atpco

ATPCO TRAVEL INDUSTRY STANDARD
ATIS-01

The Standard for Standards
An industry foundation for innovating at scale

Version 22.1
1 September 2022

Contents

About this document

Publishing information

This ATPCO Proprietary Standard is published by ATPCO and came into effect on 1 May 2020. It was prepared by the ATPCO Standards team and considered existing industry practices including, but not limited to, practices developed by the ATPCO Community from 1980 up to the present day.

Supersession

This ATPCO Proprietary Standard is the second publication, superseding Version 1.0 (May 2020). From this version (22.1) onward, the naming convention shall be the last two digits of the year, followed by a decimal point, followed by the iteration number of the release.

Contractual and legal considerations

This publication does not purport to include all necessary provisions of a contract. Users are responsible for its correct application.

Compliance with an ATPCO Proprietary Standard does not and cannot confer immunity from legal obligations.

Future revisions

This standard will be revised from time to time as appropriate to agreed policies and procedures around ATPCO Proprietary Standards, intake, and governance.

This revision is intended to include the ATPCO Proprietary Standards that cover interfaces, processing, and supporting services around distributed data for the automation of pricing and retailing, primarily used by Subscribers to ATPCO data. Future releases will cover, but will not be limited to:

- API documentation

- Revenue accounting processes

- Collection and maintenance of data

- Pricing and retailing data maintenance

- Formats for government approval of price points

- Formats for assembled data, including but not limited to ATPCO Price Elements

1. Introduction

ATIS-01, The Standard for Standards, describes how ATPCO Proprietary Standards and related documents are developed and maintained.

2. Document scope

This ATPCO Proprietary Standard describes the elements of the standards program facilitated by ATPCO as a neutral provider of data to the travel industry, related to pricing and retailing automation. The term *pricing and retailing automation* is used consistently throughout this document to describe all ATPCO Proprietary Standards activity, including but not limited to automation of offer creation, offer distribution, offer presentation, order servicing, order settlement, and offer/order management.

This document encompasses the following:

1. ATPCO approach to ATPCO Proprietary Standards
2. Development of ATPCO Proprietary Standards
3. Industry harmonization of ATPCO Proprietary Standards
4. Governance of ATPCO Proprietary Standards
5. Content of ATPCO Proprietary Standards

This standard does not include discussion of ATPCO products and services, which are sold in a commercial context and discussed in separate media, except where such products and services produce a proprietary format governed by an interface standard.

3.   Terms and definitions

Terms are defined here as they apply in this document. Other universal definitions that apply to this document and to other ATPCO Proprietary Standards can be found in ATPCO's formal Glossary.

Adoption Confirmation (M5)	A published record of adoption of each ATPCO Proprietary Standard.
Airlines for America (A4A)	Airline-owned entity specializing in the North American marketplace, responsible for standards and advocacy, further defined on their [website]().
alignment	A piece of standards work that involves a change in processing by at least one of the consumers of an ATPCO Proprietary Standard.
Airlines Reporting Corporation (ARC)	Airline-owned entity responsible for financial settlement of all US point of sale travel agency airline products, further defined on their [website]().
ATPCO Councils	Five bodies of no more than 20 organizations comprising ATPCO, airlines, system providers, and other industry organizations tasked to prioritize standards-setting activity, as well as resolve conflicts when an ATPCO Proprietary Standard will deliver high benefit to airlines but is a high cost of delivery or low confidence of delivery by an adopting system provider. Councils can approve Design Teams to move forward items of industry impact.
ATPCO Community	All stakeholders involved in the review and approval of ATPCO Proprietary Standards, including all ATPCO customers, as well as key industry organizations governing other relevant supply chain standards, for example IATA, A4A, and ARC.
ATPCO Design Teams	Temporary teams reporting to one of five ATPCO Councils to move forward priority items to deliver industry impact, working to the principles of high speed of delivery, accurate delivery, and widely adopted features.
ATPCO products and services	Proprietary offerings of ATPCO, not including ATPCO Proprietary Standards, offered commercially for use in conjunction with a customer agreement.
ATPCO Proprietary Standards	Proprietary technical standards established by consensus to provide consistent results for pricing and retailing automation across the travel ecosystem. These include the following documents:

- Data Dictionary, comprising file layouts, field descriptions, validation edits, and abbreviated descriptions of processing (Interface Standard)

- Industry reference codes used in processing (Appendices)

- Full descriptions of data processing (matching and application) to produce a consistent pricing or retailing result (Processing Standard)

- Data maintenance (load, store, data management)

Business Request	A request for an action on an ATPCO Proprietary Standard made by a member of the ATPCO Community or by ATPCO.
clarification	A piece of work which involves additions to wording that clarify the intent of the existing ATPCO Proprietary Standard, but does not require ATPCO, nor any consumer of the data, to change processing.
consensus	The consultative process, by majority or unanimity (depending on the stage in the process), through which ATPCO Proprietary Standards are developed, set, adopted, and maintained.
Detailed Solution (M3)	The complete proposed solution for a new or enhanced ATPCO Proprietary Standard.
de facto	Standards that are based on facts but not formally recognized by law.
enhancement	A piece of standards work that involves a change in processing by at least one of the consumers of an ATPCO Proprietary Standard.
International Air Transport Association (IATA)	Airline-owned entity covering standards, advocacy, and industry platforms, further defined on their [website](#).
Implementation Commitment (M4)	The commitment by industry stakeholders to adopt the agreed upon new or enhanced ATPCO Proprietary Standard.
Industry Feedback (M1)	The initial feedback for new Business Requests.
Initial Solution (M2)	The outline of a proposed solution for a new or enhanced ATPCO Proprietary Standard
interface standards	Technical standards that document file specifications and data element attributes.
majority	In the context of consensus, a *majority* means that more companies who intend to use an ATPCO Proprietary Standard are in favor of the documented and published standard than are not in favor.
processing standards	Technical standards that document required processing by recipients of data in the format prescribed by related interface standards to achieve the intended outcome (generally a pricing or retailing result) regardless of the system processing the data.
subscribers	Subscribers are referred throughout the document as systems, system providers, and consumers of the data. These companies consume ATPCO data and use ATPCO Proprietary Standards as technical documentation to implement processing logic for the data.
supply chain	General term for the end-to-end travel product distribution process, generally accepted as product definition and pricing through to financial settlement, including but not limited to pricing, schedules, reservations, ticketing, departure control (airports), revenue accounting (audit, billing,

settlement), and revenue management. This is also referred to as the distribution ecosystem.

supporting services standards	Technical standards accompanying ATPCO Proprietary Standards on pricing and retailing automation that describe how the standards interact with other supply chain processes (e.g., ticketing, reservations, revenue accounting).
technical standards	An established norm or requirement for a repeatable technical task. It is usually a formal document that establishes uniform engineering or technical criteria, methods, processes, and practices. The standardization process may be by edict or may involve the formal consensus of technical experts.
unanimity	*Unanimity* means that all companies who intend to use an ATPCO Proprietary Standard are in favor of the documented and published standard or have had their comments appropriately addressed and resolved. All objections and comments from dissenting members who intend to use the ATPCO Proprietary Standard have been satisfactorily resolved.

4. ATPCO Proprietary Standards approach

4.1. The purpose of ATPCO Proprietary Standards

ATPCO Proprietary Standards exist to provide a consistent and reliable basis for all members of the ATPCO Community to share the same expectations about a product or service, providing a framework for achieving network economics, economies of scale, efficiencies, and interoperability. This has the effect of reflecting the intent of each individual airline in distributing their product pricing and retailing, reduces the possibility for costly disputes, and delivers value to the industry through increased revenues from innovative new methods for pricing and retailing.

The purpose of ATPCO Proprietary Standards is

1. to ensure accurate and consistent processing, which reduces discrepancies across stakeholders in the supply chain.

2. to reduce development time for consumers of ATPCO data through the network economics effect—effectively developing to one set of pricing and retailing automation standards for all, rather than developing bespoke solutions and later re-developing to the industry solution.

3. to enable innovation at scale within the airline product distribution ecosystem.

4.2. ATPCO role in ATPCO Proprietary Standards

ATPCO's mission is to be the industry's trusted partner in driving innovation, reducing complexity, and delivering network efficiencies to the airline ecosystem through **standards**, technology, and effective governance.

To fulfil this mandate, ATPCO's motto for ATPCO Proprietary Standards-setting activity is "scalable standards driving industry innovation."

The three critical points of this motto are

- **Scalability**, because many new ideas in the travel industry apply well to a small market but fail as they attempt to scale across the supply chain and across multiple airlines in high volume.

- **Industry**, because ATPCO is uniquely placed as the neutral, honest broker for pricing and retailing automation where all airlines and all stakeholders serving those airlines can have a voice.

- **Innovation,** because standards are often criticized for holding back innovation, whereas ATPCO Proprietary Standards are specifically designed to spawn and support new concepts that can create value globally.

ATPCO plays a unique role in the travel industry because it offers broad standards from the perspective of a neutral, honest broker. ATPCO Proprietary Standards allow interoperability across all pricing and retailing automation stakeholders in the industry, including but not limited to airlines, travel agencies, system providers, and business process outsource providers.

4.3.   Description of ATPCO Proprietary Standards

All ATPCO Proprietary Standards are de facto technical standards and have these defining characteristics:

- Formal documents that establish uniform technical criteria, methods, processes, and practices

- Best practice in the field of pricing and retailing automation as defined by experts

- Developed by a defined consensus process

- Subject to open and transparent consultation within the ATPCO Community

- Subject to systematic, periodic review of their continuing validity

ATPCO technical standards can be divided into these three categories:

- Data interface and data exchange standards (interface standards)

- Data processing standards for the automatic calculation of pricing and retailing results (processing standards)

- Standards for processes that support these data exchanges and automated calculations (supporting services standards)

ATPCO Proprietary Standards are, unless otherwise specified, standards that may be used with ATPCO-formatted data products or other data products that conform to the ATPCO Proprietary Standards for pricing and retailing automation. ATPCO also publishes open standards that can be used with data from sources other than ATPCO (for example, Dynamic Pricing).

For clarity, ATPCO Proprietary Standards are not

- the tools and processes for data collection

- the data itself

- the method of distribution of the data (for example, API or FTP)

- Any other ATPCO products and services not defined above (for example, fare management tools, revenue accounting tools, or calculation tools)

4.4.   Development of ATPCO Proprietary Standards

ATPCO manages the development, implementation, and adoption of ATPCO Proprietary Standards through ATPCO's intake process, used for both product and standards development. This allows for a series of stage gates that test the speed, accuracy, and adoption rate of features and allows any necessary course corrections to ensure the best industry impact. The expected value of ATPCO, and of pricing and retailing of airline products to the consumer, is that the exact same set of conditions will produce the same result (price and rule set) to that consumer through all channels.

Standards are developed in the expectation that those who use them have contributed to the development process as needed, and that those who use them will be appropriately experienced, qualified, and equipped to use them. In addition, these same users will apply these standards conscientiously and will continually review them to ensure they are applied consistently.

4.4.1. Processing inconsistencies

The goal of ATPCO Proprietary Standards is that no interpretation is required. Nevertheless, ambiguity or a gap in information may occasionally be found in a standard that leads to inconsistent processing of pricing and retailing data by consumers of ATPCO data. In such cases, authorized stakeholders can raise a Business Request (BR) through MyATPCO to highlight the inconsistency and prioritize its correction according to its value to the industry.

While there will always be a balance between the value of fixing an inconsistency versus the cost of not addressing it, the goal is to ensure that all such alignment issues are addressed over time in the respective ATPCO Proprietary Standard.

4.4.2. Versioning

There is always only one current version of every ATPCO Proprietary Standard, and all systems using them to process airline pricing and retailing data are always expected to process that data to the latest published version of the standard.

Not having multiple published versions of a standard ensures absolute consistency across for pricing and retailing automation.

4.5. Governance

4.5.1. Compliance requirements

ATPCO Proprietary Standards bind the 440+ airline customers that have signed the ATPCO Community Participation Agreement, which means that these customers accept that their pricing and retailing automation data distributed by ATPCO will be processed according to ATPCO Proprietary Standards. The standards are voluntary for the remainder of the ATPCO Community in that there is no legal obligation to apply them or comply with them, except in those few cases where their application is directly demanded by regulatory instruments, for example, by financial regulations including but not limited to PCI (Payment Card Industry) compliance, or by the US Department of Transportation.

However, it is broadly recognized that because they are the de facto standards for pricing and retailing automation, there are costs associated with not following ATPCO Proprietary Standards, including but not limited to Agency Debit Memos (ADMs), inconsistent pricing in the marketplace across systems, leading to consumer confusion, and inconsistent pricing across processes within an airline, leading to costs from data analysis and correction.

4.5.2. Transparency

The development of ATPCO Proprietary Standards adheres to ATPCO's general commitment, as a neutral, honest broker to the airline industry, to transparency of process to the ATPCO Community. Before publication, every ATPCO Proprietary Standard is available to the entire ATPCO Community for review through the Detailed Solution (M3) as part of ATPCO's recognized intake process.

All subscribers to ATPCO's data products have access to the ATPCO Proprietary Standards, which can be found in the Standards Library and the Data Dictionary.

ATPCO reserves the right to retain as confidential any documentation that is considered legally sensitive to comply with regulatory requirements and to protect ATPCO Community members when sharing any such data would disclose commercially sensitive information.

5.   Development of ATPCO Proprietary Standards

5.1.   Overview

ATPCO maintains an Industry Governance Model which is the single source of truth for the standards development process and for other governance topics such as prioritization, escalation, and change management. The following sections summarize the development process regarding ATPCO Proprietary Standards.

The process for development and approval of ATPCO Proprietary Standards is described in further detail in this section, but the broad principles to be applied are as follows:

1.   there is enough of a business need to create a new standard, or change an existing standard

2.   there is consensus on the initial solution

3.   there is consensus on the detailed design

4.   the industry agrees to an implementation and adoption date

5.   there is enough advance notice so that consumers of the data and standards can budget for, and make, the appropriate changes

6.   the standard is adopted by committed systems on the prescribed date

7.   airlines gain value from the standard (that is, they are using the standard, or a product or service that uses the standard, for pricing and/or retailing automation)

Published ATPCO Proprietary Standards must be approved by consensus of the ATPCO Community such that all objections and comments from dissenting members have been satisfactorily resolved. Adoption of ATPCO Proprietary Standards is, by contrast, based on commercial decisions by relevant organizations interacting with the standard.

The steps for standards request, publication, and maintenance are shown in Figure 1.
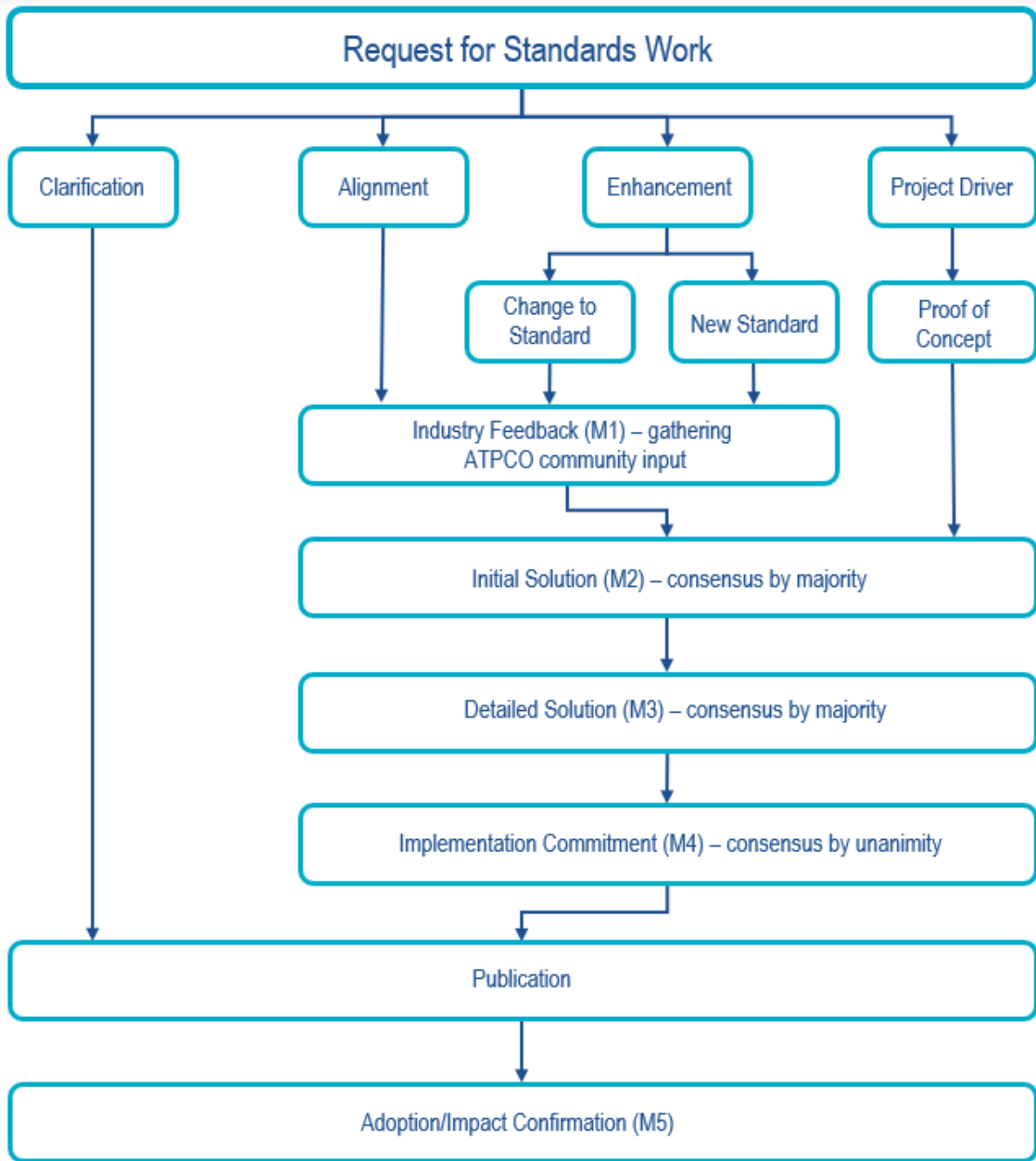
Figure 1   ATPCO Proprietary Standards Development Process

5.2. Request for ATPCO Proprietary Standards work

Overview	A Business Request acts as a common and neutral mechanism for capturing and tracking standards work requested from ATPCO. Anyone in the ATPCO Community can request standards work, including ATPCO (for strategic initiatives or technical debt).
Inputs	None
Steps	1. Request received and logged 2. Request reviewed for relevance 3. Discussed internally by ATPCO and with the requestor 4. Categorized as a clarification, an alignment, or a material change to the standards (includes new standards)
Outputs	Relevant Business Requests sent to Industry Feedback (see Section 5.3) or rejected for lack of scale

5.2.1. Clarifications

A c*larification* is defined as a piece of standards work which involves additions to wording that clarify the intent of the ATPCO Proprietary Standard, but does not require ATPCO, nor any consumer of the data, to change processing. The objective of a clarification is to improve the quality of the documentation so that more serious issues of consistency do not arise for future consumers of the standard.

Clarifications do not go through the normal standards development process. They are vetted in a monthly call with major subscribers of ATPCO Proprietary Standards to ensure that there is no impact. If there are no objections during the call, the item will be scheduled, for the date in the updated standard (see Section 5.7) and announced using a notification.

ATPCO will publish clarifications four times per year. The deadline for items to include in each release will be one month prior. The calendar will be as follows:

Release	Deadline for Agreed Items	Publication Date
1	28 February	March
2	29 May	June
3	28 August	September
4	30 October	November

If there are no clarification items for one of these dates, a notification will be sent to advise this.

5.2.2. Alignment

An *alignment* is defined as a piece of standards work that involves a change in processing by at least one of the consumers of ATPCO data. Data fields and values do not change, but new wording addresses an inconsistency in the market because one or more consumers of the standard are producing a different pricing or retailing result in the marketplace.

Alignments are treated no differently from material changes to standards (enhancements) (see Section 5.2.3) because they compete for the same resources and so must be prioritized. They are reviewed with

major consumers of ATPCO Proprietary Standards and undergo the normal standards development process defined in Section 5 as a Business Request.

5.2.3. Enhancement (includes new standards)

An *enhancement* is defined as a piece of standards work that involves a change to data fields, values, or both, or is a new standard, and that requires all consumers of the ATPCO Proprietary Standard to make a change. These items are reviewed with the submitter and undergo the normal standards development process as a Business Request.

5.2.3.1.   CHANGE TO A STANDARD

ATPCO has a large body of standards documentation that is continually being assessed by the industry to fit new business needs. A change to an existing ATPCO Proprietary Standard involves the re-publication of an existing document.

5.2.3.2.   NEW STANDARD

When a new business need is identified, a completely new standard may be required. This will result in the publication of the first version of a new ATPCO Proprietary Standard.

5.2.4. Project Driver

ATPCO notes that there may be situations when an airline or group of airlines are leading an important development that will move the industry towards more automation, lower cost, and a world of offers and orders. In such cases, immediate scale cannot be expected, because the market may not be ready. To accommodate this, ATPCO allows for "Project Driver" enhancements, where at minimum one airline and one system provider agree, with ATPCO, to implement a proof of concept.

Fundamentally, this will be announced to the industry to level the playing field and allow any member of the ATPCO Community to join the proof of concept.

Once the proof of concept has been successfully delivered, it will be included in the usual ATPCO intake as an Initial Solution (M2) as defined in Section 5.4.

5.3.   Industry Feedback (M1)

Overview	Industry Feedback (M1) is a common mechanism both for standards-setting activity and ATPCO Product development efforts, and it requires a validated Business Request (i.e., ATPCO will validate for duplication, legal viability, and relevance) to be submitted through MyATPCO. Industry Feedback (M1) allows a feedback loop to generate, based on voting (yes, no, abstain) whether there is support for the Business Request.
Inputs	Business Request form submitted by any member of the ATPCO Community, including ATPCO
Steps	1. Item published to the industry for feedback (yes, no, abstain) 2. Item is logged after a maximum of 90 days as net positive, or nil/net negative on aggregate
Outputs	• Support (net positive votes by the ATPCO Community); the item is prioritized and moved to the next progress point for ATPCO internal evaluation. • No support (net zero or net negative votes by the ATPCO Community); the item is closed and logged as Historical Industry Feedback • ATPCO may consider exceptions to this rule when a request supports strategic change or reduces technical debt

Note that clarifications do not go through the Industry Feedback process because they do not require changes by any member of the ATPCO Community.

5.4.   Initial Solution (M2)

Overview	When the Business Request has been prioritized to move on or is required by mandate or ATPCO strategic direction, ATPCO drafts an Initial Solution (M2) for the business problem. At this stage, ATPCO creates a synopsis of what will be changed in the ATPCO Proprietary Standard to ensure consensus. When a proposal includes new fields, values, and/or processing, these details may already be included in the Initial Solution (M2). The Initial Solution (M2) invites comment both from airlines (business benefit) and from consumers of the standard (cost of solution and confidence of delivery). The comment period for the Initial Solution is typically 30 days.
Inputs	Supported Industry Feedback (M1) items, or ATPCO-generated items, or successfully implemented proofs of concept.
Steps	1. Initial Solution (M2) is drafted by ATPCO 2. Initial Solution (M2) is distributed to the ATPCO Community for comment 3. Items are prioritized by councils and the rest of the industry twice a year 4. ATPCO averages the score for each item to determine a priority across all Initial Solutions (M2) 5. ATPCO recommends a future Product Development Plan based on item benefits, urgency, and likelihood to scale
Outputs	• No or low support; the item is withdrawn • Support for the item but not high priority; progress is at the sole discretion of ATPCO

- Support for the item and high priority or strategic item, or technical debt; the item becomes "Proposed" on the Product Development Plan; these items then move into Detailed Solution (M3)

5.5.　Detailed Solution (M3)

Overview	The Detailed Solution (M3) is the drafting phase for standards documentation and involves various community engagement activities such as design teams to ensure full, relevant participation by the industry, or at least every chance for any member of the ATPCO Community to comment on the solution. Adjustments can also be made to sizing for estimation purposes at this stage.
Inputs	Supported, or ATPCO-generated Initial Solution (M2) items.
Steps	1. Detailed Solution (M3) is created by ATPCO 2. Detailed Solution (M3) is distributed to the ATPCO Community for comment 3. Comment period of typically 30 days from the ATPCO Community 4. All comments are considered and addressed
Outputs	• No or low support; the item is withdrawn • Unanimous support but with adjustments; the Detailed Solution (M3) may be reissued if material, and start this cycle again, or comments added if non-material • Unanimous support as defined herein; the draft standard is finalized

5.6.　Implementation Commitment (M4)

Overview	ATPCO releases the Implementation Commitment (M4) to all consumers of the standard, including an implementation date for the ATPCO Proprietary Standard, which in most cases is 12 months later
Inputs	Unanimously supported Detailed Solution (M3) (see Section 5.5) items, or ATPCO-generated items
Steps	1. Implementation Commitment (M4) is created by ATPCO 2. Implementation Commitment (M4) is distributed to the ATPCO Community for comment 3. Comment period of typically 30 days from the ATPCO Community 4. All comments are considered and addressed
Outputs	• Date is not accepted by unanimous agreement of all companies intending to use the ATPCO Proprietary Standard; the date is negotiated earlier or later • Date is accepted by unanimous agreement of all companies intending to use the ATPCO Proprietary Standard; the implementation date is finalized • Accepted items are added to the Subscriber Readiness on MyATPCO and tracked monthly

5.7.   Publication of the ATPCO Proprietary Standard

ATPCO updates the ATPCO Proprietary Standard on the agreed date.

ATPCO Proprietary Standards are currently published to MyATPCO and are available to all subscribers of ATPCO data.

5.8.   Adoption/Usage Confirmation (M5)

Overview	ATPCO polls all consumers of the ATPCO Proprietary Standard at the monthly Subscriber Community Forum.
Inputs	Implemented ATPCO Proprietary Standard at date agreed by Implementation Commitment (M4)
Steps	5. Implementation and publication of the updated ATPCO Proprietary Standard 6. ATPCO monitors that all affected subscribers implemented the standard at the monthly Subscriber Community Forum
Outputs	• At least one consumer of the ATPCO Proprietary Standard did not adopt in time, leading to an Alignment issue • All consumers of the ATPCO Proprietary Standard adopted at the agreed time

ATPCO continues to review airline usage of the data and functionality affected by the ATPCO Proprietary Standard each quarter to ensure value is being captured, to drive agenda items for the appropriate working groups.

5.9.   Periodic review of ATPCO Proprietary Standards

ATPCO conducts periodic reviews of standards documentation for relevance and recommendation of withdrawal as needed.

5.10. Collaboration mechanisms for ATPCO Proprietary Standards

The following committees compose the core decisioning structures for ATPCO Proprietary Standards-setting activity:

- ATPCO Board of Directors and Board Sub-Committees

- Sales Channel Executive Council

- ATPCO Councils

- ATPCO Design Teams

- ATPCO User Communities

In all cases, the principles of transparency and inclusion are paramount, and all stakeholders can comment and participate in ATPCO Proprietary Standards at any time because all events, stage gates, and decision points relating to detailed ATPCO Proprietary Standards development are announced through a notification process to the entire ATPCO Community.

5.10.1. ATPCO Councils

ATPCO Councils are enabled by the ATPCO Board of Directors Charter to perform the ATPCO advisory function. These councils comprise up to 20 organizations, including the largest airlines and system providers in the ATPCO Community, as well as industry organizations, and they have a critical role in two areas of the standards-setting process:

- Applying conventional wisdom to the prioritized list of Initial Solution (M2) items to ensure that the plan is reasonable. Any changes are agreed by majority.

- Resolving conflict between needed delivery of a standard (typically by airlines) and commitment to delivery of a standard (by system providers) to come to a mutually agreed delivery date, including recommendations to revisit the Detailed Solution (M3) if needed to expedite the publication and adoption of the standard.

More on ATPCO Councils is published on our website.

5.10.2. ATPCO Design Teams

Design teams are forums for airlines, technology providers, and channels to solve industry business needs. People representing different perspectives connect here to drive results—whether setting an ATPCO Proprietary Standard or coming up with solutions to a problem, design teams are a way for individuals and organizations to make lasting, positive impacts on our industry.

Each design team has its own unique purpose, but they all encourage participants to share innovation and build real solutions.

When an ATPCO Proprietary Standards item is ready for Initial Solution (M2), is the item is sent to a design team formed of industry experts comprising, but not limited to, ATPCO, any industry organization affected by the ATPCO Proprietary Standard, airlines, and system providers. At very least, the airline requesting the change must be present (or a proxy airline supporting the change), as well as the five biggest consumers of ATPCO Proprietary Standards, to form a quorum. With no quorum, the design team will still convene but the views of members required to form a quorum will be garnered after the fact.

These meetings are not formally documented with minutes, but summaries are provided of the collaboration used to come to a Detailed Solution (M3) and therefore a draft ATPCO Proprietary Standard.

Methods include face-to-face meetings, virtual meetings, collaboration tools, and bilateral discussions to resolve issues specific to an airline or system provider.

Pilot programs are a way for individual or multiple companies to work together to propose standards. When setting up a pilot, ATPCO will broadly announce the timeline and purpose of the pilot so that any organization may participate or follow along on the creation of the draft ATPCO Proprietary Standard. Once complete, the proposed ATPCO Proprietary Standard will go through the described process for full industry approval. Participation in a pilot is measured through Initial Solution (M2) and Detailed Solution (M3) responses which will be allocated to the subject matter appropriate design team.

More on ATPCO Design Teams is published on our website.

5.10.3. Consensus

All decisions on ATPCO Proprietary Standards are made based on consensus. ATPCO's consensus process is as follows:

- For acceptance of business problems, Initial Solutions (M2), and Detailed Solutions (M3), consensus is by simple majority in the ATPCO Community, except in circumstances where ATPCO introduces a request for ATPCO Proprietary Standards work that does not require prioritization or acceptance by majority

- For Implementation Commitment (M4) and Adoption Confirmation (M5), consensus is by unanimity: from all those subscribers who are affected by the change

Consensus is based on the desire to achieve general acceptance for the application of an ATPCO Proprietary Standard within its intended sphere of influence. The means making sure that the interests of all stakeholders who are likely to be affected by it are considered, and that individual concerns are carefully balanced against the wider public interest.

When a member of the ATPCO Community expresses a concern and it is supported by sound factual arguments, it will be taken seriously. If such objections are not voiced through the broadly distributed notifications inviting comment, it will be assumed that consensus has been achieved.

In practice, the largest airlines and largest systems tend to lead on behalf of the rest of the industry. However, multiple opportunities are given to the entire ATPCO Community to comment, propose change, or object to proposed ATPCO Proprietary Standards.

6. Industry harmonization of ATPCO Proprietary Standards

6.1. The standards ecosystem

ATPCO produces proprietary standards that govern pricing and retailing automation for the travel industry. For these standards to be effective, they must be harmonized with the rest of the supply chain that is governed by other industry organizations. These organizations work with ATPCO on an informal basis to harmonize standards:

- International Air Transport Association (IATA): Supply chain business standards from airports, to reservations, to ticketing, to sales data reporting, to revenue accounting, including concepts such as New Distribution Capability messaging and retailing taxonomy

- Airlines Reporting Corporation (ARC): Standards for agency sales data reporting for United States based travel agencies

- Airlines for America (A4A): Standards covering the United States domestic marketplace, typically aligned with IATA with exceptions as needed

Collaborative activities include

- Monthly call with each organization to ensure due diligence on communication of issues that may affect standards-setting activity of any of the organizations

- Participation in standards-setting activity across organizations

- Multilateral meetings to improve industry organization ecosystem for working together

6.2. IATA and ATPCO Proprietary Standards activity: Common agreement

The term *standard* is used in many different contexts. IATA and ATPCO both use the term *standard* to describe something that is developed and adopted by the industry to facilitate common behaviors and repeatable processes. In developing standards, both IATA and ATPCO seek to build consensus wherever possible. Adoption follows the formal process determined by each organization's established governance.

IATA and ATPCO are both industry organizations, and both aim to drive efficiencies for airlines. Both develop many standards supporting the airline distribution ecosystem.

IATA facilitates the development and adoption of procedural standards and data exchange standards. IATA standards cover all aspects of commercial, operational, and financial airline processes for both passenger and cargo transportation. These standards are developed under the governance structure of the IATA Traffic Conferences and are adopted by member airlines under the Provisions for Conduct of Traffic Conferences and IATA Resolution 009. IATA standards form an agreement between IATA member airlines. This agreement defines the processes they will follow when interacting with each other, or when interacting with third parties. IATA Resolutions require unanimous support to be adopted and are binding on all member airlines.

IATA standards are never developed around one supplier's solution or one source of data. They are open and support a competitive market for solution providers. IATA also produces reference data for the industry where IATA is identified by its members as the source of this data by an IATA Resolution.

In addition to standards, IATA also facilitates the development and adoption of specifications for interactions with IATA's own industry settlement platforms. These are developed within the standards governance framework but relate to interactions with IATA. An example of this includes the BSP Data Interchange Specifications Handbook (DISH), which facilitates data exchange with the IATA BSP. These specifications may be used by any parties but are designed around use in IATA platforms.

ATPCO Proprietary Standards development and standards-setting activity focuses on pricing and retailing automation. These standards are defined within ATPCO's governance model and bind all ATPCO customer airlines. ATPCO Proprietary Standards are agreed by consensus from the complete set of ATPCO customer participating airlines and system providers. Adoption of ATPCO Proprietary Standards by subscribers to ATPCO data is non-binding but is a generally accepted industry practice. The ATPCO technical standards form an agreement amongst ATPCO participating customers on the exchange of data with ATPCO, processing of this data, and interaction with supporting processes.

ATPCO produces technical standards that describe data exchanges (interface standards), the processes used to automatically calculate airline pricing and retailing results (processing standards), as well as standards for processes that support these data exchanges and automated calculation such as government and regulatory automation standards (supporting services standards). These standards are for use with ATPCO-sourced pricing and retailing data content. ATPCO also publishes open standards that are agnostic and can be used with ATPCO pricing and retailing data, or pricing and retailing data that is available in ATPCO formats but has been obtained from another source. ATPCO does not develop standards concerning interactions between airlines and third parties, unless these interactions involve the use or processing of data that can be sourced from ATPCO. This could include supporting processes in the supply chain such as guidelines on ticketing of certain transactions following the application of ATPCO data (for example Negotiated Fares – Ticketing Standard) or guidelines for revenue accounting (for example Baggage – Ticketing and Reporting Standard).

ATPCO Proprietary Standards include the details for processing ATPCO data for airlines and third parties, and this is a clear difference between ATPCO Proprietary Standards and IATA standards. IATA standards typically do not specify how data is processed internally by implementors, and instead focus on interactions and interoperability between parties.

ATPCO technical standards consider IATA standards to enable airlines to comply with IATA standards. Where an ATPCO Proprietary Standard supports pricing and retailing automation and needs to reference IATA standards, ATPCO drafts documentation to reference the relevant IATA standard, which is then included as an appendix to the ATPCO Proprietary Standard.

IATA and ATPCO have a strong relationship and a long history of working together to add value to the airline industry. ATPCO has more than 400 customer airlines including many IATA member airlines. There is a clear benefit in having harmonized standards development and adoption activities across both organizations.

IATA and ATPCO collaborate to document governance for collaborative standards development activity. This is especially important given industry transformation impacting retailing and distribution, primarily the move to offers and orders facilitated by initiatives such as New Distribution Capability, Next Generation Storefront, and dynamic offers. Clearly articulated roles and responsibilities, and close collaboration

between IATA and ATPCO, would ensure that no duplication occurs. This agreed governance will be included in the ATPCO Proprietary Standard for Standards (ATIS01) for discussion, consensus, and acceptance by the industry.

6.3.   IATA and ATPCO path to offers and orders

ATPCO shares the industry vision approved by the IATA Board of Governors in December 2021 and as described in the [IATA white paper](). In the context of the airline retailing workflows and the future state of offers and orders only (i.e., transitioning away from legacy industry processes and artifacts) below is a joint IATA/ATPCO Clarification:

A. Airlines have the choice to use their own product attributes/rules/science or to re-use ATPCO Community data and products to create offers

B. Industry standards apply to four major areas:

1. Digital identity of actors within the airline retailing ecosystem (IATA Identity Management Group)

2. Distribution of offers to sellers (IATA NDC Standards)

3. Fulfilment of orders to support delivery, accounting, and settlement (IATA ONE Order and Settlement with Order Standards)

4. Interline and other transportation partnerships with offers and orders (under development by the IATA Passenger Services Conference)

C. ATPCO Community data for pricing and retailing automation applies when an airline or system chooses to use ATPCO data in any of the processes that support the offer creation. If the airline is using ATPCO Community data, ATPCO will create ATPCO Proprietary Standards and consistent data formats to ensure the accurate loading and interpretation of the data by its users. ATPCO does not and cannot define how an airline chooses to create an offer.

D. ATPCO and IATA are both committed to achieving the industry aspiration toward a world of 100 percent offers and orders, with no more legacy artifacts, and recognize this will require a significant transformation on both sides:

5. IATA recognizes that its standard resolutions, recommended practices, and data exchange messages will need to be transformed or deprecated. Although IATA will maintain such standards as long as necessary to support the transition, the work to identify the standards and messages for deprecation has already begun.

1. ATPCO recognizes that its standard data applications provided to enable consistent pricing shopping and settlement will need to evolve in a way that moves the industry forward to 100 percent offers and orders. ATPCO, however, will continue to provide standard data as approved by its airline board of directors, guided by its councils and design teams.

ATPCO and IATA are jointly invited to participate in each other's working group and design team meetings and together will monitor any duplication of industry airline retailing activities on a regular basis.

6.4.   Roles and responsibilities

6.4.1.   ATPCO

These are ATPCO's principal responsibilities within the scope of this standard:

- Creating the ATPCO Proprietary Standards

- Building and facilitating consensus in the industry for ideation through implementation

- Publishing ATPCO Proprietary Standards

- Reviewing and highlighting discrepancies with other Industry Standards (e.g., IATA, A4A)

- Conducting due diligence to monitor that the principles, processes, and practices described in this standard are maintained

- Positively communicating and promoting ATPCO's role as a neutral standard-setting body for the travel industry

- Facilitating decision making structures such that the right standards are developed in the right amount of time.

- Providing inputs to ATPCO's Industry Governance Model to support the ordered development of standards for the travel industry

6.4.2.   Airlines

Whether board members, members of one of ATPCO's councils or design teams, or customers of ATPCO products and services, airline representatives have a responsibility to

- Raising Business Requests where a genuine business problem exists

- Advocating and articulating the business problem to allow for an educated debate on priority

- Actively engaging in the prioritization process by providing level of benefit for proposed standards changes

- Actively engaging in solutioning and design to ensure well-rounded and consultative standards are developed to address the business need

- Using the standard when it has been implemented and adopted across the industry

- Providing appropriate expertise and representation throughout the standards development process

- Informing ATPCO promptly when any member of the ATPCO Community is not adhering to the standard

6.4.3.   System providers

This information specifically applies to system providers who consume ATPCO Proprietary Standards and are affected by them, requiring some level of adoption. This group includes airlines who have proprietary systems that consume the data and companies who provide systems to airlines in cases where the airline subscribes to the data. Responsibilities are as follows:

- Engaging their individual airline customers to ensure adequate input into the ATPCO Proprietary standards-setting process

- Giving a considered view of cost to deliver changes necessary to comply with the standard, as well as confidence of delivery

- Supplying appropriate alternatives to address any issues with delivery of high value standards to the marketplace caused by that system.

- Actively engaging in solutioning and design to ensure well-rounded and consultative ATPCO Proprietary Standards are developed to address the business need

- Making best endeavors to meet commitments to adoption of the standard as published in ATPCO's Product Development Plan

- Engaging their individual airline customers after adoption to use the standard to promote scale of the solution.

- Providing appropriate expertise and representation throughout the standards development process

- Informing ATPCO promptly when any member of the ATPCO Community is not adhering to the standard

6.4.4.   Industry organizations

For this document, these organizations include, but are not limited to, A4A, ARC, and IATA. Responsibilities are as follows:

- Proactively reviewing proposed standards and flag any perceived supply chain issues

- Providing appropriate expertise and representation throughout the ATPCO Proprietary Standards development process

- Proactively meeting to ensure that ATPCO Proprietary Standards-setting activity is harmonized and aligned during the ATPCO Proprietary Standards-setting process.

7. Content of ATPCO Proprietary Standards

The initial version of this ATPCO Proprietary Standard is focused on distribution of pricing and retailing automation data. Changes to documentation standards and the addition of other business areas like Revenue Accounting, government approvals, and data collection will be covered in future releases.

7.1. Common principles

All ATPCO Proprietary Standards are written to a common format and style. As a general principle, the standards must contain detail that covers most coding use cases given the referenced data, leaving no room for ambiguity. Therefore, the goal is consistency of processing of the data in the marketplace.

Each standard must include a copyright page which includes the following text:

Publication Date: [Day, Month, Year of release]

The information contained in this document is the property of ATPCO. No part of this document may be reproduced, stored in a retrieval system, or transmitted in any form, or by any means; mechanical, photocopying, recording, or otherwise, without the prior written permission of ATPCO. Under the law, copying includes translating into another language or format. Legal action will be taken against any infringement

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7.2. Documentation content

7.2.1. Data Dictionary

The Data Dictionary includes the following data elements distributed by ATPCO and governed by ATPCO Proprietary Standards:

- Business Area
- Standard Name
- Field Name
- Location and byte lengths
- Status (current, pending, historical)
- Description
- Specifications (field values)
- Processing
- Cross Edits
- Effective and Discontinue Dates

The Data Dictionary is available to the entire ATPCO Community through MyATPCO.

7.2.2. Industry reference data (Appendices)

Industry reference data (also known as Appendices) is a standard set of defined codes that are used throughout the data as meaningful and consistent values in conjunction with airline-coded data. These are set by ATPCO in collaboration with the industry, which may include but are not limited to airlines, system providers, and other industry organizations, and are maintained by ATPCO.

All these Appendices are available in consolidated form on the ATPCO Standards Library on MyATPCO.

7.2.3. Processing standard

The processing standard document describes the standard processing of airline-created data against other inputs to produce a consistent priced result regardless of the system processing the data. The processing standard includes the following sections, as applicable:

1. Overview: Contains data requirements for processing, and a basic processing overview.

2. Definitions and assumptions: Definition of terms used within the document (which are not common to ATPCO's Glossary), and assumptions inherent to using the standard accurately.

3. Processing: A text description of every field and value in the data file, including match conditions, descriptions, application in conjunction with other fields and values (as applicable), examples, and flows as needed.

4. (Optional) Travel Segment Indicators (TSIs): Codes that define a specific point or portion(s) of travel; these codes may be used alone or in combination with Geographic Locales to specify the application of a provision. This section of the document is used to define the most commonly used TSIs for the record being defined by the data application document (to be used in conjunction with the TSI Data Application standard).

5. (Optional) Coding conventions: Commonly applied conventions to sequencing or general coding of the data. These are simply recommended coding practices for data integrity in specific circumstances and are not enforced by edits.

Processing standards are available only to Subscribers to ATPCO's data products and can be found in the ATPCO Standards Library on MyATPCO.

7.2.4. Examples

Some ATPCO Proprietary Standards have separate documents that detail examples of itineraries that best highlight the intended processing of the data in a standard manner.

Examples are available only to Subscribers to ATPCO's data products and can be found in the ATPCO Standards Library on MyATPCO.

7.2.5. ATPCO Proprietary Standards Overview

For particularly complex standard sets, standards overview documents show how multiple standards work together to create a single result. These are designed to show how data works together, describe how it can fit together in a relational way, and provides context to more general processing, such as date logic.

Standards Overview documents are available only to subscribers to ATPCO's data products and can be found in the ATPCO Standards Library on MyATPCO.

7.2.6. Next generation format and presentation

As per best-in-class standards practice, ATPCO will continue to modernize and improve the presentation of standards content to make it more accessible, user friendly, and intuitive to a world of offers and orders. Expected Enhancements include but are not limited to

- Minimum Revisable Units approach to avoid document churn and allow more efficient review

- Continued digitization of content

- Consistency of content

- Modern publishing techniques like XHTML rather than PDF and Microsoft Word

- Optimized metadata to enable easy search and find

- Increased automation of the link between data, examples, the ATPCO Proprietary Standard, and pricing automation

7.3. Intellectual property rights

All intellectual property and copyright of the ATPCO Proprietary Standards are the sole property of ATPCO. Members of the ATPCO Community are entitled to use relevant content published and owned by ATPCO as part of the ATPCO Proprietary Standards-setting process and in accordance with ATPCO policies. Reproduction or use of ATPCO Proprietary Standards in any other context is strictly forbidden.

7.4. Applicable law

ATPCO performs reasonable due diligence to ensure that ATPCO Proprietary Standards are vetted to comply with local and global regulations. However, ATPCO Proprietary Standards are always subordinate to the law. It is important that they are drafted to avoid any confusion between the provisions of an ATPCO Proprietary Standard and requirements imposed by law.

Reference to applicable legislation where it is relevant and helpful in application of the ATPCO Proprietary Standard is permissible but is not encouraged.

ATPCO Proprietary Standards make no attempt to offer any interpretation of the law.

ATPCO Proprietary Standards are supportive of ATPCO's widely broadcast pro-competitive mission, as is the ATPCO Proprietary Standards-setting process outlined in ATIS-01.