>Workspace: Lorna WS2</li> </ul> |

Copy RTM

Copy RTM button will only copy items from the current page. Please navigate to the other pages to copy more items.

## Benefits of Kneat Entity Data Model for CSV

- Configurability – build entities to suit your Validation process
- Data Governance – build Standardised entities ensuring consistency, saving time
- In-app CSA – build & manage Risks within your validation system
- Save Time - reduce transcription errors; re-use of entities
- Efficient Design– agile editing outside docs; real-time Traceability Matrices
- Change Management – audit history per entity ; assess impact of change on systems
- Share data – integrations and data export

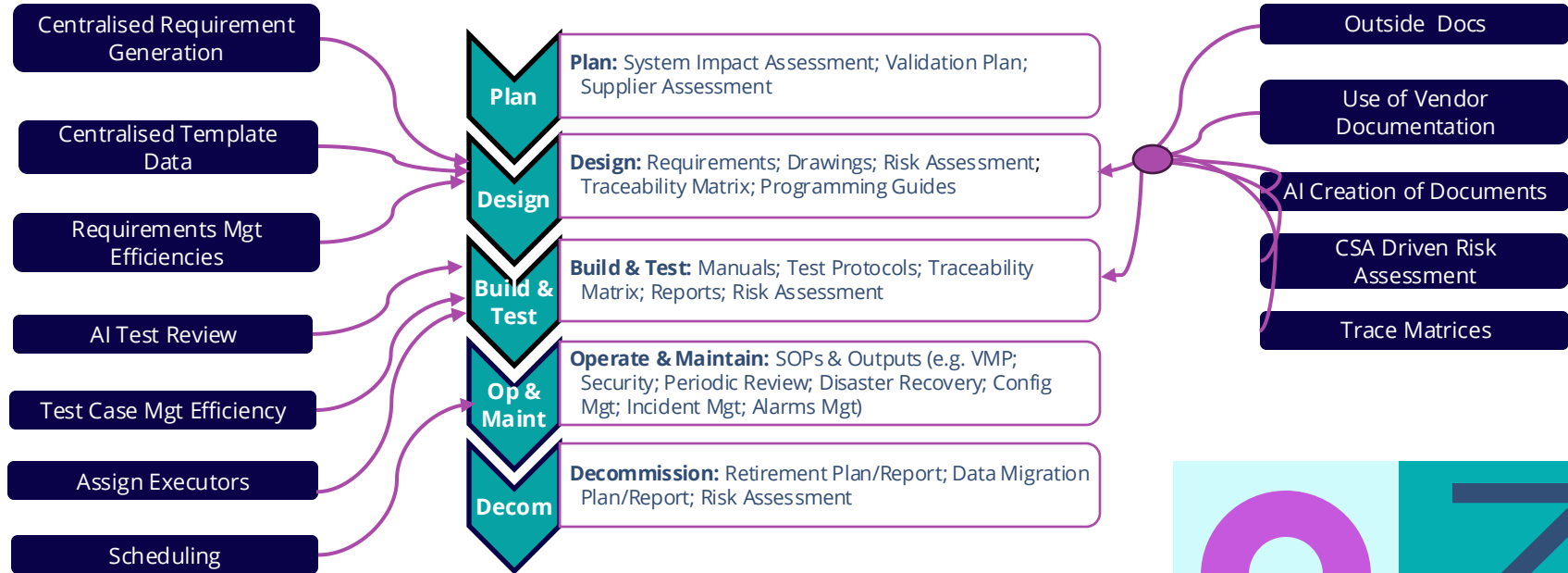
# Demo



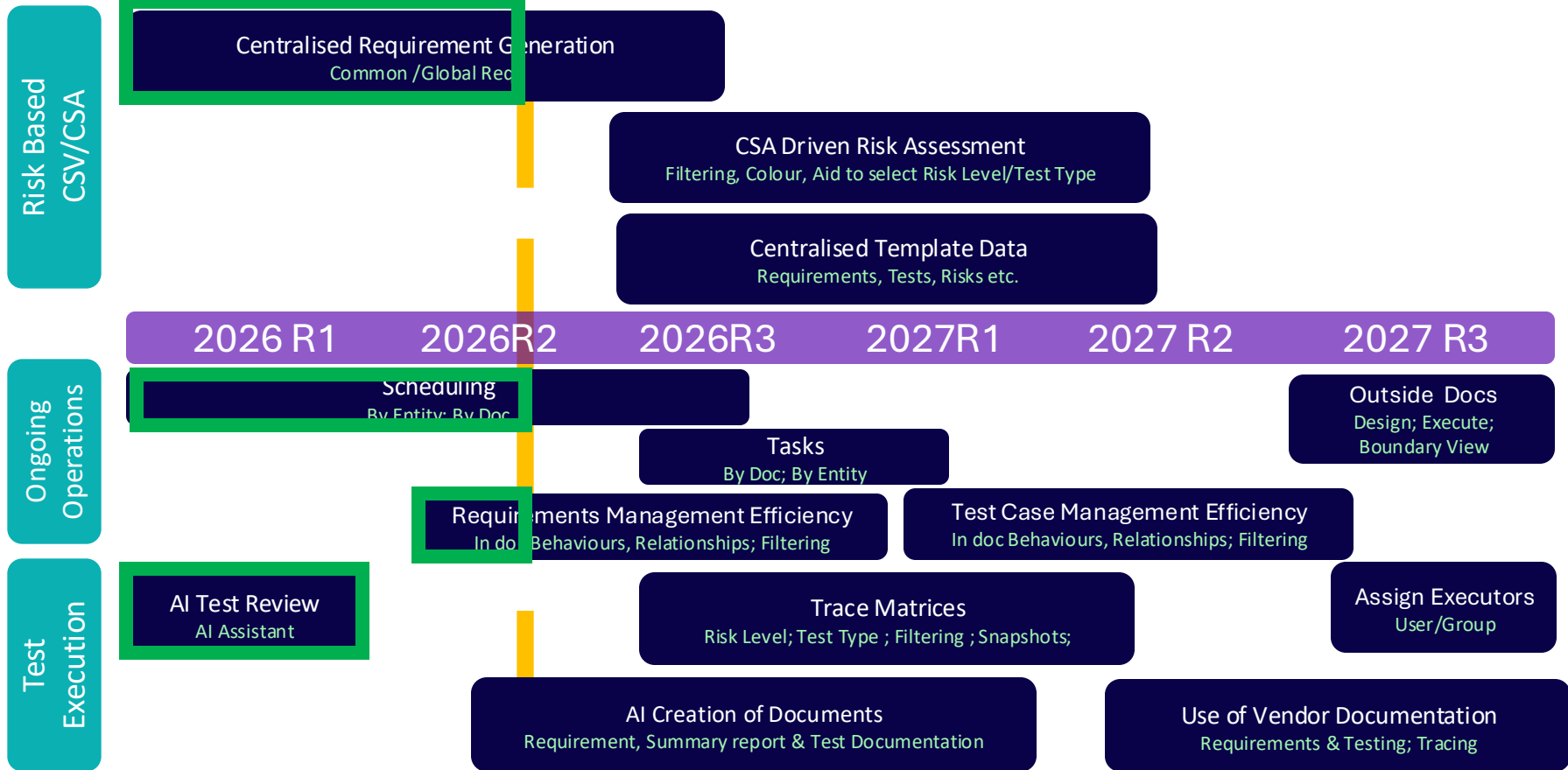
# Next Steps



# Features coming soon – as affecting CSV deliverables



# Kneat GX CSV/CSA Roadmap 2026/2027



# Q&A