

Contributing to EPCglobal Action and Working Groups

EPCglobal Action Groups are designed to bring together global users from a variety of industries to define business and technical requirements for the EPCglobal Network. Participation is a benefit of subscription and is open to Subscribers from all EPCglobal Member Organizations (MOs). The business and technical Action Groups help to develop the foundational building blocks of the EPCglobal Network, working toward the creation of global, cross-industry standards and commercial adoption.

Subscribing companies to EPCglobal US are encouraged to provide company representatives to participate in these groups. The following is a list of Action Groups that have been established:

- **Business Action Groups (BAGs)** are comprised of representatives from companies that currently use or plan to utilize EPCglobal Network technology. These groups aim to establish business requirements and use cases across multiple industries to facilitate supply chain efficiency. There are currently three Business Action Groups: Fast Moving Consumer Goods, Healthcare & Life Sciences, and Transportation and Logistics Services.
- **Hardware Action Group (HAG)** defines the interfaces between hardware components (primarily RFID tags and readers) in the EPCglobal Network.
- **Software Action Group (SAG)** defines software interface and other standards both within the EPCglobal Network elements and between these and other elements of enterprise systems distributed over a number of enterprises and geographies.

This section will provide a detailed listing of EPCglobal Action and Working Groups along with complete descriptions of their role in the EPCglobal Standards Development Process and the skill set recommended to actively participate. Companies with a desire to participate in any Action Group or Working Group are required to sign the EPCglobal Intellectual Property (IP) Policy located in this Kit and on the website at www.EPCglobalinc.org. For more information on how to participate in an Action or Working Group, read this section of the Kit or contact the EPCglobal Community Manager via email at KRhoades@EPCglobalUS.org

Business Action Groups (BAGs)

Healthcare Life Sciences Business Action Group (HLS BAG)

The mission of the HLS BAG is to identify Healthcare and Life Science end-user business requirements to the EPCglobal standards development process and promote the adoption and implementation of the EPC and the components of the EPCglobal Network. The HLS BAG will accomplish its mission through the following actions:

- Chartering Working Groups to explore application areas and initiate, refine, and complete use cases for forwarding to the technical Action Groups.
- Ratifying the technical specifications of the technical Action Groups as meeting the requirements of user Business Action Group requirements.
- Providing a forum for the interaction of End-Users and Solution Providers to collaborate on the definition of user requirements and the understanding of solutions to those requirements.
- Providing a forum to share learnings from pilots and implementations of the EPCglobal Network.
- Acting as the primary representative body of users of the EPCglobal Network and coordinating the activities of the BAG with those of other groups that may contribute to the work of driving adoption of the EPCglobal Network.
- Representing a global scope of interest in the EPCglobal Network by users and ensuring that geographic opportunities and challenges are recognized. It is the intention of the BAG to recognize global scope through use cases rather than through the chartering of separate user groups on different continents or in different countries.

Participant Profile

The HLS BAG needs the ideas and expertise of supply chain professionals to help shape the direction of the EPCglobal standards development process. Participants are generally mid-level to senior experienced business leaders, with strong track records in supply chain management, electronic commerce, or business process expertise. Some common characteristics of a typical HLS BAG participant include:

- A business visionary who embraces innovation;
- Strong understanding of industry issues;
- Good communication skills, with emphasis on consensus-building and collaboration;
- Subscribers who are actively engaged in building knowledge about EPC, adopting the standards based EPCglobal Network and collaborating in the establishment of business models supported by the use of EPC;
- Subscriber companies involved in the HLS extended supply chain, including, but not limited to, retailers, distributors, logistics providers, manufacturers, packaging companies, appropriate trade associations, and government regulatory bodies;
- Decision-makers or key influencers within their company regarding overall strategy for EPC and RFID.

HLS BAG Working Groups

Information

- Recommend information business requirements and related process for the Healthcare and Life Sciences supply chain for use cases as identified and prioritized by the Strategic Planning Work Group. The initial priority is on the "safe and secure supply chain use case". The recommended business requirements and processes would include: numbering systems, data retention, data ownership / visibility / information sharing, and EPC assignment processes.
- Create information business requirements supported by meta data standards would allow supply chain partners to communicate business sharing with a common set of elements, as well as enabling healthcare stakeholders to effectively utilize RFID within their internal processes.
- Recommend business requirements that would ensure that the Hardware and Software Action Groups have the requirements and incorporate the standards needed to support various healthcare business processes. This group will propose business requirements based on existing healthcare protocols and needs while evaluating their adequacy when using RFID technology.
- Provide an Information framework encompassing business protocols and methodologies from a board healthcare constituency to communicate their RFID related data practices to consumers, internal, and external business partners.

Process

- Develop business processes as defined and prioritized by the Healthcare and Life Sciences Business Action Group Strategic Planning Working Group.

Strategic Planning

- Develop and manage the execution of a strategic work plan, designed to coordinate and prioritize the activities of Working Groups within the HLS BAG.
- Provide specific input to other EPCglobal Action Groups and other standards-setting bodies, as appropriate, regarding the requirements for standards, policies, and agreements between and among trading partners and regulatory bodies in the extended healthcare and life sciences supply chains as related to the application and use of RFID technology in general and the EPCglobal Network, specifically, to track, trace and authenticate articles of commerce.
 - Relative to the HLS BAG goal of providing for a safe and secure supply chain for pharmaceutical products, this group will commission the development of specific use cases, and scenarios, which describe in detail (i) the route traversed by articles of commerce and (ii) business interactions involved at each node of the supply chain, focused initially on compliance with international laws and regulations, state pedigree laws and US FDA guidelines.
 - Commission the development of specific use cases, and Scenarios, which describe in detail (i) the route traversed by articles of commerce and (ii) business interactions involved at each node of the supply chain, focused on elements that may include enhancing supply chain efficiencies, improving care provider efficiencies and effectiveness, and enhancing the patient / consumer experience, compliance, and safe usage. It is recognized that medical and surgical devices, over-the-counter medications, vaccines and biological materials, durable medical equipment, and many other specific examples of goods, other than strictly pharmaceutical products, must be addressed in these use cases and scenarios.

- Prioritize the critical path elements needed to support end-user implementations of EPC technology and the EPCglobal Network.
- Provide for collaborative, focused interaction among EPCglobal end-users, staff, other BAGs and Working Groups regarding the work and priorities of the individual Working Groups.
 - Identify cross-Working Group issues and concerns, coordinate and help facilitate collaboration to prevent duplication of effort, ensure timely progress towards desired outcomes.
 - Provide visibility into the prioritization and work plan process.
- Ensure that the HLS BAG strategic work plan remains aligned with the business priorities of EPCglobal Subscriber companies.

Technology

- Serve as a technical resource to the other work groups inside the HLS BAG.
- Investigate specific issues that Working Groups may pose to the Technology Working Group.
- May also serve as the primary author of some use cases and other business/functional requirements documents on behalf of the HLS BAG, depending on the nature of those use cases.
- Address technology issues as defined and prioritized by the HLS BAG.

Fast Moving Consumer Goods Business Action Group (FMCG BAG)

The mission of the Fast Moving Consumer Goods Business Action Group (FMCG BAG) is to identify end-user business requirements to the EPCglobal standards development process and promote the adoption and implementation of the Electronic Product Code (EPC) and the elements of the EPCglobal Network. The FMCG BAG will accomplish its mission through the following actions:

- Chartering Work Groups to explore application areas and initiate, refine, and complete use cases for forwarding to the technical Action Groups.
- Ratifying the technical specifications of the technical Action Groups as meeting the user Business Action Group requirements.
- Providing a forum for the interaction of End-Users and Solution Providers to collaborate on the definition of user requirements and the understanding of solutions to those requirements.
- Providing a forum to share learnings from pilots and implementations.
- Acting as the primary representative body of users of the EPCglobal Network and coordinating the activities of the BAG with those of other groups that may contribute to the work of driving adoption.
- Representing a global scope of interest in the EPCglobal Network by users and ensuring that geographic opportunities and challenges are recognized. It is the intention of the FMCG BAG to recognize global scope through use cases rather than through the chartering of separate user groups on different continents or in different countries.

Physical meetings of the FMCG BAG are held on a quarterly basis. Conference calls are held on a weekly basis or as needed by each Working Group.

Participant Profile

The FMCG BAG needs the ideas and expertise of supply chain professionals to help shape the direction of the EPCglobal standards development process. Participants are generally mid-level to senior experienced business leaders, with strong track records in supply chain management, electronic commerce, or business process expertise. Some common characteristics of a typical BAG participant include:

- A business visionary who embraces innovation;
- Strong understanding of industry issues;
- Good communication skills, with emphasis on consensus-building and collaboration;
- End-Users who are experienced with or will soon commence RFID pilots or implementation as part of supply chain solutions;
- Solution Providers who are experienced in RFID implementation, business cases development, and solution selection process.

FMCG BAG Working Groups

Asian Adoption Program (AAP)

- Help Asian businesses to extract maximum business benefit from the use of EPCglobal technology as quickly as possible with minimum problems and without duplicating the work of other EPCglobal or GS1 work groups.
- Obtain agreement on standards adoption by EPCglobal Subscribers in the region and publicize common expectations of how EPCglobal technology will be implemented in Asia in order to avoid conflicting approaches.
- Ensure that Asian views related to EPCglobal and user requirements in the region are clearly represented to EPCglobal and other standards and policy groups.
- Enable AAP participants to exchange information to assist in the practical implementation and justification of RFID and EPCglobal technology within Asia.
- Communicate with relevant organizations including industry and consumer groups, government and other regulatory authorities.
- Attract adoption of EPCglobal Standards from key entities in the region.

Data Exchange

- Establish business requirements for the use and exchange of EPC-related data between trading partners.
- Determine and communicate the scope and standardized business processes of EPC data exchange.

European Adoption Programme (EAP)

- Enable EAP participants to exchange information to assist in the practical implementation and justification of EPC and RFID technology within Europe.
- Agree on common expectations of how EPC technology will be rolled out in Europe in order to avoid incompatible approaches.
- Publicize a common approach to roll out EPC technology in Europe in order to speed adoption and the associated benefits.
- Reflect back to EPCglobal and GS1 technical groups any issues with standards arising from implementations in Europe.
- Lobby and communicate with relevant organizations including industry and consumer groups, government, and other regulatory authorities.

Pilot and Implementation

- Provide end-user companies with practical and timely information needed as they prepare for EPC/RFID pilot and implementation projects.

Reusable Transport Items (RTI)

- Establish data standards for the tagging of reusable assets across the supply chain.
- Propose data exchange flows underpinning the efficient and safe management of RTIs.
- Recommend ways of linking the management of RTIs to the need for product/ingredients tracking.
- Provide clear links with existing product tracking requirements associated with the movements of assets.

Strategic Planning

- Ensure that the EPCglobal strategic work plan is aligned with end-user business priorities.
- Provide collaborative, focused interaction between end-users and EPCglobal on the work and priorities of the overall Action Groups.
- Capture requirements and prioritize the critical path elements needed to support end-user implementations of the EPC and the EPCglobal Network.
- Recommend the strategic work plan priorities to the Business Steering Committee
- Provide visibility into the prioritization and work plan process.
- Facilitate a process to assess the delivery of EPCglobal strategic work plan elements and evaluate the effect of changes.

Tag and Label Inlay Standards

- Create a tag and label guideline to enable silicon RFID chip, inlay, tag, RFID printer, and RFID applicator manufacturers to standardize their product offerings to meet the end-user requirements described in the RFID Usability Requirements.

Transportation & Logistics Services Business Action Group (TLS BAG)

The mission of the TLS BAG is to work towards the successful deployment of RFID utilizing the EPCglobal Network in supply chain applications, such that the use of specific standards (data sets, RFID technology/frequencies, exchange interfaces, etc.) are transparent to trading partners. This technology deployment needs to be done in such a manner that it is not solely dependent on specific market vertical applications or the countries or theatres that the products or assets are managed. All standards will be fully transparent between trading partners (supplier, freight forwarder, carrier, manufacturer, retailer, air and sea freight, 3PL/LLP, consolidators, trucking, rail, integrators, terminal operators, customs, postal)

Participant Profile:

The TLS BAG needs the ideas and expertise of transport and logistics service providers to help shape the direction of EPCglobal standards development. Participants are generally mid-level to senior experienced business leaders with strong track records in supply chain management, electronic commerce or business process expertise.

TLS BAG Working Groups:

Transportation:

- Identify benefits of EPC RFID in transportation and develop specifications
- (Standards) to enable organizations to improve visibility, performance, security, quality and communications

4 Walls:

- Deliver business functional requirements / specifications related to processes that occur within the 4 walls.

Integration:

- Identify and present a collaboratively developed set of generic standards governing the format continuity and types of data traversing the global supply chain permitting visibility to the chain of custody at each transport unit level.

Import / Export (Customs):

- Streamline import and export procedure by mean of RFID.

Hardware Action Group (HAG)

The mission of the Hardware Action Group (HAG) is to define the interfaces between hardware components (primarily EPC tags and readers) in the EPCglobal Network. Physical meetings of the Hardware Action Group (HAG) are held bi-annually. Conference calls are held on a weekly basis or as needed by each Working Group.

Participant Profile

The HAG needs the ideas and expertise of technical supply chain professionals to help shape the direction of the EPCglobal standards development process. Participants are generally mid-level to senior experienced technical leaders, with strong track records in supply chain operations. Some common characteristics of a typical HAG participant include:

- A technical visionary who embraces innovation;
- Deep technical knowledge of UHF Gen 2 Standard and other Radio Frequencies;
- Prior experience in defining certification tests for RFID devices (RF and protocol).

HAG Working Groups

UHF Generation 2 Testing and Certification Working Group

- Collaborate with MET Laboratories to review and confirm the certification test plans for the UHF Gen 2 Protocol.

UHF Generation 2 Interoperability

- Develop, review, and finalize a Generation 2 interoperability test plan.
- Plan, engage participants, or otherwise provide support for a first round of interoperability testing to validate the test plan.

Software Action Group (SAG)

The mission of the Software Action Group (SAG) is to develop definitions for software interface and other standards, both within EPCglobal Network components and between these and other elements of enterprise systems distributed over a number of enterprises and geographies. Physical meetings of the SAG are held bi-annually. Conference calls are held weekly or as needed by each Working Group.

Participant Profile

The SAG needs the ideas and expertise of technical supply chain professionals to help shape the direction of the EPCglobal standards development process. Participants are generally mid-level to senior experienced technical leaders, with strong track records in supply chain operations. Some common characteristics of a typical SAG participant include:

- A technical visionary who embraces innovation;
- Deep technical knowledge data security;
- Prior experience in electronic data exchange.

SAG Working Groups

EPC Information Services (EPC IS) Phase 2

- Create one or more normative technical specifications that will facilitate the development of interoperable EPC IS systems. The scope of these specifications is limited by the following constraints and guidelines:
 - EPC IS version 1.0 will address Data Capture and Data Query.
 - Access Control and Authentication will be addressed.
 - All specifications will seek to adopt the layered approach already adopted by the Reader Protocol, Reader Management and Filtering & Collection Working Groups and to cleanly separate the specification of data from operations upon data.
 - The only binding of the abstract service descriptions provided in this version of specifications will be a binding to a web services framework, using WSDL and XSD.

Filtering and Collection Version 1.1

- Create version 1.1 specification of Application Programming Interface (API), associated data specifications, and reporting mechanisms, through which clients may obtain filtered, aggregated tag read data from a multiplicity of tag read sources.

Reader Protocol

- Define the 1.0 protocol specification for exchanging data and commands between hosts and readers, supporting functions such as reading tags, writing to tags, and killing tags.

Reader Management

- Define a set of standard functions that enable configuration, provisioning, monitoring, and alarm notification of individual RFID readers leveraging the standard communication protocol defined by the Reader Protocol Working Group where applicable. This set of standard functions will provide a baseline for management operations, will be extensible for future revisions, and will provide the ability to accommodate vendor specific extensions.

Security 2

- Deliver a set of recommendations to provide a security framework to ensure different levels (i.e. 'low', 'medium', 'high') of consumer information privacy, data authentication, integrity for both wireless and wired data transmissions, and mutual business confidence for collaborative business trading networks.

Tag Data Translation

- Develop the necessary specifications to express the current Tag Data Standards encoding and decoding rules in an unambiguous machine-readable format, which will allow any component in the EPCglobal Network technology stack to automatically convert between the binary and tag-encoding and pure-identity URI formats of the EPC as appropriate. The motivation is to allow components flexibility in how they receive or transmit EPCs, to reduce potential 'impedance mismatches' at interfaces in the EPCglobal Network technology stack. Reference implementations of software that demonstrate these capabilities will also be developed.

Tag Data Standards

- Identify and document the required maintenance to the current EPCglobal Tag Data Standard specification.
- Provide methodology as guidance to the current Tag Data Standard specification for proprietary coding, alphanumeric coding, etc.
- Identify the requirements of future tag data standard scheme including synchronization and/or incorporation of ISO data standard, potential new industries, Class 2 and beyond.

Reader Operations

- Develop the second generation EPCglobal Reader Protocol, which will provide the means for control of RFID Reader device operation, and seek to include all capabilities expressed by features of the air protocols supported by a device.

Joint Requirements Groups (JRGs)

The mission of the Joint Requirements Groups is to collaborate on topics to produce a single set of business requirements for standards development by the appropriate technical Action Group (HAG or SAG). Physical meetings and conference calls of these Joint Requirements Groups are held as needed.

FMCG & HLS Joint Requirements Groups

Applied Tag Performance Joint Requirements Group

- Create performance tests specifications for applied tags whether it be the primary, secondary or unit load. These specifications will be designed to conform to specific regulatory bodies that exist in Europe, Asia and North America.
- Develop, publish, and maintain EPCglobal laboratory accreditation criteria for Applied Tag Performance (ATP) evaluation by defining & developing ATP methodologies; and publishing, maintaining & updating ATP Specifications (standard specifications in EPCglobal nomenclature) for EPCglobal accredited labs.
- Develop, publish, and maintain an EPCglobal laboratory accreditation process for site certification of ATP Specifications conformance by defining certification requirements and processes.
- Act in an advisory capacity to EPCglobal to promote adoption.

Item Level Tagging Joint Requirements Group

- Gather requirements collaboratively with FMCG and HLS Business Action Groups in support of future item level tagging. The resulting requirements may call for the formation of Working Groups to address any or all of the reported requirements.

HLS & SAG Joint Requirements Groups

Drug Pedigree Messaging Interface Requirements Joint Requirements Group

- The ultimate objective is to create the technical requirements for a software Application Programming Interface (API), associated data specifications, and security mechanisms, through which various clients may capture, secure, and access drug pedigree data via the EPC IS interface. Due to fast approaching deadlines from state and federal regulatory bodies, it is the intent that the work of this group be performed within an accelerated schedule.