



BUREAU OF THE  
**Fiscal Service**  
U.S. DEPARTMENT OF THE TREASURY

# **G-Invoicing** **Agency Options for In-Flight Orders**

*Version 1.1.1*  
*May 2, 2022*

# In-Flight Orders



## Objective

- Provide options for agencies to create In-Flight Orders (IFO) in G-Invoicing, adjusted to account for Performance to-date

## Policy

- Treasury Financial Manual (TFM) mandate for In-Flight Orders extending into FY 2024 to be established in G-Invoicing by October 1, 2023

## Agency Options

- A. Manually convert IFOs in your Enterprise Resource Planning (ERP) system, for unpaid balances only
- B. Solicit help from your ERP provider or IT department to convert IFOs
- C. Enter IFOs directly into G-Invoicing's User Interface (UI)
- D. Use new Order Upload feature
- E. Conditionally, use 7600EZ for future billing on IFOs

API

UI

EZ

# Recommendations for Options A-D

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- Partners must agree on terms, including but not limited to:
  - GT&C with appropriate Order Originating Partner Indicator
  - FOB Point and Constructive Receipt Days
  - Number of Lines and Schedules
  - Unit of Measurement, Quantity and Unit Price
  - Prepaid Performance Quantity (PPQ) for Advances
- Consider negotiating one file per partnership (Requesting Agency/Service Agency)
  - Separate files facilitate a secure e-mail exchange of data between two partners



*Note: Creating an Order is still a 2-step process, whether it's new or in-flight*

- 1. Partner 1 creates and approves the Order*
- 2. Partner 2 updates and approves the Order*

# Recommendations for Options A-D (cont.)

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- Each pair of trading partners should plan their IFO strategy
  - When applicable, each agency should talk with their ERP vendor about what options are available to them
    - Your system may not be capable of pulling open IFO and/or Advance PPQ
  - An agency should talk with each of their trading partners to see which combination of options will be most effective
    - Best option for requesting side may be different than servicing side
  - Consider testing the options with a few Orders before committing full resources to the IFO effort
  - Negotiation of IFO data may occur over longer stretches of time
  - Agreement on remaining balances and Advance PPQs should occur “just in time” for creating the IFOs
  - Two partners should work quickly to get their IFOs to open status

# API Options (A and B)

- Application Programming Interface (API) Prerequisites
  - Required data must be agreed upon, but strict (CSV) format is not necessary
  - Agencies should discuss options with their ERP vendor
  - Close out existing Orders pointing towards IPAC
- API Options
  - A. Manually convert IFOs in your ERP system to look like new ones
    - Open replacement Orders, using remaining (unpaid) balances
      - Fully performed lines can be omitted or marked as cancelled
    - ERP system will push Orders **and optionally Advance PPQ** to G-Invoicing
      - Advance Prepaid Performance Quantity **will be** supported through the API
  - B. Solicit help from your ERP provider or internal IT department
    - Convert IFOs within agency system
    - ERP system will push Orders to G-Invoicing



## *Recommendation*

- *Agencies should talk with their ERP vendor and/or IT department about what API options are available to them*

# User Interface Option C



## C. Enter each IFO directly into G-Invoicing's UI

- Required data must be agreed upon, but a strict format is not necessary
- UI provides immediate feedback when data is invalid
- New feature will be added to identify Advance Performance as Prepaid
- Adjustments to Advance PPQ will be allowed through the UI
  - Adjustment may move funds or not, at user's discretion

## *Recommendations*

- *Agencies should talk with their ERP vendor about what options are available to them*
  - Your system may not be capable of pulling open IFO and/or Advance PPQ
- *Agencies should talk with their trading partners to see which combination of options will be most effective*
- *Agencies should test their choices with a couple IFOs before committing full resources to the IFO effort*

# User Interface Option D



## D. Order Upload feature – Proposed process

1. Agree to both partners' data in one strictly formatted spreadsheet
2. Partner 1 includes their Order Tracking Number for each Order
3. Partner 1 uploads or drops off the file for processing
4. Partner 1 reviews results then cleanses data and repeats 3-4 until error free
5. Partner 1 creates Orders in Shared with Partner 2 (SP2) status
6. Partner 1 reviews the Order “batch” and reverses the upload, if necessary
7. Partner 1 may download Order file for Partner 2 to upload
8. Partner 2 reviews the Orders and asks Partner 1 to reverse, if necessary
9. Partner 2 updates the file provided by Partner 1, if necessary
10. Partner 2 uploads the file for processing
11. Partner 2 reviews results and cleanses data, repeating 9-10 until error free
12. Partner 2 moves Orders to Open status and uploads PPQ if applicable
13. Partners 1 & 2 review open Orders + Advance PPQ, adjusting as necessary

### *Recommendations*

- *Same recommendations as noted for Option C (Slide 6)*

# Option E – 7600EZ

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- Not technically an In-Flight Order, but can be used as substitute
- Two partners agree that all future billing will be < \$10,000
- Establish a GT&C to support EZ invoices
- Servicing Agency sends EZ Invoices through API or enters them through G-Invoicing's UI
- Buy/Sell transactions sent directly to IPAC will be considered noncompliant



*Note: If you submit an invoice > \$10k, the standard EZ process will return an error*

# IFO Options Matrix

- Which combinations of IFO options work best for both partners?

		Partner 1				
		A	B	C	D	E
Partner 2	A	Replacement Orders look like new. Adv PPQ via G-Invoicing API or UI.	Replacement Orders look like new. Adv PPQ via G-Invoicing API or UI.	Adv PPQ via G-Invoicing UI or API. Can partner 1's ERP handle IFOs/PPQ?	Adv PPQ via G-Invoicing UI or API. Can partner 1's ERP handle IFOs/PPQ? Partner 1 may lose ability to reverse.	Both partners must agree upon EZ for it to be a viable option.
	B	Replacement Orders look like new. Adv PPQ via G-Invoicing API or UI.	Replacement Orders look like new. Adv PPQ via G-Invoicing API or UI.	Adv PPQ via G-Invoicing UI or API. Can partner 1's ERP handle IFOs/PPQ?	Adv PPQ via G-Invoicing UI or API. Can partner 1's ERP handle IFOs/PPQ? Partner 1 may lose ability to reverse.	Both partners must agree upon EZ for it to be a viable option.
	C	Adv PPQ via G-Invoicing UI or API. Can partner 2's ERP handle IFOs/PPQ?	Adv PPQ via G-Invoicing UI or API. Can partner 2's ERP handle IFOs/PPQ?	Good for small number of Orders. Partners key in Orders + Adv PPQ. Can both ERPs handle IFOs/PPQ?	Adv PPQ entered into G-Invoicing UI. Can partner 1's ERP handle IFOs/PPQ? Partner 1 may lose ability to reverse.	Both partners must agree upon EZ for it to be a viable option.
	D	Adv PPQ via G-Invoicing UI or API. Can partner 2's ERP handle IFOs/PPQ? Consider both using option D.	Adv PPQ via G-Invoicing UI or API. Can partner 2's ERP handle IFOs/PPQ? Consider both using option D.	Adv PPQ entered into G-Invoicing UI. Can both ERPs handle IFOs/PPQ? Consider both using option C or D.	Good for large number of Orders. Upload creates Orders and Adv PPQ. Can both ERPs handle IFOs/PPQ?	Both partners must agree upon EZ for it to be a viable option.
	E	Both partners must agree upon EZ for it to be a viable option.	Both partners must agree upon EZ for it to be a viable option.	Both partners must agree upon EZ for it to be a viable option.	Both partners must agree upon EZ for it to be a viable option.	Least amount of effort, but limited to \$10,000 Order balance. Works for API or UI.

Options	A: Manually convert IFOs in your ERP system to look like new ones
	B: Solicit help from your ERP provider or IT department to convert IFOs
	C: Enter each IFO directly into G-Invoicing's user interface
	D: Use new Order Upload feature
	E: Conditionally, use 7600EZ for future billing on IFOs

*Recommendations:* Talk to your ERP vendor about what options work best for your situation, then test those options.

*Direct entry of PPQ into G-Invoicing should not be made if either partner's ERP system is unable to pull down and process PPQ.*

*Talk to your partners about what options will work for their agencies, then test the option(s) that you and your partners have chosen.*

- Aside from option E, any combination can work
- Be sure to talk with your vendor, talk with your partners, and test before you commit major resources

# Prepaid Performance Quantity (PPQ)

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- Options A-B (API) support Advance PPQ
  - New parameter will identify PPQ, handled like Option C
- Option C (G-Invoicing UI)
  - UI will allow users to flag an Advance Performance as “Prepaid”
    - Prepaid Performance supported for Advances only
    - G-Invoicing will assign status PRE (i.e., Prepaid)
    - Advance PPQ will not go to PND (pending) or STL (settled) status
    - Subsequent adjustments to Advance PPQ are made in PND or PRE status, at the user’s discretion
- Option D (Order Upload feature)
  - Optional PPQs are:
    - Only for Advance Performance
    - Created immediately after all Orders pass validations
    - Created if all of Partner 2’s PPQs match Partner 1’s
      - Otherwise, the upload will stop and show the PPQs that don’t match
    - Adjusted through the Performance UI (see Option C above)
- Option E (EZ) does not support PPQ

# IFO Examples

## Advanced

In-Flight Order = \$1,000,000  
 Adv = \$750,000  
 Div = \$400,000

Replacement Order of  
 \$600,000 entered or uploaded  
 directly into G-Invoicing<sup>1</sup>

Prepaid Advance of \$350,000  
 created in G-Invoicing<sup>1</sup>

Use Case: Adjust prepaid  
 Advance by \$-50,000.  
 Adjustments to prepaid  
 Performance (in G-Invoicing)  
 can optionally return funds.

## FOB Source

In-Flight Order = \$1,000,000  
 Div = \$400,000  
 Rcv = \$200,000

Replacement Order for  
 \$600,000 balance made in  
 ERP system or directly in  
 G-Invoicing<sup>1</sup>

No Performance History

<sup>1</sup> Assumes that agency is not using ERP system, or their  
 ERP system can pull down Order or prepaid Performance.

## FOB Destination

In-Flight Order = \$1,000,000  
 Div = \$400,000  
 Rcv = \$200,000

Replacement Order for  
 \$800,000 balance made in  
 ERP system or directly in  
 G-Invoicing<sup>1</sup>

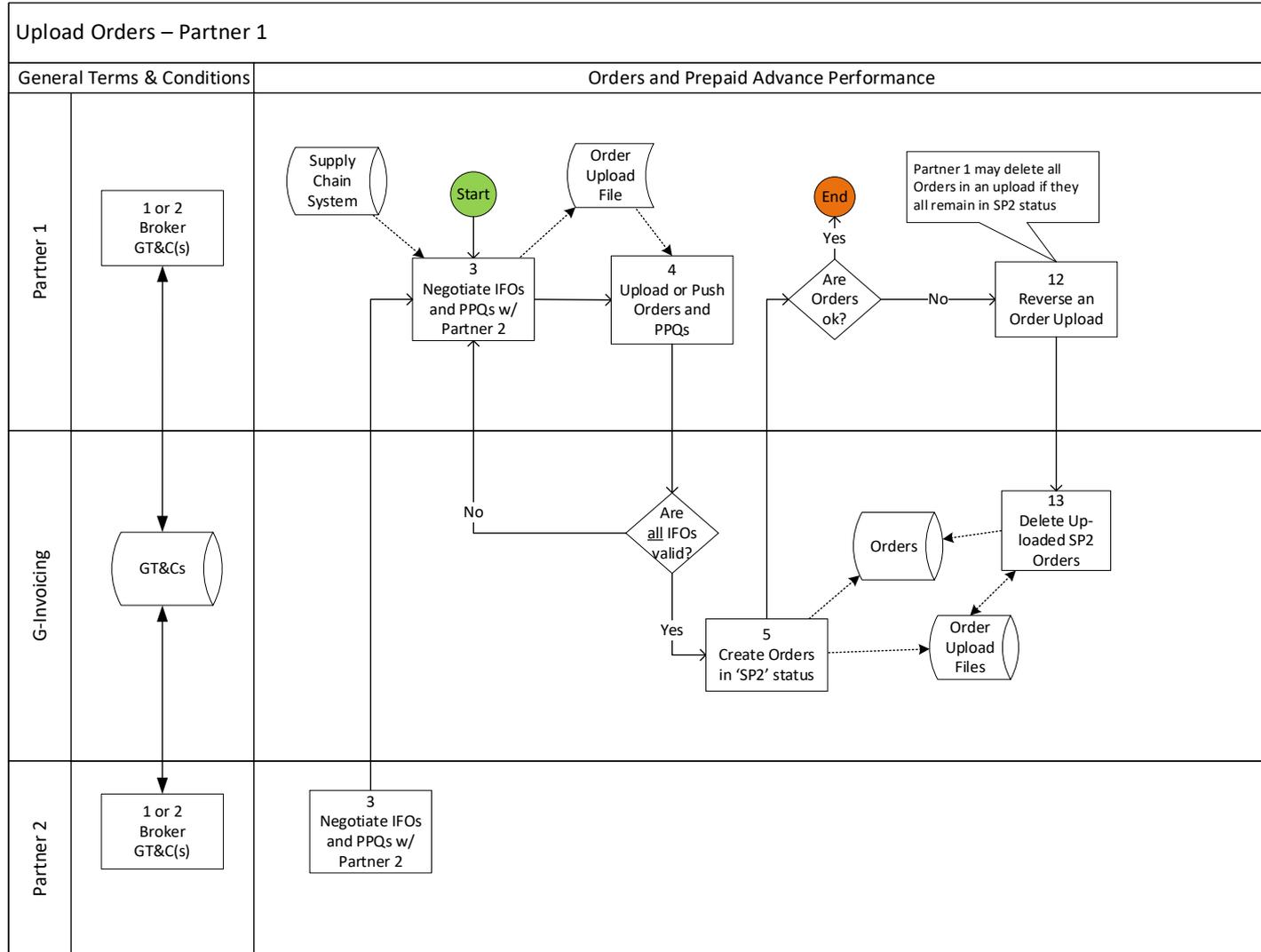
Servicing agency must  
 provide Delivered/Performed  
 of \$200,000 to support  
 receipt

# Appendix D: Order Upload Details

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- Option D Example: Both partners agree to use Option D, but not all Orders are approved by Partner 2
  1. Partner 1 uploads 60 In-Flight Orders in SP2 status, all for Partner 2
  2. Partner 1 uploads 40 more
  3. Partner 2 notices 10 they disagree with (out of the 100 SP2 Orders)
    - Method 1: They talk, then Partner 1 deletes all 100 and starts over
    - Method 2:
      - 1) Partner 2 rejects the 10 through UI (Option C) or API (Option A)
      - 2) Partner 2 uploads the 90 good ones (Option D)
      - 3) Partner 1 modifies the 10 bad ones, or uploads the corrected 10
- Assumptions:
  - Both partners either have no ERP system or their system can pull down open Orders for processing
  - Users for each partner have been granted access to upload Orders directly into G-Invoicing
- The remaining slides further describe Option D
- Details are intended for developers and agency users who are considering using Option D

# Appendix D: Order Upload – Partner 1



# Appendix D: Partner 1 Upload (Step 4)

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- Every Order in the upload file must pass all validations for SP2 status (Shared with Partner 2) before any Orders can be uploaded
  - Multiple errors per Order will be returned, but not necessarily all errors at once
    - Some validations are conditional on other data values
- The size of the Upload Order file will be capped at 25mb
  - Small file sizes better support the one fail / all fail approach
- Data contained in Order Upload files will be staged in G-Invoicing
  - Errors and other messages will be retained, and associated with the file upload
- Once cleansed, Partner 1 will request IFOs be uploaded in SP2 status
  - Partner 2's Order Tracking Number will be set to 'Order Upload' + Batch ID
    - Temporarily identifies Orders created via the Order Upload feature
    - Users can filter/export their Order Summary list by ALC, Tracking ID and Status
    - Partner 2 may leave their Order Tracking Number as 'Order Upload' + Batch ID, or override it
- Partner 1 may reverse an upload
  - This physically deletes the SP2 Orders associated with that upload
  - Reversal only allowed if all Orders in the upload still in SP2 status



# Appendix D: Partner 2 Upload (Step 8)

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- Options A through D (from slide 2) are available for Partner 2
  - They can approve Orders through the API, in the UI or by uploading a file
  - If Partner 2 chooses Option D:
    - The SP2 Orders (created by Partner 1) can be exported from G-Invoicing
    - They may obtain Partner 1's Order Upload file (outside of system)
      - G-Invoicing will add the new Order Numbers into the exported SP2 Order File
- If Partner 2 finds disagreeable SP2 Orders, they have two options:
  1. Ask Partner 1 to reverse the entire upload, correct it and reprocess it
    - Only possible if all Orders still in SP2 status
  2. Upload the Orders they approve of, and reject the others via UI or API
    - Partner 1 may then modify the rejected Orders or submit new ones
- Every Order in the upload file must pass all validations
  - Partner 2 must supply their data and agree with Partner 1's PPQs
  - Prepaid Advances will be created for the agreed-upon Orders and PPQs
  - PPQ is optional, and zero is allowed, for which no Performance is created

# Version History

Version	Date	Release	Description
v0.1	11/30/2021	TBD	Original version, reviewed by Treasury, CGI and Oracle
v0.2	12/7/2021	TBD	Merged new presentation format in with technical details
v0.3	12/15/2021	TBD	Raised questions on viability of PPQ following vendor reviews
v0.4	12/22/2021	TBD	Highlighted issues to be resolved and created discussion slide (17)
v0.5	1/11/2022	TBD	Proposed solutions to PPQ issues in prep for talking with vendors
v0.6	2/7/2022	TBD	Single PPQ for Advances, and added IFO Options matrix
v0.7	2/10/2022	TBD	Following internal FRB and Treasury reviews
v0.8	2/14/2022	TBD	Changed IFO flag to 'Order Upload' using Agency Tracking Identifier
v0.9	2/17/2022	TBD	Revised following Treasury review
v1.0	2/24/2022	TBD	Updated IFO Options Matrix following Treasury review. Published.
v1.1	4/25/22	5.0	Advance PPQ will be supported via API. Option D steps have changed.
v1.1.1	5/2/22	5.0	Corrected slide 9 options to include Advance PPQ via API