# EPCglobal Overview
# DoD Summit for Industry

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EPCglobal U.S.

# Problem with Competing Standards


- Three competing standards in U.S.
- Led by CDMA
- Non-Interoperable systems
- "Out-of-Network" charges for consumers

- GSM 90% of world outside of North America
- Higher mobile phone penetration and R&D development
- Faster adoption of mobile data transfer and text messaging

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# Context for EPCglobal

## *Supporting Industry Transformation*

- Significant industry transformations require leadership
  - EDI, barcodes, product classification, data synchronization, etc
- Current mandates for the use of EPC indicate long-term commitment by global leaders
  - Wal*Mart, DoD, Target, Best Buy, Albertson's, etc.
- Current industry movements for the use of RFID demonstrate its applicability to solve critical regulatory issues
  - Healthcare & Life Science, Automotive, Transportation & Logistics
- Industry priorities and needs must be addressed to meet timelines and avoid excessive costs
  - "By industry, for industry" is crucial success factor
  - Avoiding fragmented approaches is a must
  - Must support "supply chain convergence"
- Successful path forward is a global approach
  - Leverage reach of committed companies and supply chains
  - Directly engage other industries, associations, standards bodies, and governments

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# EPCglobal Overview

## *Organizational Overview*

| | | |
|---|---|---|
| **Established** | Nov-2003 (joint venture of the Uniform Code Council and EAN International) | |
| **Mandate** | Leverage global reach and proven track record for commercialization by its parent organizations | |
| **Global Support Network** | 103 EPCglobal Member Organizations | |
| **Standards Work** | 1,400+ global participants | |
| **Subscribers** | 400+ global subscribers | |
| **Board Member Firms** | Cisco<br>Gillette<br>Johnson & Johnson<br>Procter & Gamble<br>Lockheed Martin | DHL<br>Hewlett-Packard<br>Metro Group<br>Wal*Mart<br>US DOD |

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# EPCglobal Overview

## *Role in Supporting RFID Adoption*

- Global Standards Development, EPCglobal Network, and Governance
  - Tag/Data Standards and Registry Services for Global Product Identification Keys
  - IP-Protected Technical Standards Development
  - Design and Administration of the EPCglobal Network
  - Consumer Awareness, Public Policy Advocacy, and Regulatory Liaison
  - Foster Global Trading Community Adoption and Education
- Deployment of Standards, Implementations and Support Services
  - Market Development
  - Training and Education
  - Localized Member Implementation Support
- Manage integration and coexistence of RFID with successful bar code implementations of today

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## *Community Vision*

- Technical Standards
  - Purpose: Specifications for physical RFID equipment
  - Examples: Frequency; Chip Performance/Capability; Tag/Data
  - Built to work with, not compete with, application standards
  - Standards will graduate to ISO once complete
- EPCglobal Manager Number Registration
  - Purpose: Global registry for product classification systems
  - Examples: GTIN, SSCC, GRAI, GLN, NDC, VIN, CAGE, DODAAC etc.
  - Preservation of existing investments in enterprise technology and trading community collaboration efforts
- EPCglobal Network
  - Purpose: Network to create visibility for EPC-tagged items
  - Examples: Track and trace; anti-counterfeit/division; pedigree; product recall and expiration
  - Tags are “license plates”; most information held in the network

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## *Additional Subscriber Services*

- Introductory Tools (“I don’t know what I don’t know”)
  - “Getting Started” guides
- Assessment/Planning Tools (“I need to build a business case”)
  - Financial Planning
  - Implementation Planning and Optimization
- Implementation Tools (“I need help implementing”)
  - Vendor Profiles
  - Hardware Certification - Gen 2 Conformance and Interoperability
  - Software Certification -Conformance and Interoperability
  - Applied Tag Performance Lab Accreditation
  - Consultant Training and Certification
- Knowledge Base
  - Best Practices
  - Key Findings and Learnings
- Support for Subscriber Trading Community Initiatives

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## *Working With Industry*

- Industry/subscriber commitment determines priorities
- All inter/intra industry perspectives, geographies and supply chain participants included
- Linkages to support compatibility with the work of other standards bodies, associations, and consortium
- Currently engaged Industries
  - Operational Action Groups
    - Fast Moving Consumer Goods
    - Footwear & Apparel
    - Healthcare and Life Sciences
  - Q2 Action Groups Forming
    - Logistics and Transportation
    - Food & Beverage
  - Q3 Action Groups Forming
    - Aerospace and Defense
  - Q4 Action Groups Forming
    - Industrial and Automotive

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# UHF Gen 2

## *Overview of the Standard*

- Convergence to One Global, Interoperable Standard
  - Simple purchase decisions for implementers
  - Focused equipment manufacturing efforts
- Increase Speed and Ease of Global Adoption
  - Enhanced compatibility with regional RFID regulations
  - On-the-fly adaptive techniques for readers
- Increased Functionality and Performance
  - Defined by cross-industry requirements of the market
  - Better read and write rate performance
- Increased Production and Competition
  - Increased inventory available for implementations
  - Reduced costs for tags and readers
- Broad Community Support
  - Consensus from 60+ technology providers

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# UHF Gen 2
## *Timeline*

- Q4 2004
  - EPCglobal UHF Generation 2 air interface protocol ratified
- Q1 2005
  - EPCglobal AFI Committee submits recommendation on Numbering Management
  - Submission of Gen 2 Standard to ISO for certification as a global RFID standard
- Q2-Q3 2005
  - Gen 2 Compliance Testing & Certification
  - Gen 2 Interoperability

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## *2005 Roadmap*

- Technical Standards
  - 13.56 MHz
  - 433 MHz
  - Class 3 and 4 tags
  - Sensor capabilities
  - Extended memory capabilities (256 bits plus)
- EPCglobal Manager Numbers
  - Enhanced support for 256 bit tag/data standards
  - Incorporation of Industrial/Automotive and Aerospace & Defense Key Systems
- EPCglobal Network
  - Enhanced Security and Authentication
  - Discovery Services
  - Interoperability with GDSN

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# Mission of EPCglobal

- Combine technical research and user experiences to drive collaborative development and rapid deployment of EPC technical standards
- Partner with all industries to build communities that drive mass adoption of RFID/EPC technologies
- Reduce risk and system integration costs for implementing firms

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