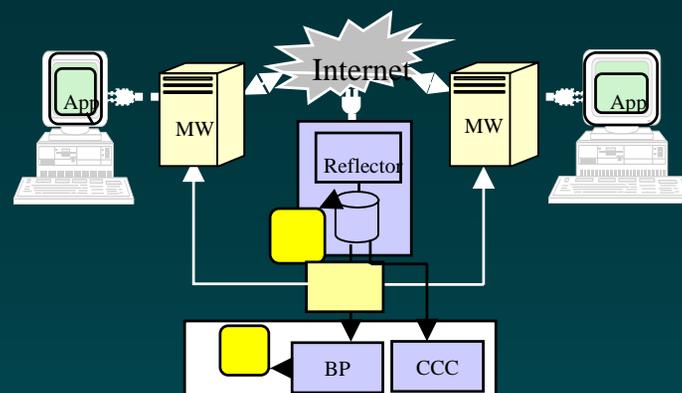


OAG/NIST B2B Interoperability Testbed Update

October 30, 2003,
OAG Meeting,
Redwood Shores, CA



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NIST

Tony Blazej

Open Applications Group

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Jaiman Lee

Korean B2B Interoperability
Testbed (KorBIT)

Outline

- IV&I Proof of Concept Support
- OAG/NIST TestBed - KorBIT Collaboration
- KorBIT Update

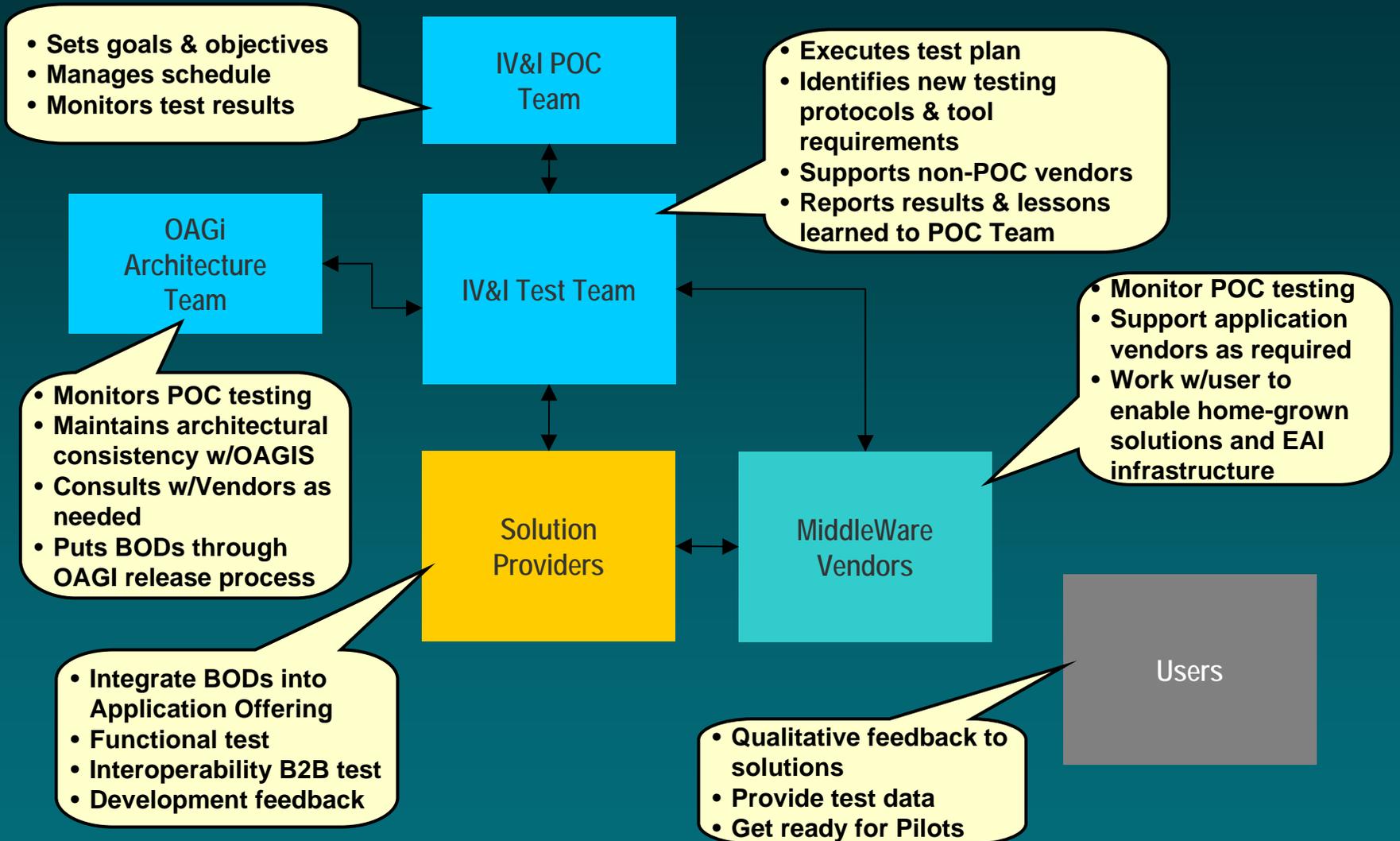
IV&I POC Support

- IV&I POC Participants
- Constituency Relationships
- Testing Roles
- POC Phase Plan
- Testing Process
- Interoperability Testing
- Drake Certivo Testing Facility

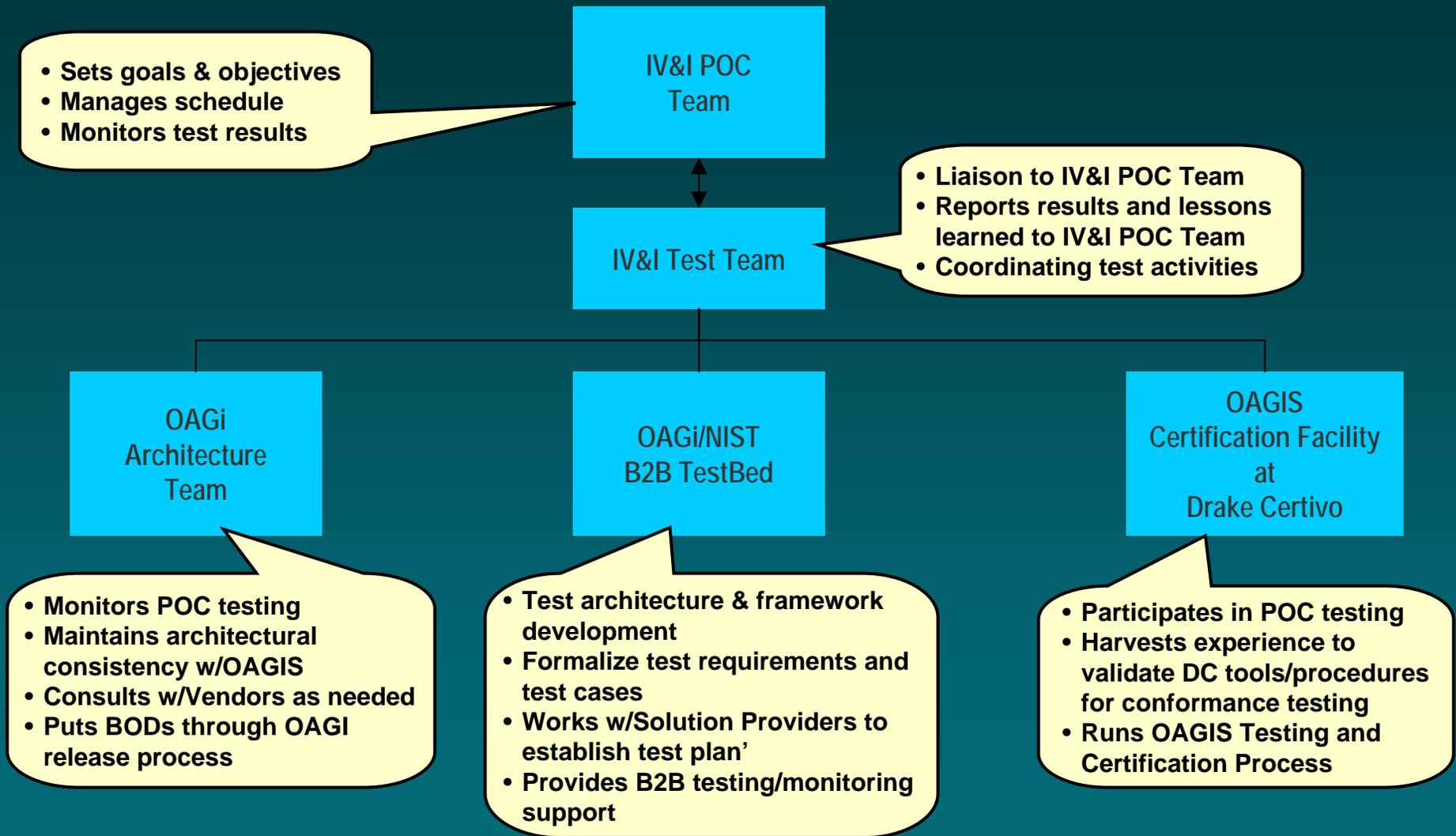
IVI POC Participants

- IV&I POC Team
- OAGi/NIST B2B TestBed
- OAGi Architecture Team
- Drake Certivo [as OAGIS Certification Agency]
- Accordare
- Solution Providers
- Tool Providers
- MiddleWare Vendors
- Users

Constituency Relationships



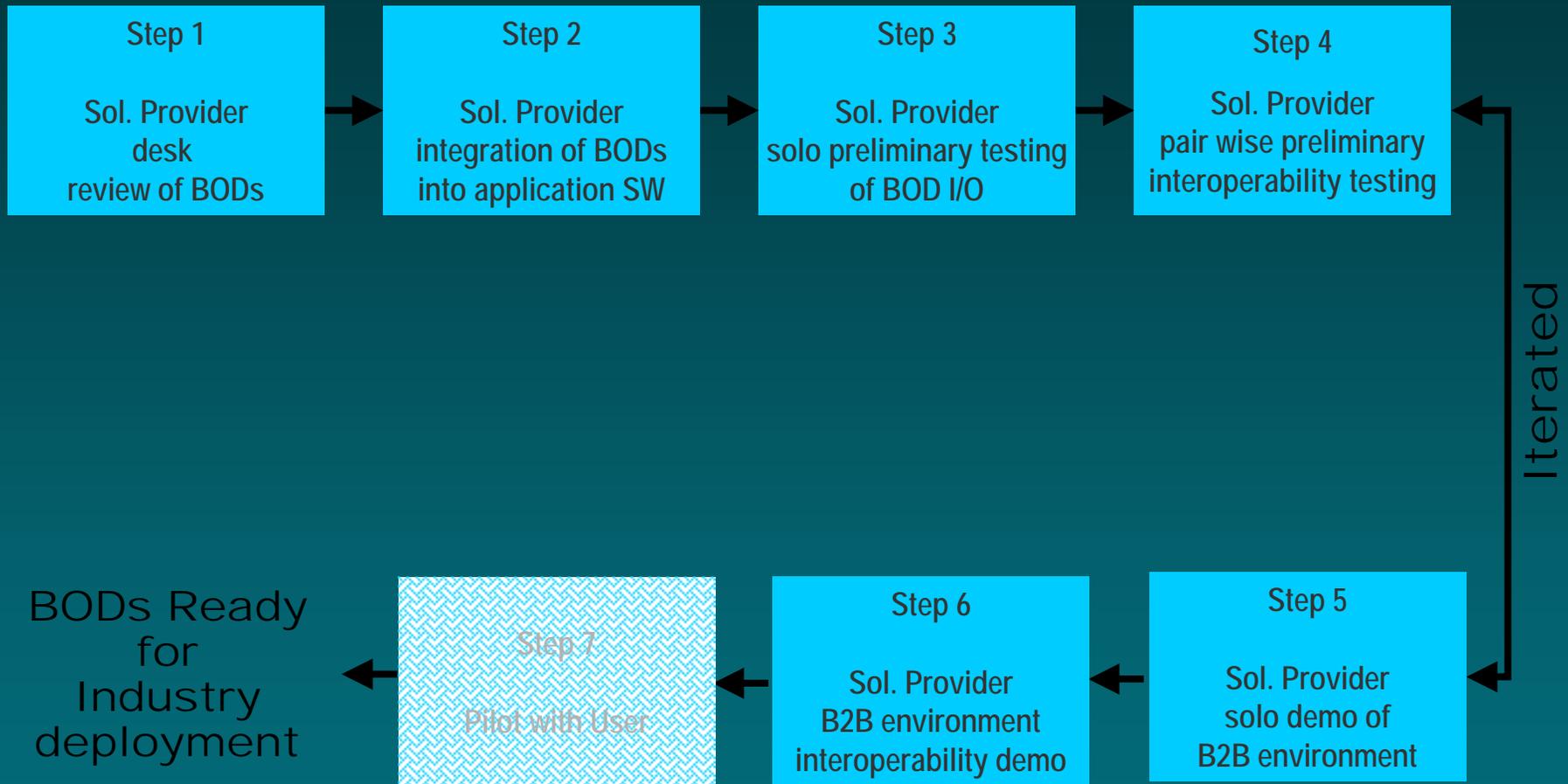
TestBed Relationships



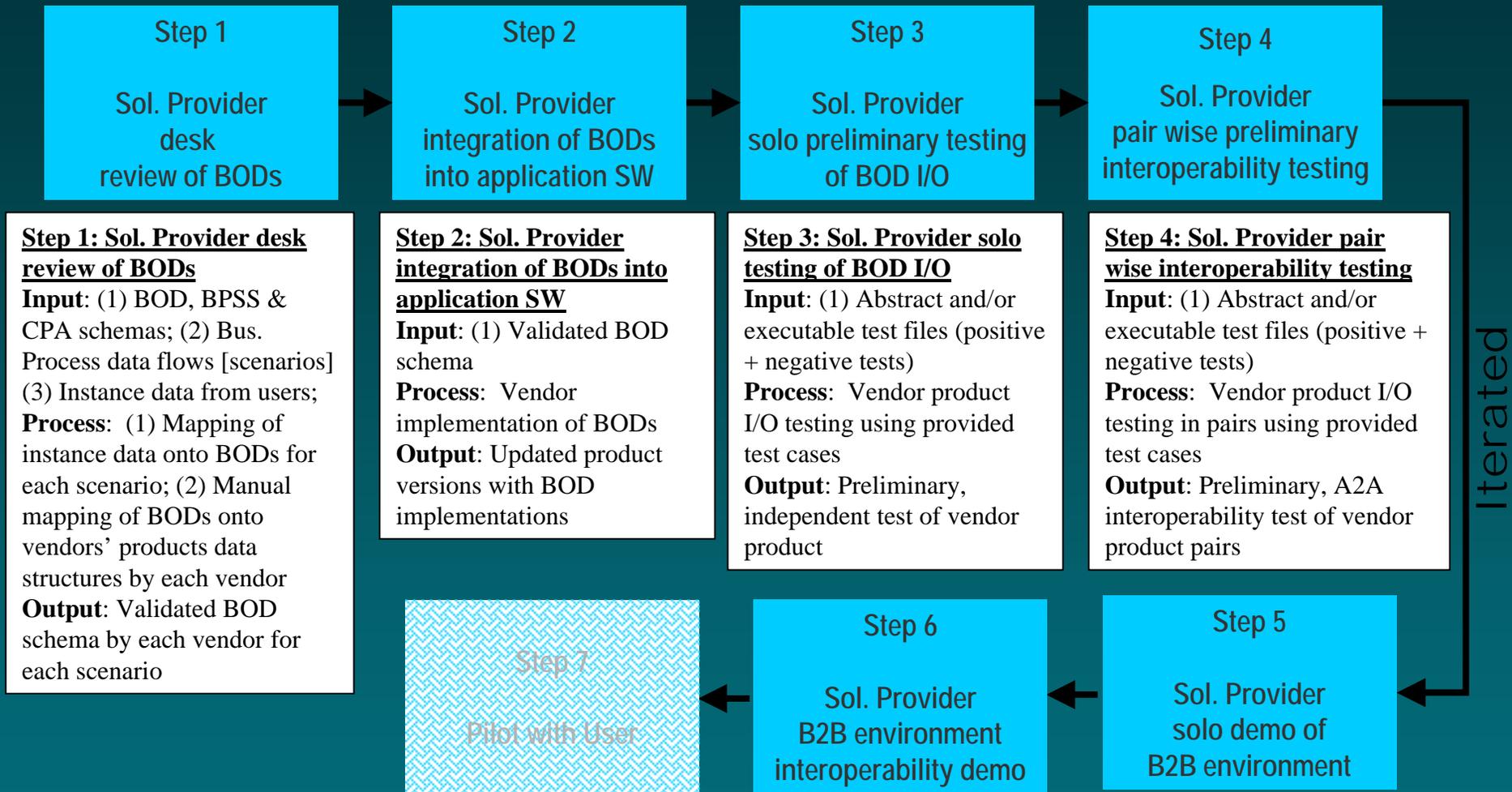
Testing Roles

- IV&I POC Team develop Test Requirement Specification (TRS)
 - What are we testing?
- The OAG/NIST facilitators develop test suite for Test Bed
 - How is it tested?
- Drake Certivo runs BOD testing services
- Accordare supports B2B testing services
- Implementation Partners use Test Bed
 - Test
 - Report on the tests

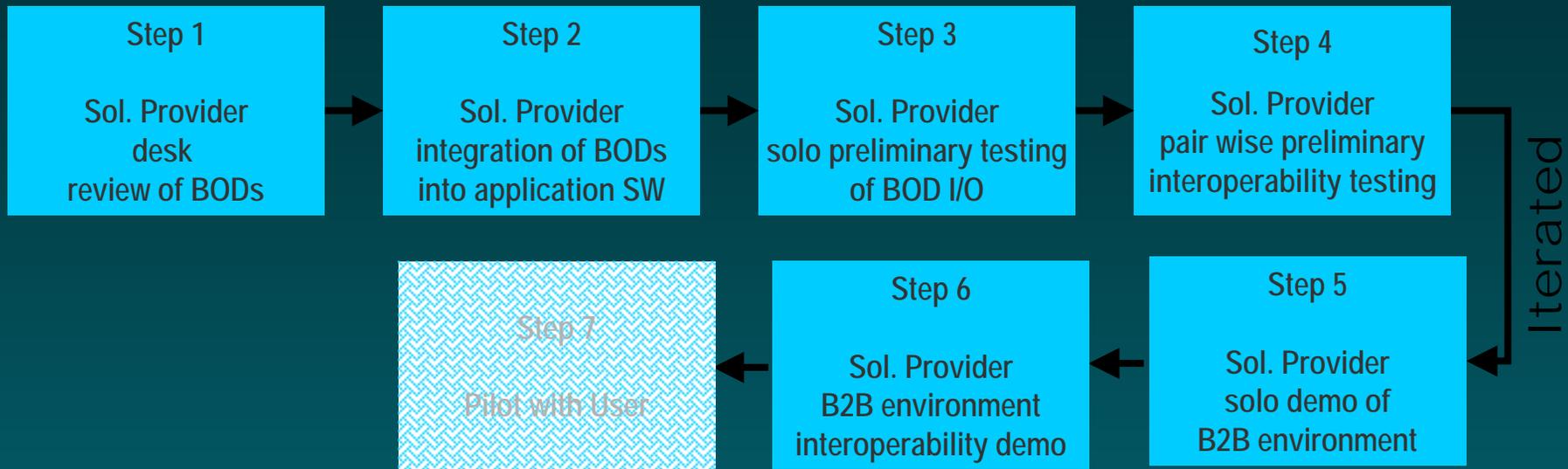
POC Phase Plan



POC Phase Plan (2)



POC Phase Plan (3)

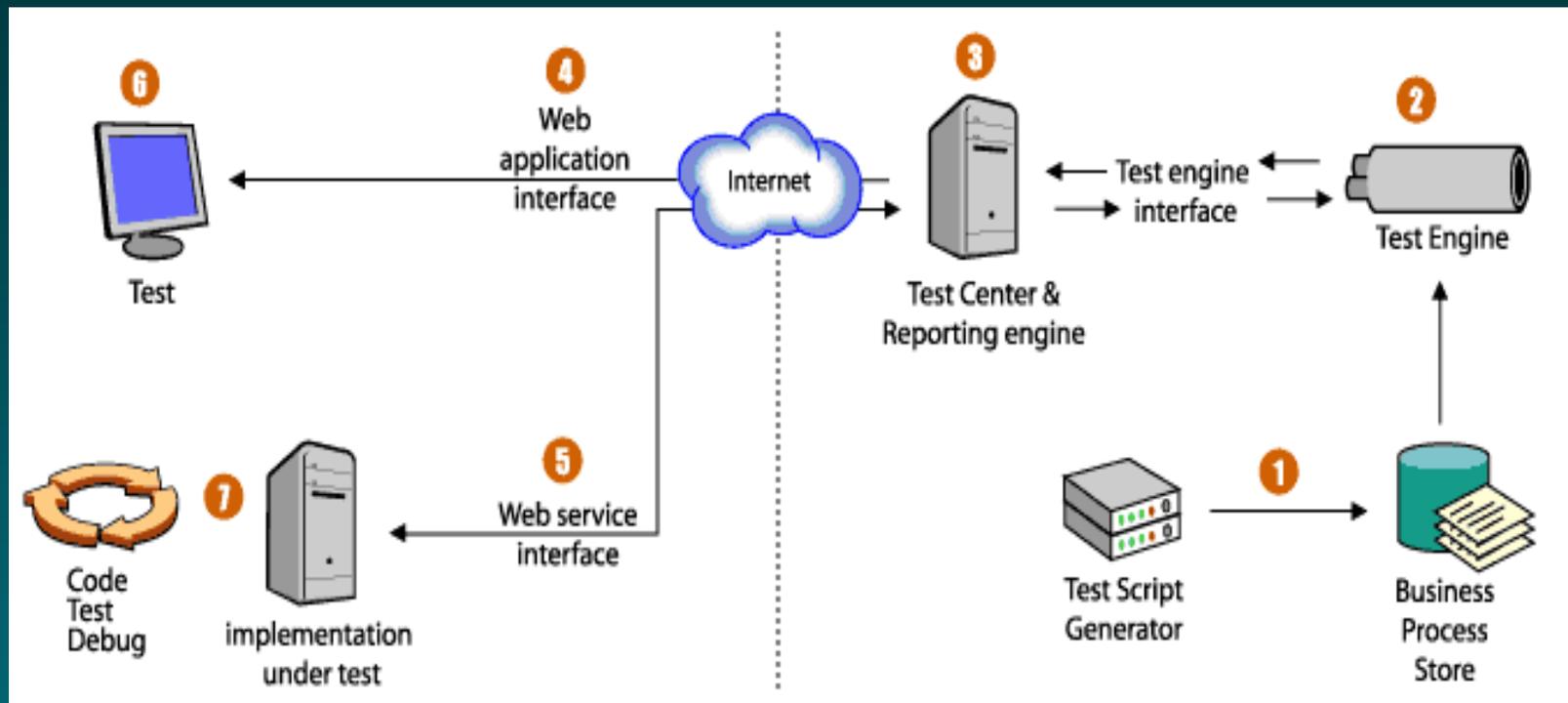


Step 7: Pilot with User
Input: (1) User/Vendor “deal”; (2) User supplied B2B test scenarios with application data
Process: Multiple pair-wise vendor product interoperability demonstrations with provided user test scenarios
Output: Product implementation demonstrated in production environment [SW hardened & deployable]; (2) Implementation guide input

Step 6: Sol. Provider B2B Environment interoperability testing
Input: (1) A2A test cases and (2) B2B test scenarios
Process: Multiple pair-wise vendor product interoperability testing using provided test cases, scenarios
Output: Interoperability test cases completed

Step 5: Sol. Provider solo testing of B2B Environment
Input: (1) BOD conformance tests and (2) B2B infrastructure conformance tests
Process: Vendor product I/O testing using provided test cases; staged and using the B2B testbed
Output: A2A over B2B conformance tested vendor products

Testing Process



Testing Overview

- Testing service is internet-based: can be exercised 24x7, support available 9-5 PST.
- Participants must be involved with AIAG IV&I POC Work Group
- Initially targeting 4-6 participants
- Testing process controlled by participants
 - Initiate tests
 - Retrieve results
- Upon completion participants are ready for interoperability testing rounds with other participants.

Interoperability Testing

- Plans for 2-3 demonstrations of pair-wise interoperability
- NIST/OAG TestBed tools
 - Accordare Reflector
 - Business Process Monitor
 - Constraints Checker
- Testing scheduled through TestBed
 - Test protocol specification
 - Assistance
 - Monitoring
 - Test results reporting

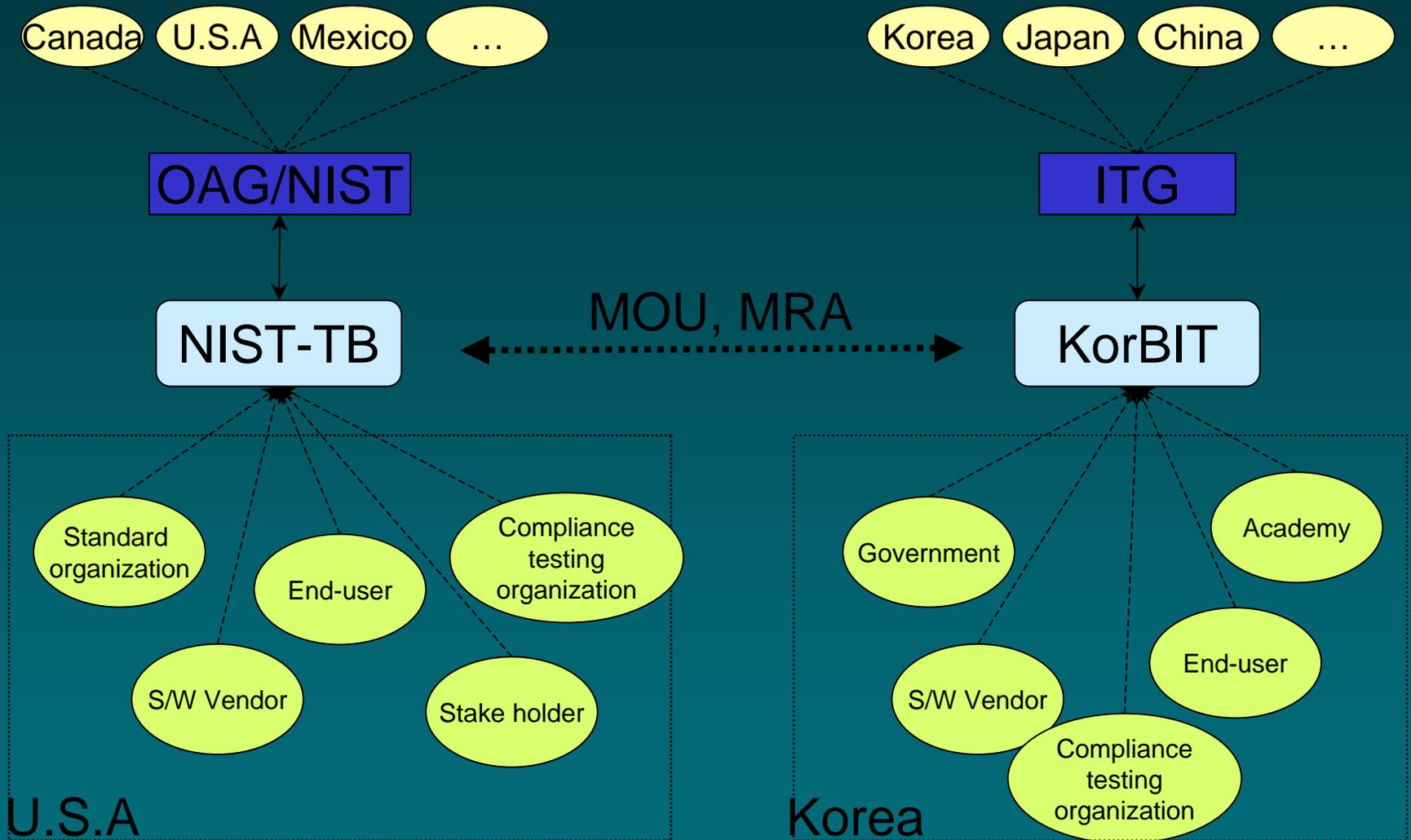
Drake Certivo Test Facility

- Drake Certivo is volunteering services
 - Work with a fixed number of participants
 - Test their conformance to the BOD specifications
 - Free of charge to the participants
- Test Harness hosted by Drake Certivo
- Test scripts built in conjunction with NIST and OAGi
- Details of testing process will be outlined and distributed to Measured Participants

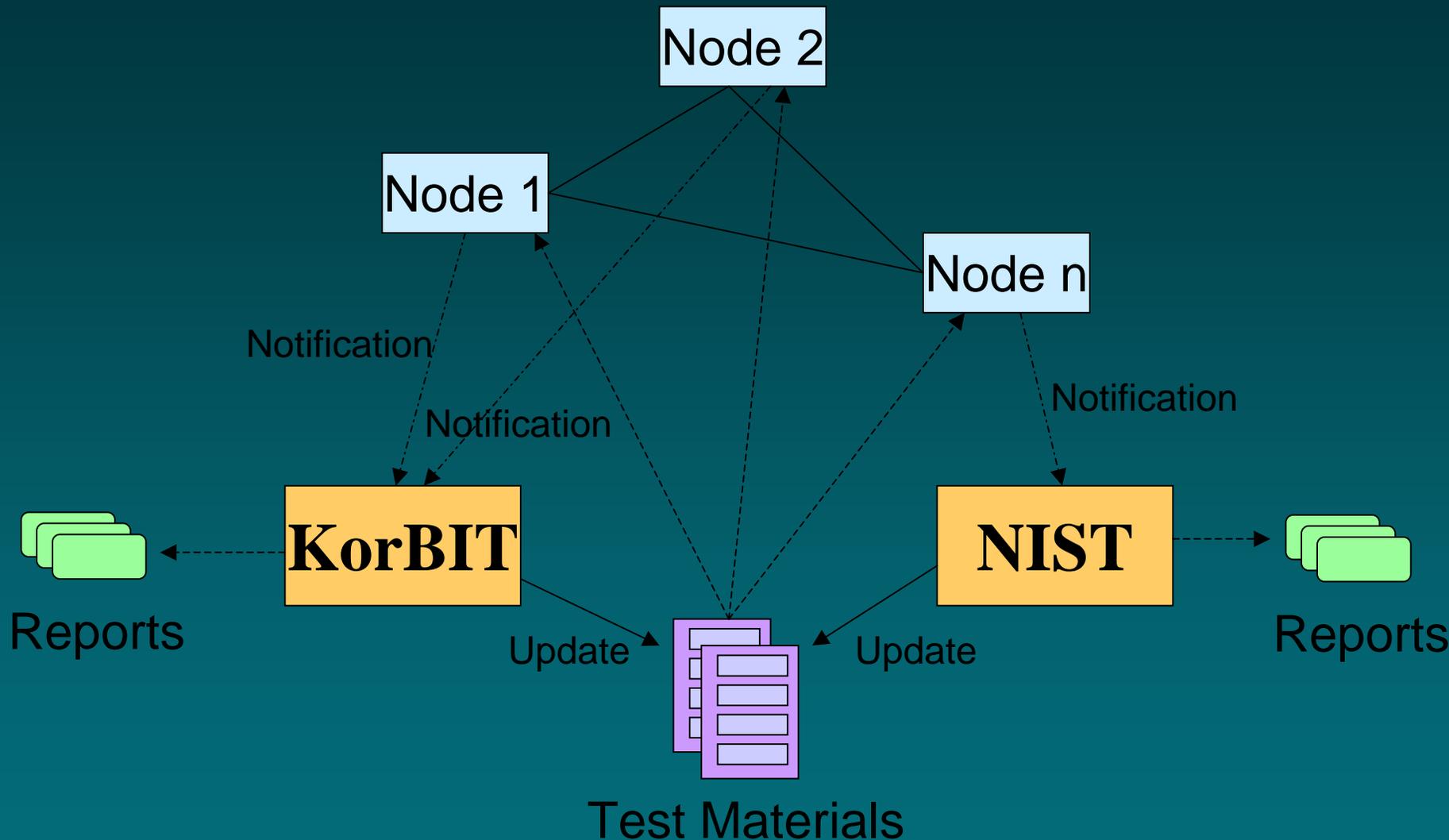
OAG/NIST TestBed - KorBIT Collaboration

- Overall Collaboration Strategy
- ebXML MSH Testing
- BOD Testing
 - Information Mapping Testing
 - Functional Testing
 - Business Logic Testing

KorBIT-NIST Testbed Collaboration Strategy



Overall Testing Framework



ebXML MSH Testing

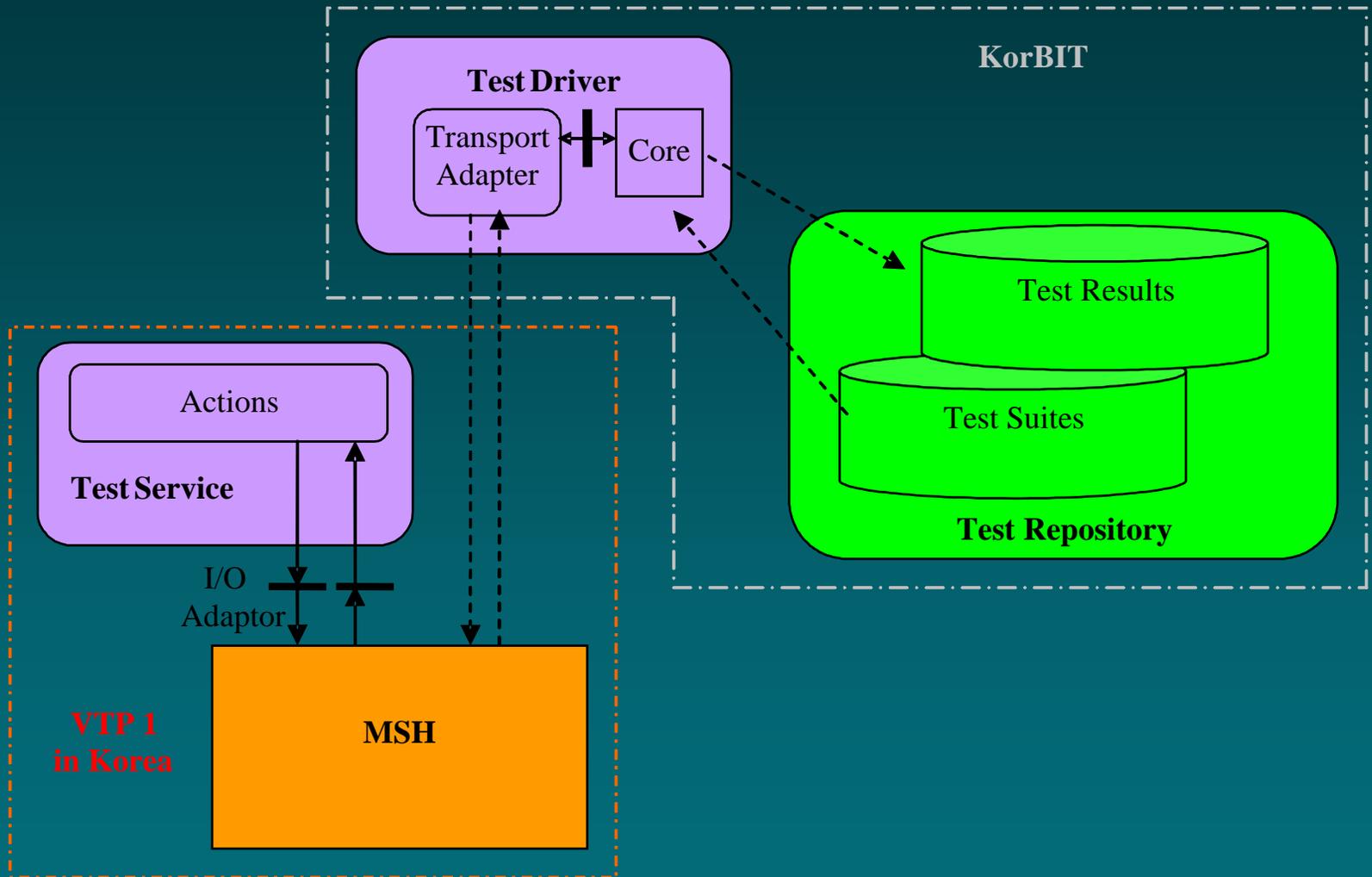
Objectives:

- To identify detailed principles and methodologies for the **Messaging Service Handlers** testing
- To demonstrate the procedures of the message exchange testing
 - Automated conformance testing of Messaging Service Handlers (MSHs)
 - Automated interoperability testing between Messaging Service Handlers (MSHs)

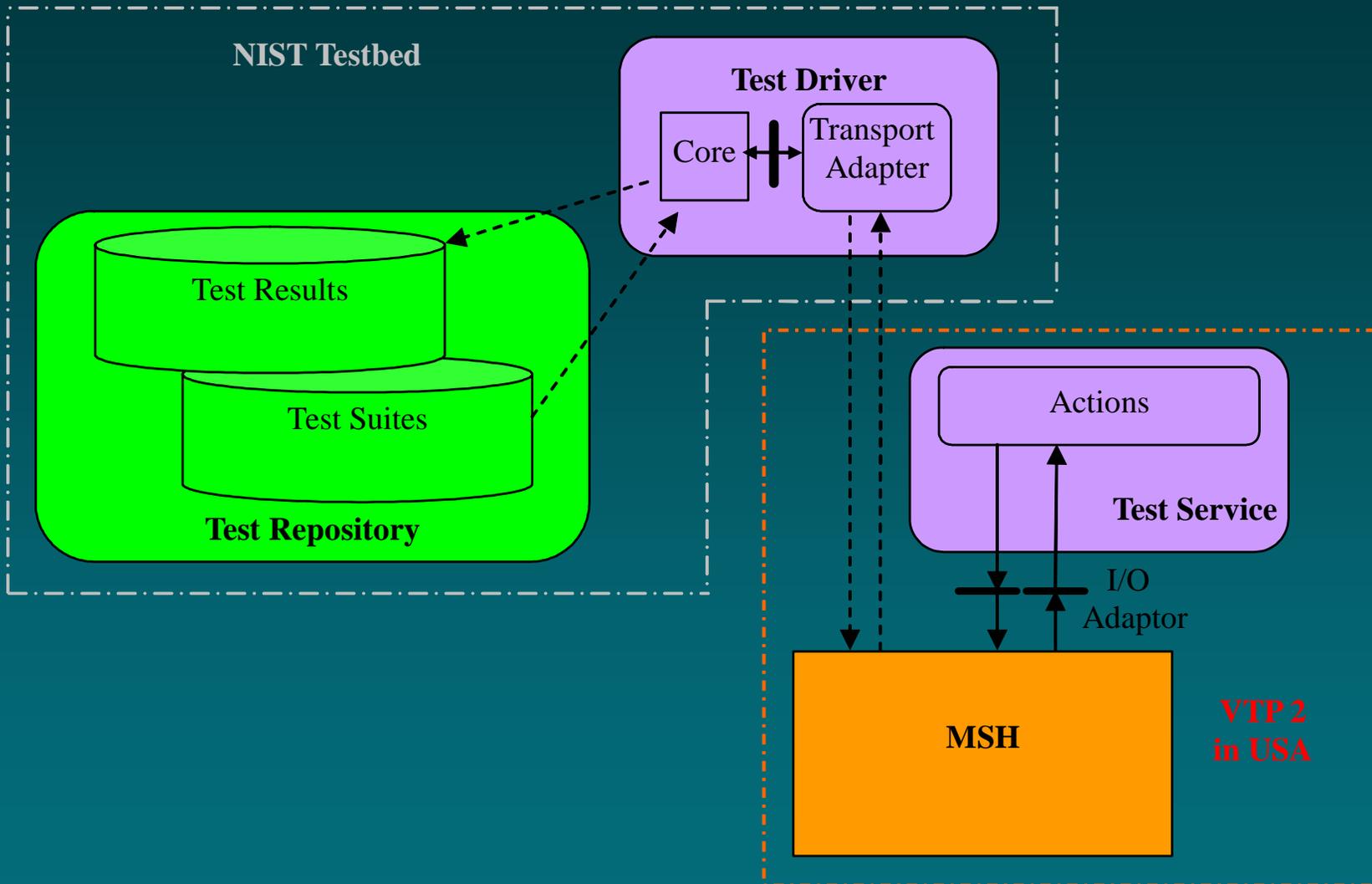
Demonstration Layout

	Conformance Testing (CT)	Interoperability Testing (IT)
KorBIT (#1)	CT1	IT1
NIST Testbed (#2)	CT2	IT2

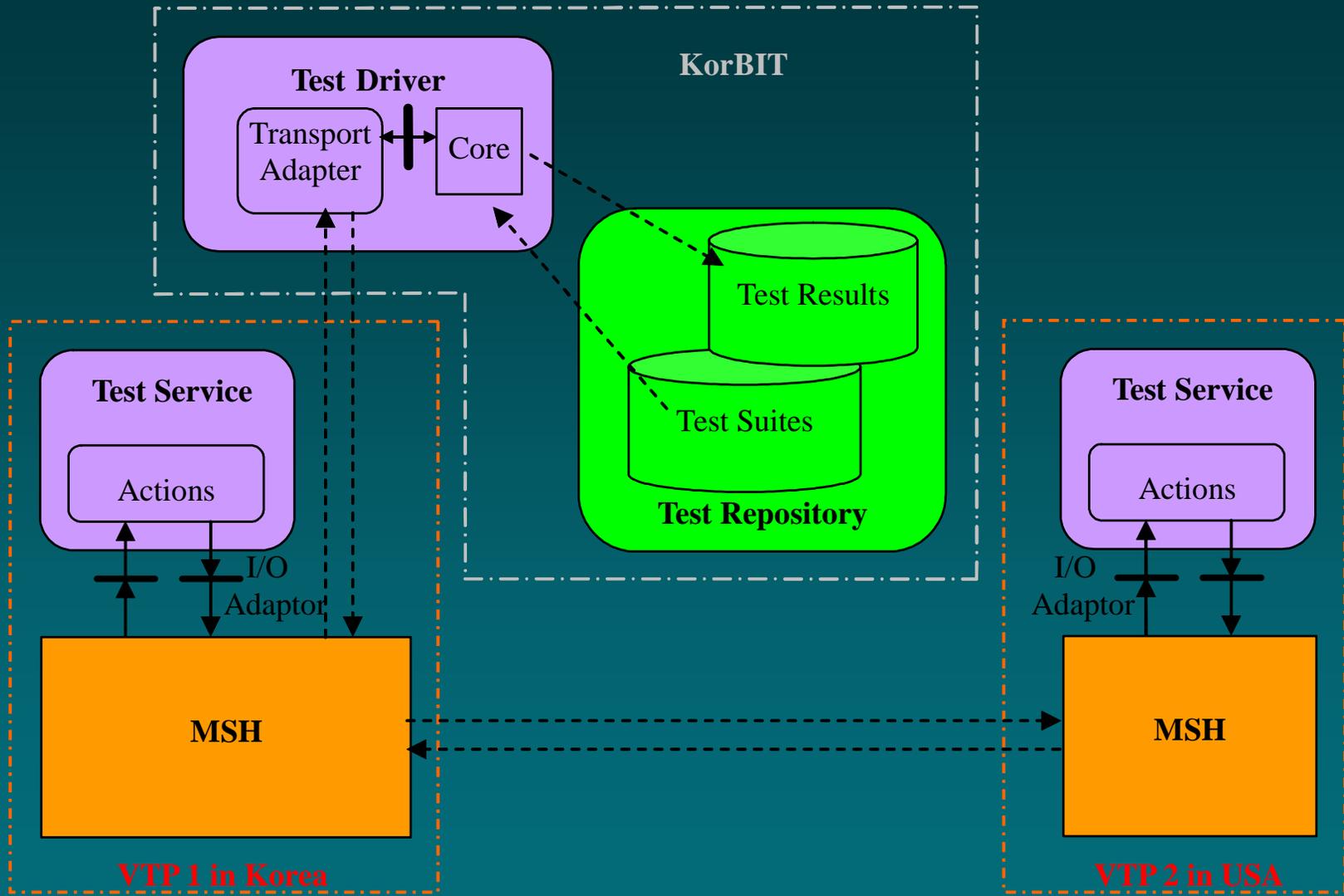
Demonstration Layout for CT1



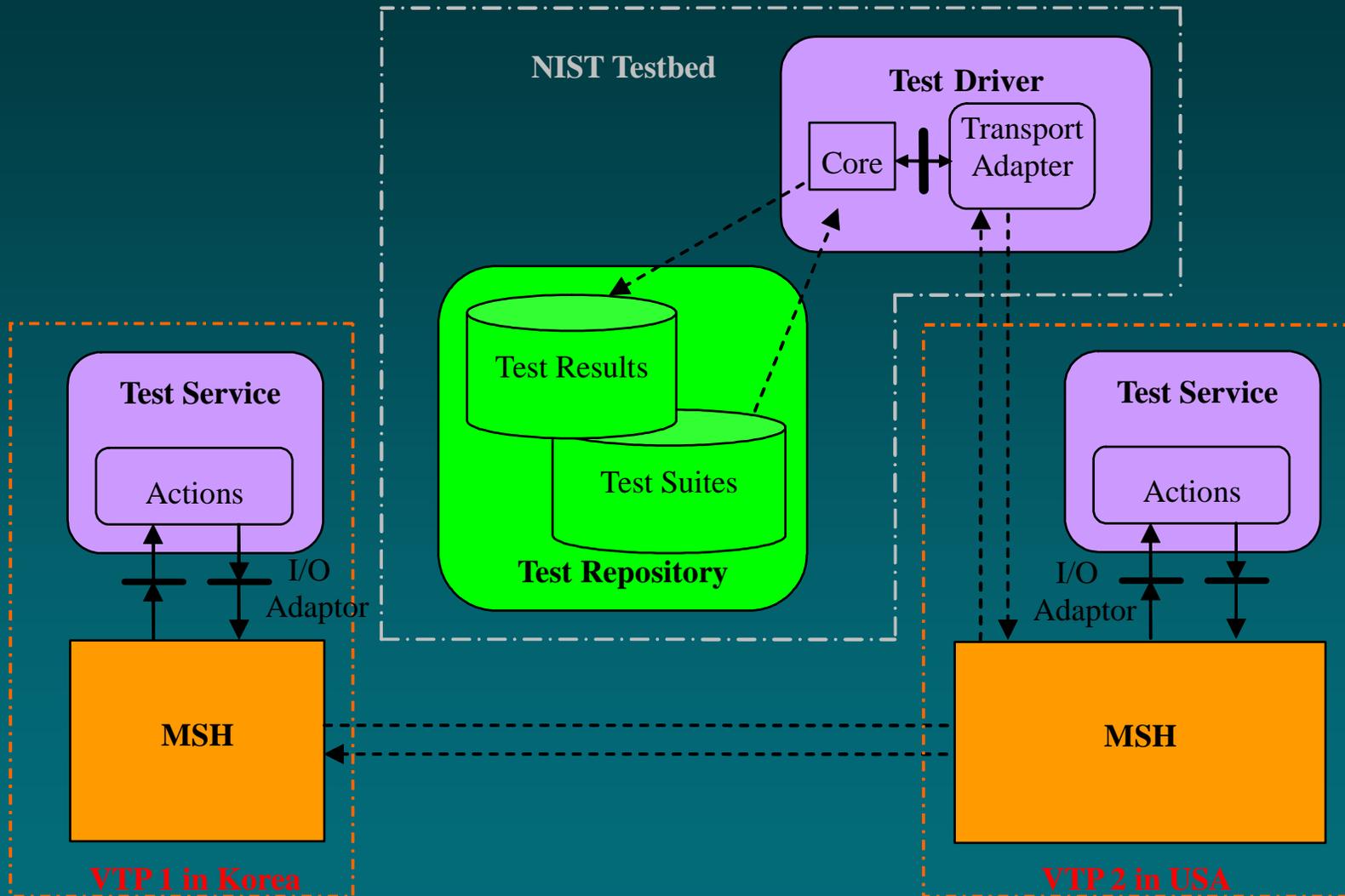
Demonstration Layout for CT2



Demonstration Layout for IT1



Demonstration Layout for IT2



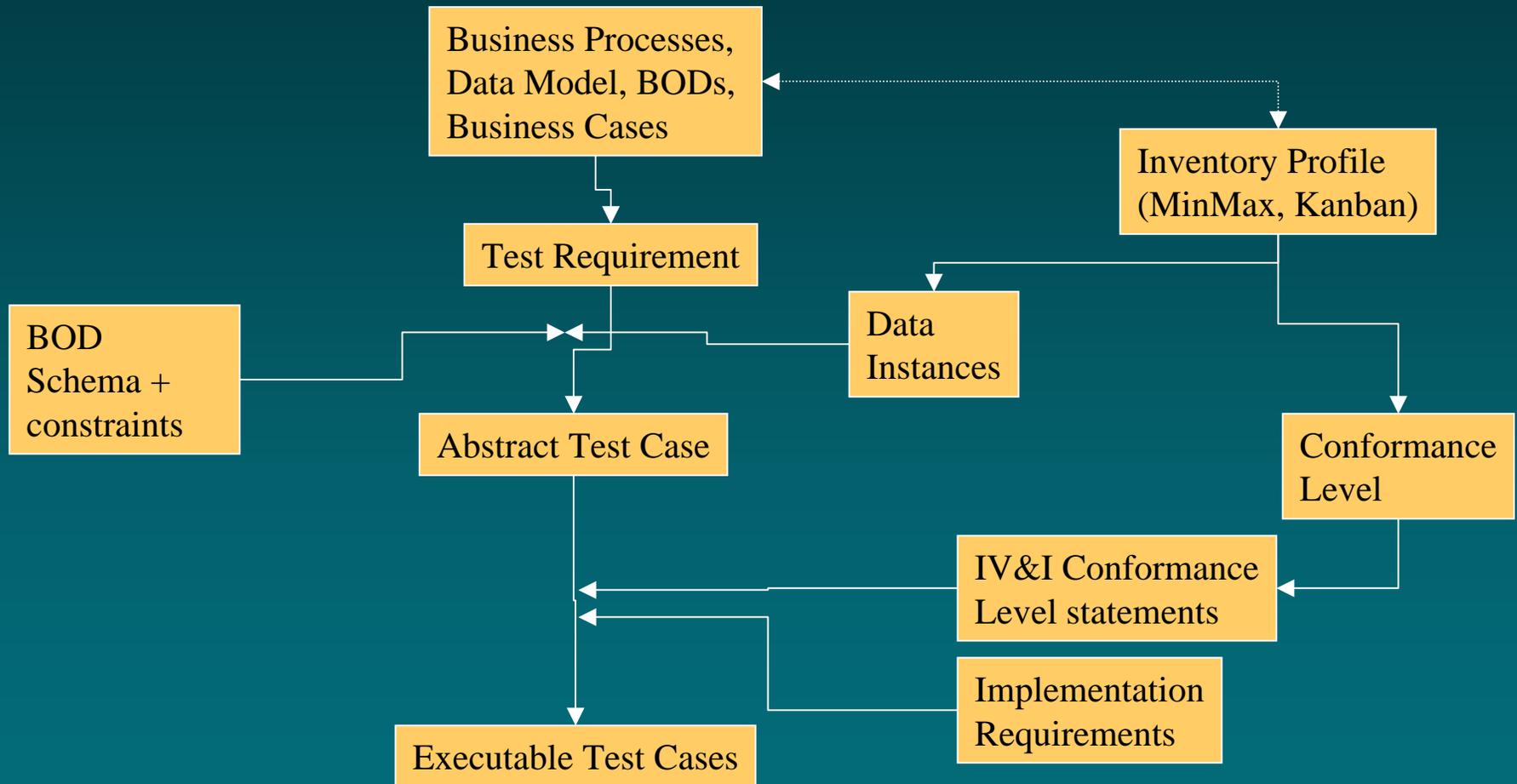
Participants for Joint Demonstration

- Korea
 - Testbed : KorBIT
 - MSH Vendor : KTnet, Posdata, Innodigital
- USA
 - Testbed: NIST Testbed
 - MSH Vendor : ??

BOD Testing

- Information Mapping Testing
- Functional Testing
- Business Logic Testing

Information Mapping Testing Process



Information Mapping Testing: Identifying Test Requirements

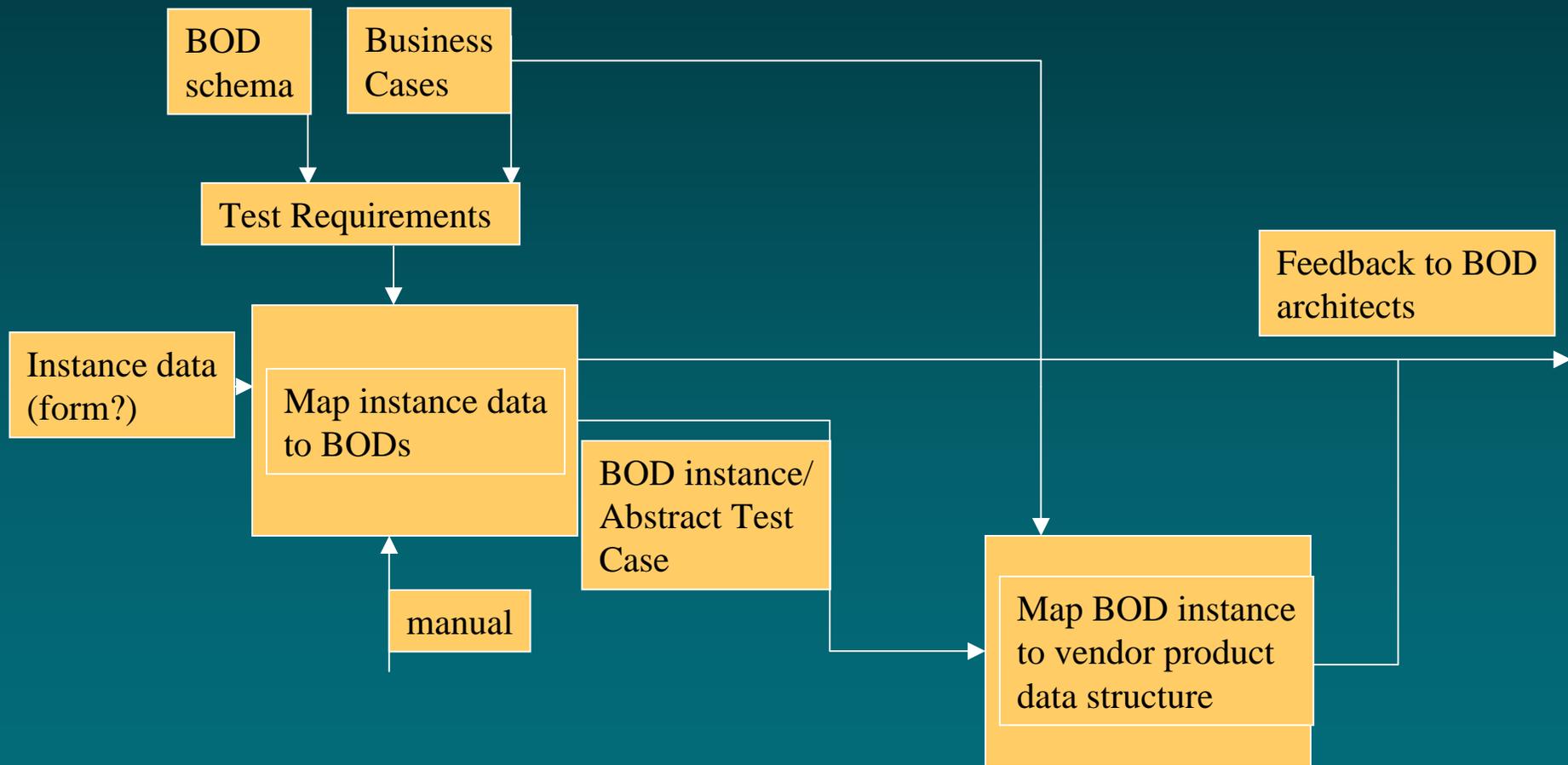
- Data-driven approach -> Test requirements generated from the information model
- Process-driven approach -> Test requirements generated from the business process and transaction models

Information Mapping Testing: Identifying Test Requirements

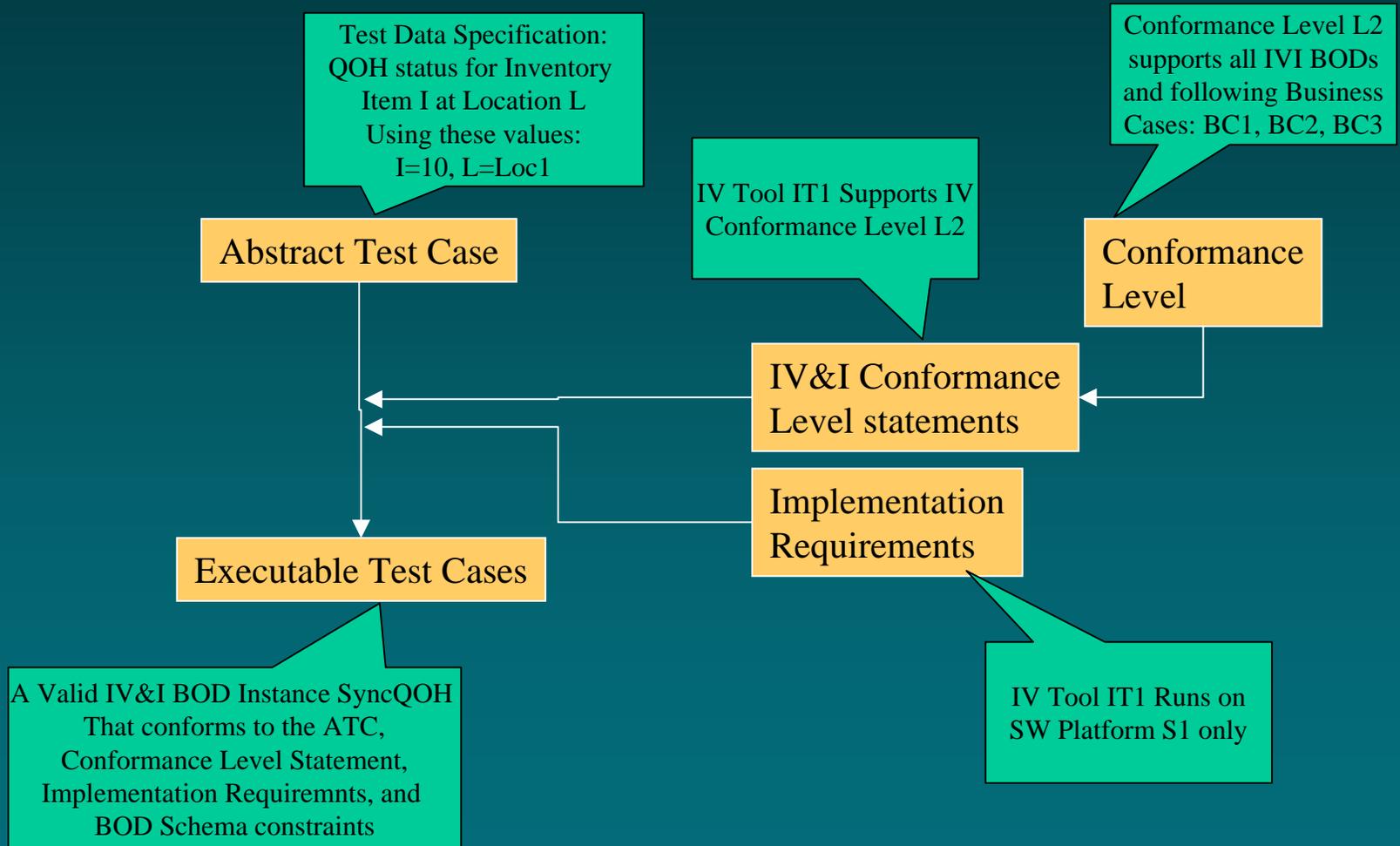
BOD	BOD Action Parameter	Business Case			
		BC1: Inventory Management Per Item	BC2: Inventory Management Per Item and Location	...	BCn
SyncQOH	Add	TR1	TR2	...	TR n
	Delete	TRn+1	TRn+2	...	
	Change				
SyncReceiptAdvice	Add	TRn+m-1	TRn+m	...	
	Delete				
	Change				
SyncASN	Add			...	TRz
	Delete				
	Change				

*TP = Test Purpose

Information Mapping Testing: Obtaining Abstract Test Suites (Phase 1)

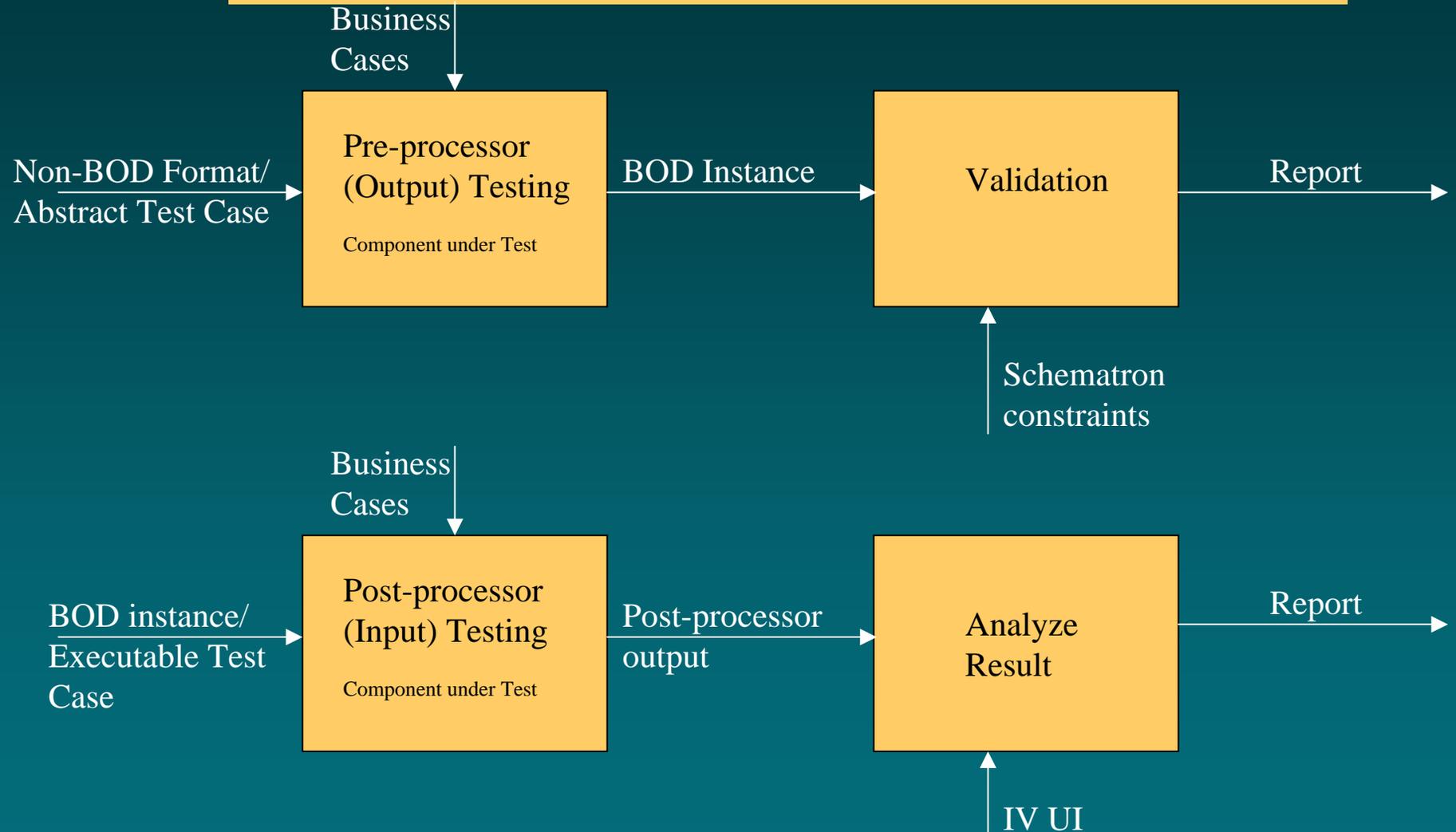


Information Mapping Testing: Obtaining Executable Test Suites



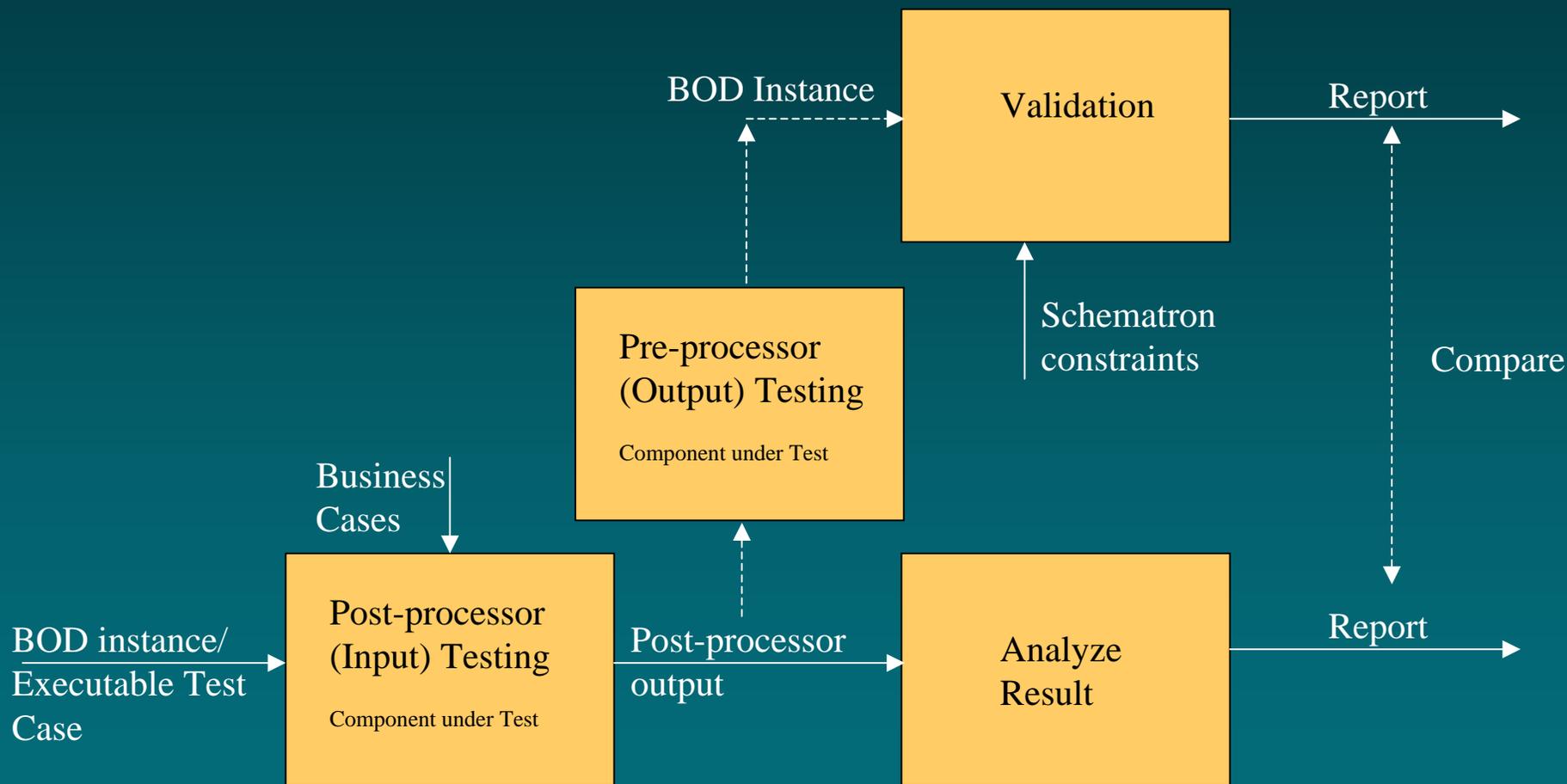
Information Mapping Testing: Conformance Testing

Phase 3: Pre and Post Processor Conformance Testing



Information Mapping Testing: Conformance Testing

Phase 3: Pre and Post Processor Conformance Testing



Functional Test

- Likely automatable through a sequence of message exchanges
- For example, check that Sync with Add really happens, check that when Confirm = onError the ConfirmBOD is only sent when there is an error.

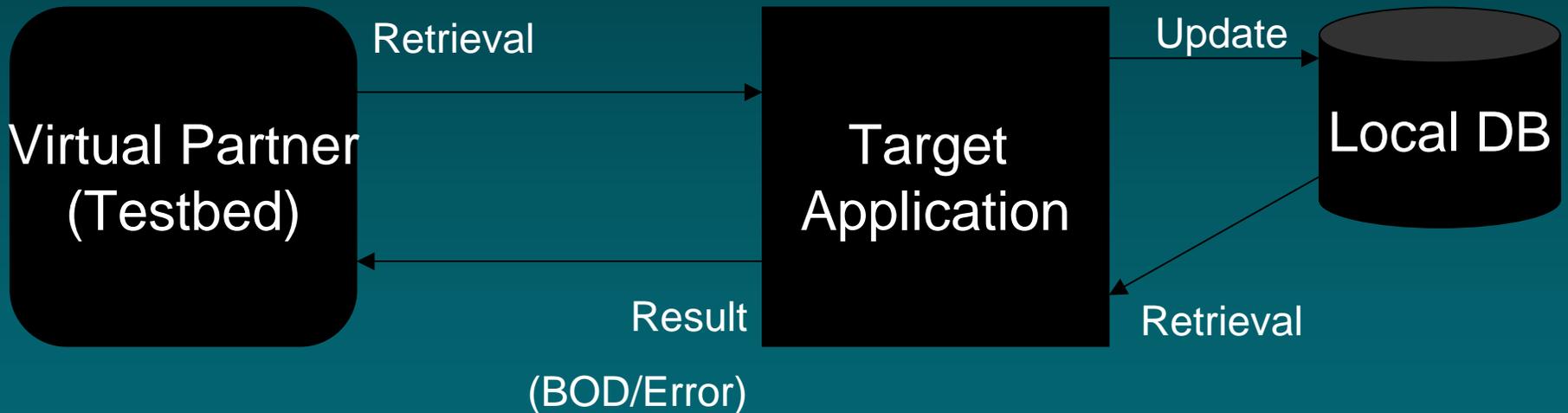
Functional Testing: Configuration

Addition

Deletion

Modification

Retrieval



Black Box Approach

- We will check
 - Whether applications correctly understand the Verbs and behave/perform as specified
 - Whether applications correctly interpret the Nouns and decode/encode them
 - Whether applications detect (fatal) errors from mis-use of BOD name (Verbs and Nouns), invalid BODs, etc and correctly respond (notify or recover) them

- The Verbs and Nouns are following to OAGIS 8.0 definition

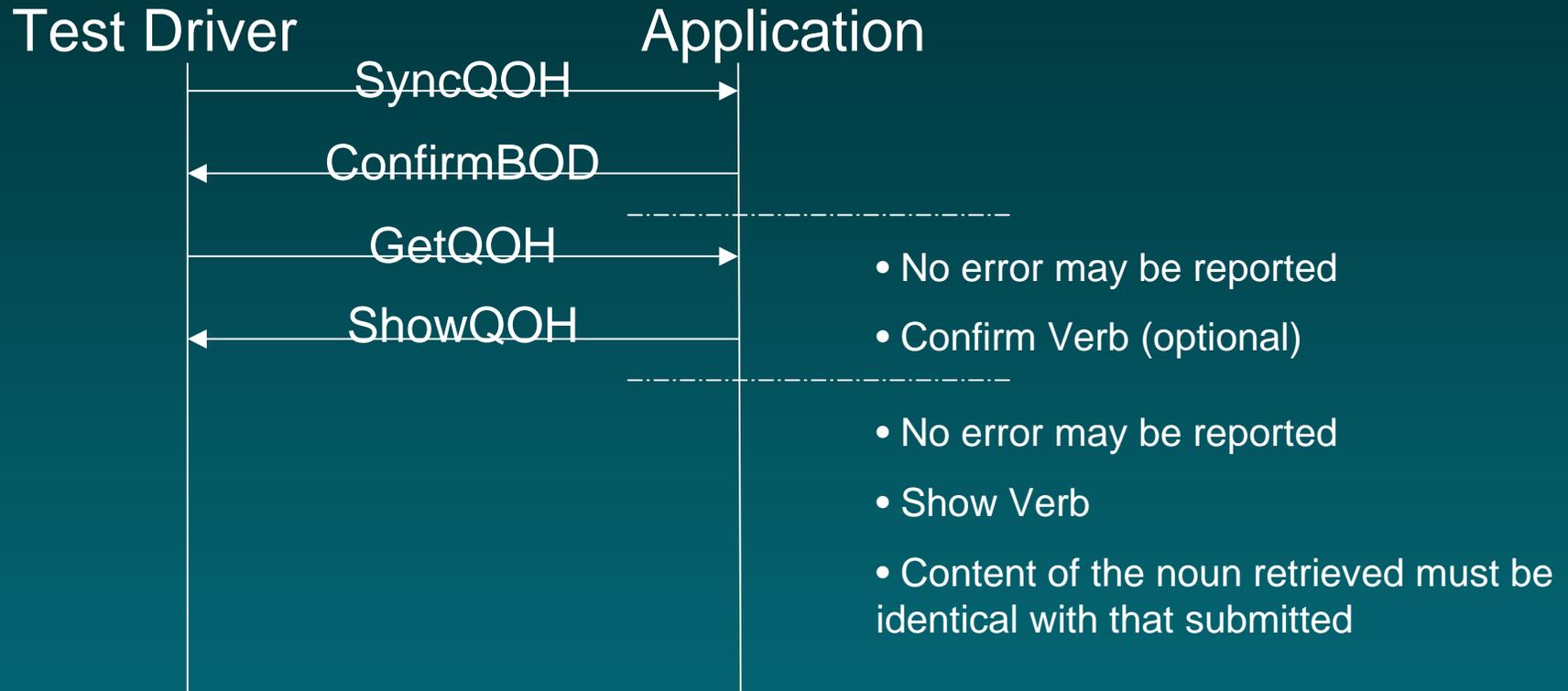
Request and Response

- Addition
 - Errors including technical errors
 - Accept and insert
 - Accept but error
 - Reject
- Deletion
 - Errors including technical errors
 - Accept and remove
 - Accept but error
 - Reject

Assumption

- Applications are capable of constructing DB structures automatically by referencing agreed schemas (or from instances)
- Empty DB, before addition transactions

Test Scenario for Positive Test (Sync & Get)



Business Logic Testing

- Likely automatable through a sequence of message exchanges
- Driven by
 - deployment models
 - use case scenarios
 - business cases and choreographies
- Seems only feasible to test only common business logic among partners

Korean B2B Interoperability Testbed (KorBIT) Update

Prof. Hyunbo Cho, POSTECH