EPCglobal Driving Adoption Department of Defense Update

7 April 2004

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Agenda

- Milestones Since December
- EPCglobal Network Workplan
- EPCglobal Standards Development Process
- Become Actively Involved in the Standards Development Process

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EPCglobal Milestones

- Issued IP Policy 12/15/03 – input from 60+ companies
- Completed Standards Development Process 1/29/04 – input from 90+ companies
- Reinstated Hardware and Software Action Groups 2/5-6/04 – 160+ participants
- EPCglobal Summit 03/16-17/04 – 370+ participants, 184 companies
- EPCglobal Community grows to over 200 companies

EPCglobal Network Workplan
Objectives

- To outline the required standards and network components/services to support 2004-2005 pilots and implementations
- Align EPCglobal community around a shared vision of EPCglobal Network evolution with focused initiatives for the action groups
- Create detailed development and resource plan to ensure elements are delivered
- Capture and share key learnings throughout the development and pilot process

EPCglobal Network Workplan

	ELEMENT	OBJECTIVE
1	**EPCglobal Numbering System**	Provide Tag Data Standards for EAN.UCC System Keys
2	**EPC Tags & Readers**	Standards for Capturing Physical Data – Hardware and Software
3	**Conformance & Performance Testing**	Test specifications to support EPCglobal standards
4	**EPCglobal Logo Identification**	GSMP Application Interface standard for the location and use of EPC logo on product
5	**EPCglobal Training & Implementation Support**	Develop and deliver training and implementation learnings based on the 2004 pilot implementations
6	**EPCglobal Data Exchange**	Definition of business processes that use EPC related data
7	**EPCglobal Network Framework**	Draft of EPCglobal network design
8	**EPCglobal Data Metamodel**	Define structure of EPC data within the EPCglobal network.
`9	**EPCglobal Middleware**	Specifications for Application Programming Interfaces
10	**EPCglobal ONS**	Deployment of root ONS for EPC Manager Numbers & server locations
11	**EPCglobal Industry Enablers**	Provide direction to eliminate barriers to implementation

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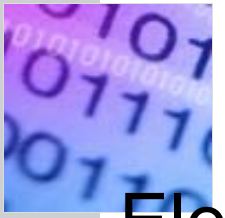

Focus - 2004

Element:

EPCglobal Manager Numbering System –

- **Provide Tag Data Standards for EAN.UCC System Keys**
- **Develop supporting implementation guidelines for obtaining and managing EPC manager numbers.**

EPC Tags & Readers - **Standards for Capturing Physical Data – Hardware - Class 0 & Class 1 v1 certification requirements**
UHF Gen 2 air interface protocol
Software - Reader (wireline) protocol and Reader management

EPCglobal Middleware – **Specifications for Application Programming Interfaces**

EPCglobal ONS (Object Naming Service)

Deployment of Root ONS for EPC Manager Numbers & Server Locations

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Focus - 2004

Element:

EPCglobal Data Exchange – **Definition of business processes that use EPC related data**

EPCglobal Network Design - **Initial framework definition for the EPCglobal network**

EPCglobal Data Metamodel - **Initial framework definition for the structure of EPC data within the network**

- Static (identification & description of product in motion)
- Instance (serialized information)
- History (trip instance takes throughout the supply chain)
- Associated (Dynamic data related to additional documents)

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Focus - 2004

Element:

Conformance and Performance Testing –

- **Required to ensure that EPC software and hardware will perform effectively in production environments developed from the specifications and requirements delivered from the EPCglobal action groups**

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Objective

To build a complete and sustainable hardware certification program to serve the EPCglobal community.

A secondary goal of the program is to use various test results over time to create usage and application guidelines that minimize the need for additional testing.

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Industry Request – Vendor Testing

- Conformance Testing
  - Testing done to judge hardware products (tags and readers) conformance to a particular standard. This is generally a pass/fail type test, providing guidance if a product fails to comply
- Simulated Performance Testing
  - Testing of tags and readers with respect to the different scenarios and environments (mounting material, position (distance and orientation), population, aggregations, speed, volume, rate and RF environment).

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Industry Request – User Testing

- User case and pallet end user performance testing
  - Testing tagged cases and pallets for actual performance
- Eventual certification of end users
  - Enable end users to test tagged cases and pallets themselves

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Key Constructs

- EPCglobal owns the Certification Program criteria
- Program Implementation will be through the Member Organization network on a national/regional basis
- Testing Centers will only be launched through EPCglobal
- First Lab will be located in North America

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Key Constructs (cont'd)

- Certification methodology will be input into ISO/IEC Standards 18046, 18047-3, 18047-6
- Certification Program Services delivered by one Supplier with potential for other Suppliers to meet geographic testing requirements
- Over abundance of certification agents will pose management challenges
- Program needs to ensure sufficient market to sustain certification agent
- Program needs to be affordable

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Next Steps

- Review with BOG company experts
- Review with Member Organization
- Summarize review process
- Final BOG recommendation for approval

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A look ahead at 2005…….

- *Enhanced Unit tagging specifications*
  - *a) High value, high theft*
  - *b) Cold chain*
  - *c) Department of Defense*
  - *d) Public Sector*
  - *e) Health Care*
- *Track and Trace Use Cases:*
  - *a) Exception Processing*
  - *b) Shipment tracking*
  - *c) Shipment tracing*
  - *d) Reconciliation*
- *Management of Tagged Units*
- *Implementation Guidelines*

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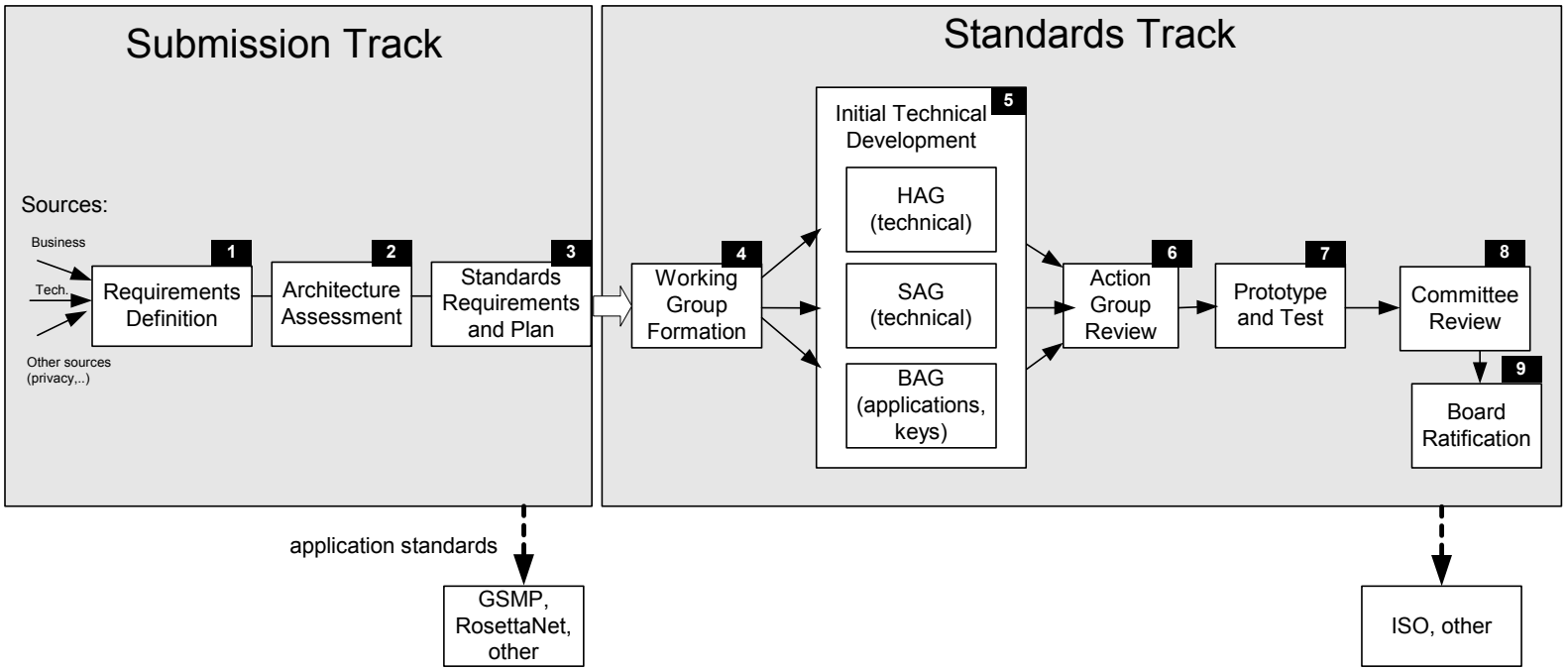
EPCglobal Standards Development Process

EPCglobal Standards Development Process



Business and Technical Work Group Activities

Business Working Groups

Tag Data Standards
Data Exchange
Retail Supply Chain
Cert. + Compliance
Pilot + Implementation
European Adoption Program

Technical Working Groups

Class 0
Class 1
UHF Generation 2

Reader Management
Reader Protocol Specification
Filtering & Collections
ONS

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Commitments Needed

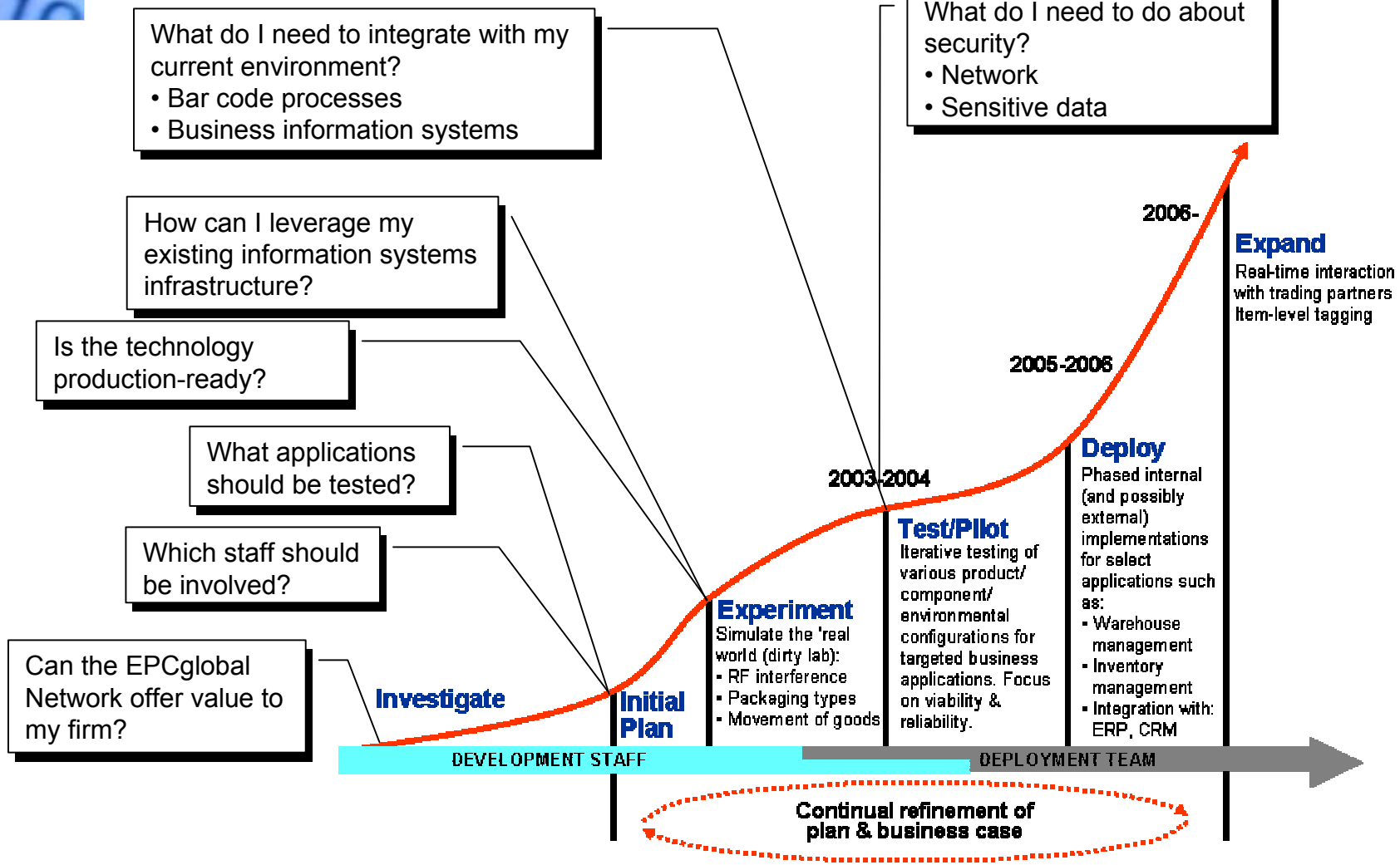
- Commitment for DoD resource
- DoD Suppliers involved in the Standards Development Process
- Commitment from suppliers to implement

Getting Started

- Senior Level Management Commitment
- Subscribe to EPCglobal
  - Attend training courses
  - Benefit from educational materials
  - Exchange knowledge with other Subscribers
- Initiate Integrated Process Teams
  - Engage with trading partners
  - Certification and compliance testing
  - Integration with today's bar code system
- Participate in EPCglobal Action Groups
  - Collaborate with other industry leaders
  - Engage in the community and learn from the best
  - Global standards creation with multi-industry involvement
- Adopt and adapt!

Implementation Considerations

(partial list)



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The Time to Act is Now!

- Influence the Future of the Supply-Chain
- Join EPCglobal
- Become an active participant in the Business and Technical Action communities and Shape Outcomes
- Commit to pilots and Be Prepared for Change
- Drive adoption