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Module 1:
iRIS Product Introduction

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What is iRIS?

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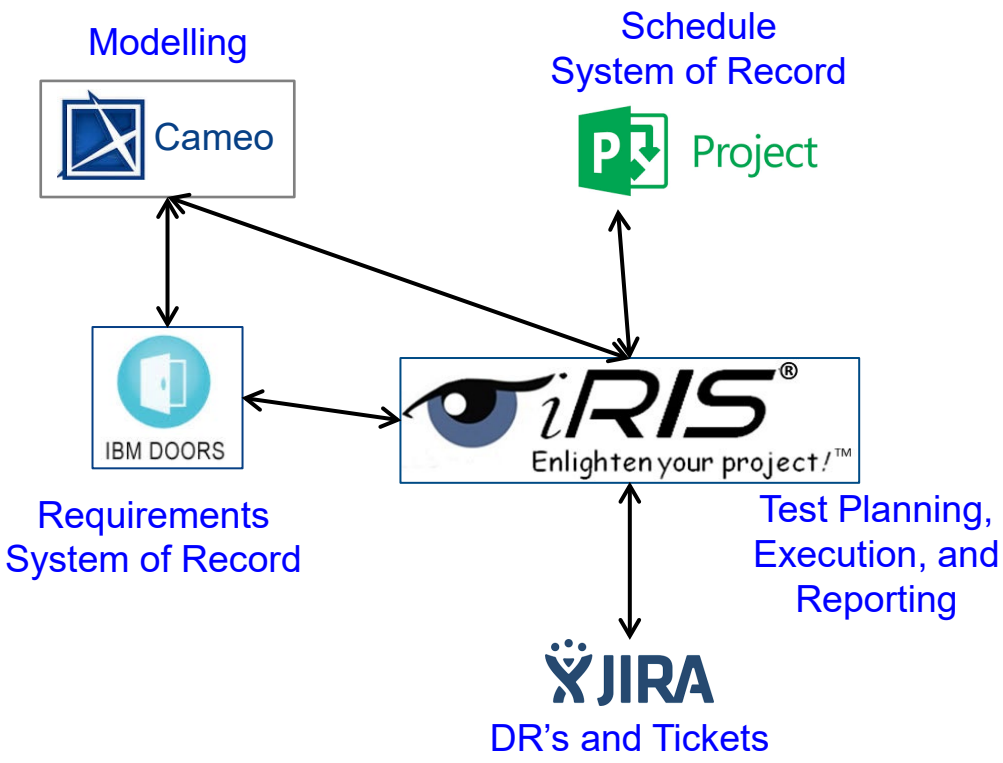
- iRIS is a software platform to:
  - Plan, execute, and report on a test program
  - Maintain linkage to the technical baseline
  - Integrate the test program with key program items like scheduling, requirements, workflow, discrepancies, and modeling and simulation
- iRIS allows you to do these things attached to the relational database instead of stove piped away in a standalone application



iRIS Pedigree

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iRIS Designed for Compliance with Governing DoD Policy, Guidance & Instructions

- Process Monitoring & Control
- Metrics & Measurement (TPMs)
- Risk Management
- Interface Management
- Change Mgmnt/Data Mgmnt
- Validation & Verification
- Test & Evaluation

DoD Systems Engineering Primers & Handbooks

- Team Collaboration
- Event-Driven Schedules/Exit Criteria
- Combined DT/OT Test Events
- T&E resource planning
- Common T&E Database
- DT&E/OT&E Metrics & Reports
- OT&E System Readiness

Capabilities-based Test & Evaluation

- Early OT&E/ITT Involvement
- Certification Template Exit Criteria
- Contractor Testing
- Risk Identification and Tracking
- Certification Template Review/Approval
- Certification Metrics and Reporting
- Final OT&E Readiness Certification

System Readiness for Dedicated OT&E

iRIS®
Enlighten your project!™

Fun Fact…

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The “iris” controls the amount of light let into the eye. The iRIS logo is used a metaphor to symbolize how a program can become more enlightened or informed by using iRIS!

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The Foundation of iRIS

The Foundation of iRIS is Event Based Verification (EBV)

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EBV Enables Programs to Significantly Reduce DT&E Management Overhead and Maximize Comprehensiveness

- The process is to “manage by event, sell-off by specifications”
- Improves Configuration Control & Traceability
- EBV is recommended for all levels of requirements verification

- Once all requirements have been allocated to events, the program can then manage to a significantly fewer number of events versus thousands of requirements

Many things can be an event, such as a:

- **Critical analysis**
- **Test for credit**
- **Test dry-run**
- **Demonstration**
- **Inspection**

Events must reduce verification risk or sell-off a requirement

Primary EBV Elements

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- **EBV is a Requirements-driven Process that Serves as an Integrating Function for DT&E**
  - **EBV simplifies the flow of accurate data to DT&E**
  - **Cuts across the institutional stovepipes**
- **EBV is comprised of three primary elements:**
  1. **Events: A logical grouping of requirements that will be assessed to gauge the progress toward the end product. Events can be unit tests, configuration item tests, functional qualification tests, system tests, sprints (Agile), operational tests**
  2. **Event Integration Sheet (EIS): A report from iRIS that correlates the information used to describe events**
  3. **Test & Verification Event Matrix (TVEM): is a matrix report from iRIS that identifies all project Events, the event dates, and the requirements in the event. The TVEM spans all project developers and all years of the project. This is a key system integration tool and the core of EBV**

What is an Event?

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- **Risk Reduction** (RR) events may be informal activities that may or may not need formal Configuration Management (CM) or Quality Assurance (QA) involved
  - RR events help us gain confidence that the system in development is on track
- **Formal events** typically require strict CM and QA and are those events that we'd audit to formally sell-off (verify) a requirement
- iRIS uses **bold-blue** font to identify requirements that are formally verified within an event

Event Based Verification is Implemented in iRIS via the Event Integration Sheet (EIS)

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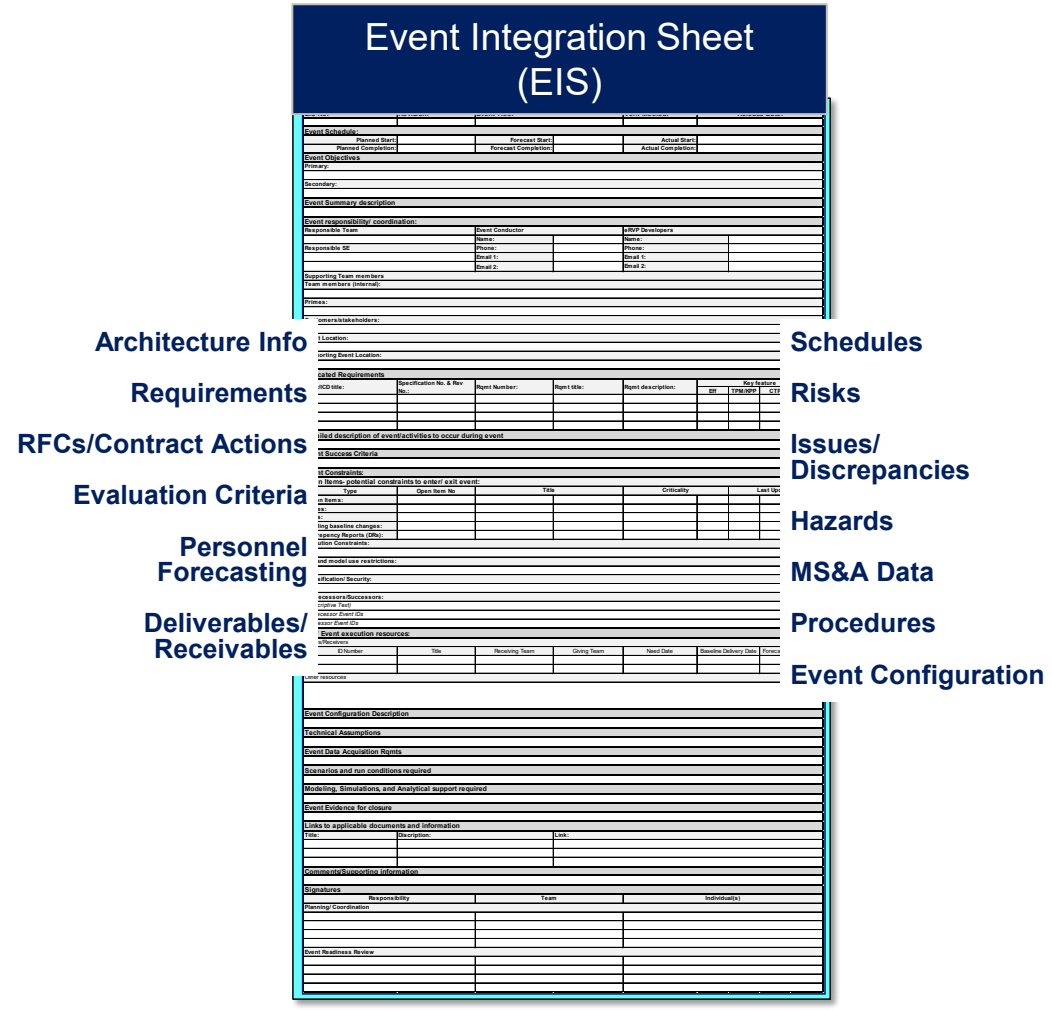
- An EIS is developed for each event to support event planning, coordination, and reporting
- Includes risk reduction, verification, validation and potentially other DT&E events and activities
- Individual Requirement Verification Plans (RVPs) help define how system-level requirements will be verified within events



An Accurate EIS is Critical

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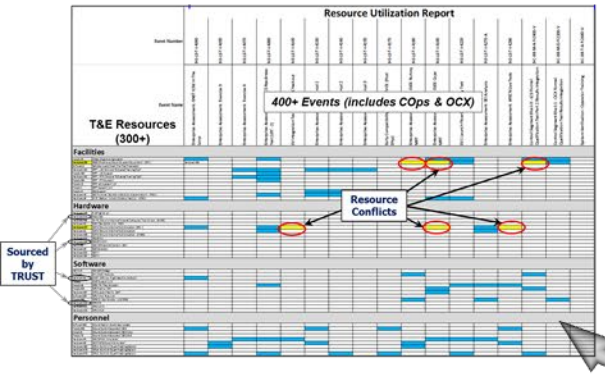
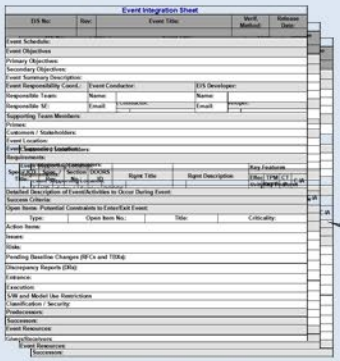
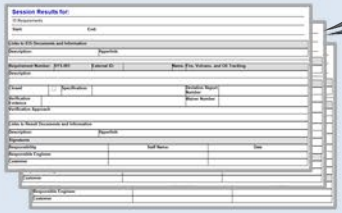
Resource Utilization



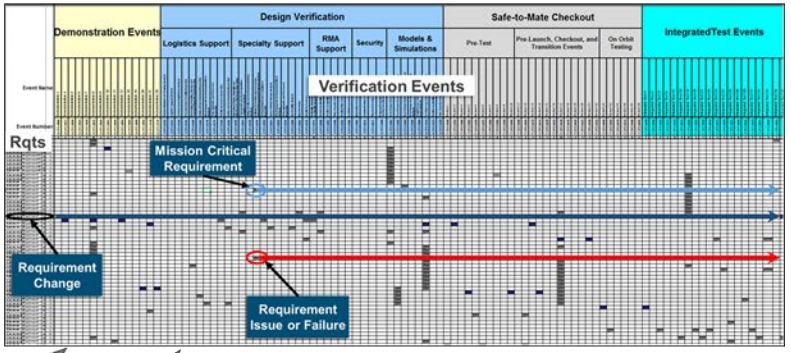
Event Plan



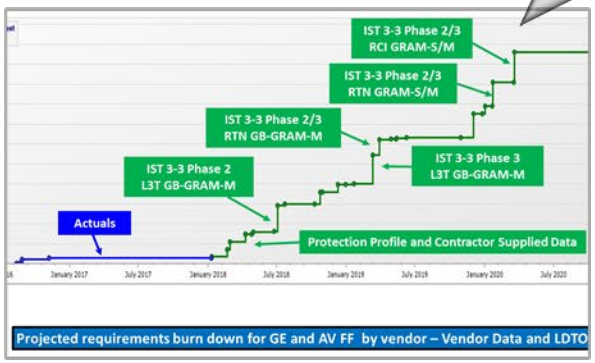
Event Results



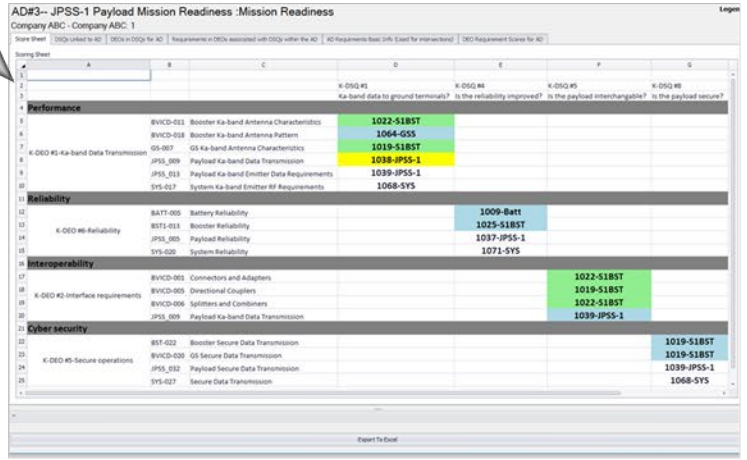
TVEM



Requirement Verification Burnup



DEF Scorecards



An Event is Intended to…

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- **Drive** Verification Planning
  - Not intended to replace verification plans or procedures although it is helpful to include EISs as annexes to these products for traceability
  - Intended to increase traceability throughout all phases of test & verification
- Be a Verification **SUMMARY**
  - Should be kept at a high level
  - Should not take more than an hour to create initial draft of an EIS
  - Should foster communication between stakeholders (Systems Engineering, Specialty Engineering, T&V, Project Controls and Customer personnel)
- Help Control the DT&E Program Baseline
  - Once a draft EIS is baselined, it can be locked and put under automated configuration control to retain a history of all approved changes
  - Needed to Ensure T&V Integrity for the FCA/PCA Process

This occurs in lockstep with the Requirements to ensure sell-off credit

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iRIS in the System Engineering, Integration, and Test Ecosystem

iRIS in the SE Lifecycle

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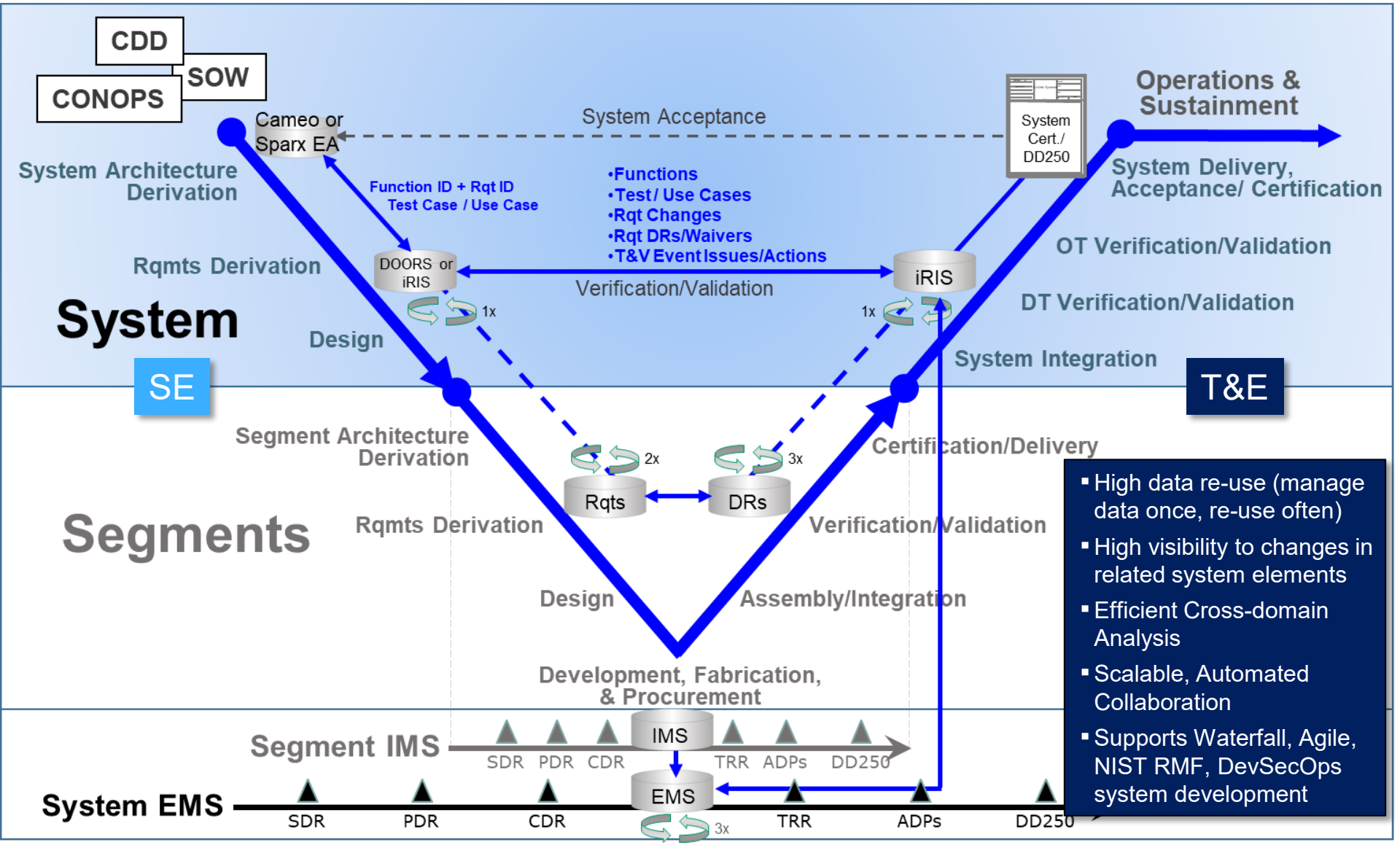

- High data re-use (manage data once, re-use often)
- High visibility to changes in related system elements
- Efficient Cross-domain Analysis
- Scalable, Automated Collaboration
- Supports Waterfall, Agile, NIST RMF, DevSecOps system development

iRIS in the Typical SE Tool Ecosystem

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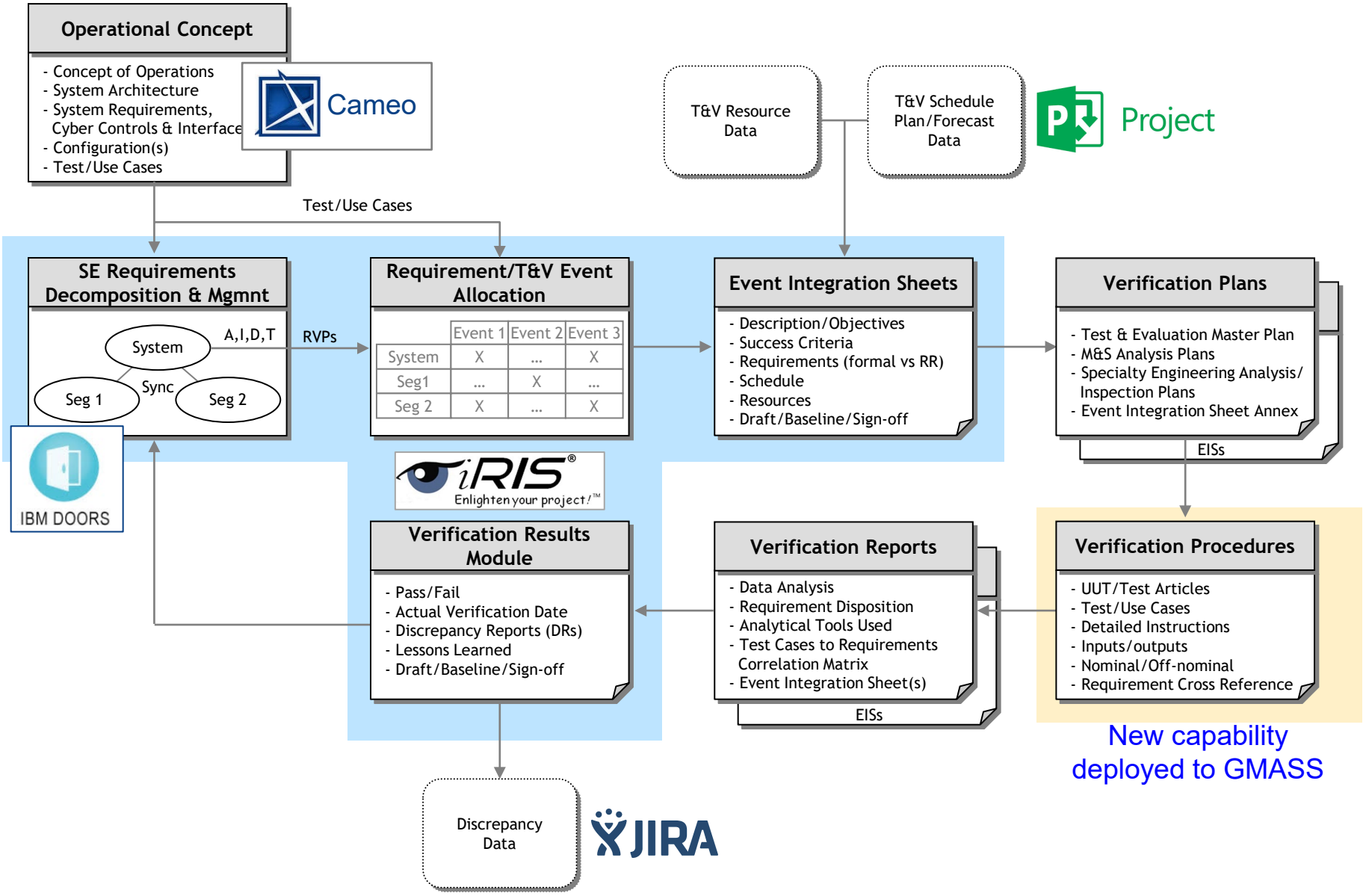

iRIS Fly Through

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- Landing page
- Sample EIS
- Document Generator