Wurldtech Presents……

WIB Requirements & APC Update

Lessons Learned & Resultant Program Refinements

Presented By:

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Presentation Goals

To present the Audience with

- an update on WT certification pilots, the evolution of the requirements and the lessons learned
- the changes made to achieve a viable program, applicable across a variety of industry verticals
- an overview of the certification process
Revision History & Pilot Update

Contents
• WIB Pilot Summary
• SmartGrid Pilot Summary
• Lessons Learned
WIB Pilot Timeline

**Key milestones since release of version 1**

**March - April**
- Wurldtech to finalize V1 of Achilles Practices Program and start pilot

**May 19th**
- First Pilot feedback and recommendations shared in WIB meeting
  - Vendor X,Y,Z

**June - August**
- Continued Pilot, focus on feasibility and model
  - Vendor X,Y

**August-Sept**
- Additional Pilot participant feedback on MRE & Partitioning
  - Vendor Z

**Sept 24**
- WIB Meeting Tactical Pilot Feedback; Goal to finalize

**March 18**
- WIB Security Requirements V1 available

**May-June**
- Recommendations and Gap analysis results Processed

**August-Sept**
- APC cert
<table>
<thead>
<tr>
<th>Replace industry/vertical specific terms with more generic control system -&gt; automation system, re. IEC standard language (IEC PAS)</th>
<th>Wider industry target, less specific terminology</th>
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<tbody>
<tr>
<td>Added PA’s and BP’s to align with emerging requirements (US NISTIR 7628), SP99</td>
<td>Future proofing; ensure up-to-date coverage of topics for audit.</td>
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<tr>
<td>Added PA’s and BP’s to align with industry leading end user requirements</td>
<td>Acceptance by end-users, ensure link to target audience</td>
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<tr>
<td>Pilot – AMI Vendor ABC: Focus was on new requirement feasibility and associated MRE vetting</td>
<td>Same focus as initial pilot; proven to provide valuable feedback</td>
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Lessons Learned

The route to successful rollout..........

Conceptual, visionary

WIB Security Requirements

Achilles Practices
BP’s, MRE, ...

Pragmatic, Certifiable

Tremendous amount of effort and vision has been put into the WIB requirements, and subsequent pilot, having provided valuable feedback, now gearing up for execution.

Matters to consider with respect to Vendor acceptance

• Vendors have difficulty seeing WIB as a testable/certifiable
• Definitions open for interpretation, discussion,
  ➢ Potential variation in outcome of individual certification projects
• Clarification in project startup labour intensive, low added value
• End-to-end cost prohibitive
  ➢ Negative Business Case; Management support
• Implementation / change management for
  full set of requirements high effort (cost)
Required Program & Content Updates

Contents

• Reorganization of Requirements
• Restructuring of Certification Levels
• Summary of Requirement Changes & Additions
• The End Result
Reorganization of Requirements

• **Drivers:** Clarity, Alignment To Lifecycle Stages, Audit

• Requirements have been partitioned into 35 Process Areas (topic areas) spanning four (as opposed to 3) logical categories

![Diagram with categories: Organization, System Capability, Acceptance Testing & Commissioning, Maintenance & Support]
1. Organization Process Areas

- Category Description: Requirements and Enhancements targeted at organization policies and procedures.
- Conformance Criteria: Proof of policy existence and evidence of its application.

Table 1: Example Organization Requirements
2. System Capability Process Areas

• Category Description: Requirements and Enhancements for security functions to be designed into the Vendor’s system and compensating security functions used to protect Vendor system components and subsystems which do not have built-in security capabilities.

• Conformance Criteria: Proof of system capability and verification of correct functionality.

Table 2: Example System Capability Requirements
3. Acceptance Testing & Commissioning Process Areas

- **Category Description**: Requirements and Enhancements for demonstrating correct implementation of security functions built into the Vendor’s system, and readiness of system turnover for operation by the Principal or his selected Operator.
- **Conformance Criteria**: Verification of security functionality and existence of operational polices.

Table 3: Example Acceptance Testing & Commissioning Requirements

- Category Description: Requirements and Enhancements for demonstrating correct maintenance of security functions built into the Vendor’s system, and timely support in response to security related events.

- Conformance Criteria: Existence of policy and its application and verification of functionality.

Table 4: Example Maintenance & Support Requirements
Restructuring Of Certification Levels

• **Driver: Vendor Capability, Conformance Cost, Market Pull**
• Simplify model
  • Integrate maturity into requirement enhancements
  • Consider implementation cost and associated risk reduction
  • Discriminate Bronze, Silver and Gold certification by particular requirements and how well the requirement is satisfied.
• Bronze certification: awarded for successful completion of all applicable requirements on the basis that security policies and practices exist which can be used to build security into the Vendor’s system.
• Silver certification: awarded for successful completion of all applicable requirements and selected Enhancements that have been implemented. The primary consideration for selection is cost and complexity to implement the requirement.
• Gold certification: awarded for successful completion of all applicable requirements and Enhancements that have been implemented and verified through direct measurement or analysis.
Restructuring of Certification Levels

WIB Vendor requirements are midpoint of Certification: **Silver**

- optional step-up – **Gold** or step-down – **Bronze**

**Gold**: additional industry specific requirements

**Bronze**: an entry level certification for smaller vendors, eliminating any organizational cost threshold.
Summary of Requirement Changes & Additions

- **Driver: Vendor feedback, Cross Sector Applicability**
- Replaced Industry and vertical specific terms with terms more generic and towards IEC standard language
  - E.G. “control system” -> “automation” system, towards IEC standard language (IEC PAS)
- Added “Protect Data” Process Area and requirements to align with emerging standards (SP99) and regulations (US NISTIR 7628)
Summary of Requirement Changes & Additions

- Keep the intent of the original requirements
- Increased clarity
- Replace conceptual with pragmatic requirements
- Enabled testability
- Align for IEC structural requirements
Certification Process
- Predicted Average: 2-3 month from first contact to certificate issuance
- High dependency on Vendor preparedness
Vision & Positioning Statement For Wurldtech Labs

Wurldtech Labs
The Global Center Of Excellence For Securing Digital Energy Infrastructure Into The 21st Century

Perry A. Pederson, VP Wurldtech Labs
Manager Of Centre Of Excellence Initiative

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