GST e-invoice/IRN System

Detailed Overview

A. e-invoice - Background:

The GST Council, in its 37th meeting held on 20th September, 2019, approved introduction of electronic invoice ('e-invoice') in GST in a phased manner. Accordingly, steps have been initiated to introduce 'e-invoicing' for reporting of Business to Business (B2B) and export invoices. GST Council, in its 39th meeting, held on 14th March, 2020, further recommended certain classes of registered persons to be exempt from issuing e-invoices.

Following classes of registered persons have been exempted from issuing e-invoices:

    a. Special Economic Zone Units

    b. insurer or a banking company or a financial institution, including a non-banking financial company

    c. goods transport agency supplying services in relation to transportation of goods by road in a goods carriage

    d. Suppliers of passenger transportation service

    e. Suppliers of services by way of admission to exhibition of cinematograph films in multiplex screens

B. e-invoice – Advantages:

e-invoice has many advantages for businesses such as *Auto-reporting of invoices into GST return, auto-generation of e-way bill (where required).*

e-invoicing will also facilitate *standardisation and inter-operability leading to reduction of disputes among transacting parties, improve payment cycles, reduction of processing costs and thereby greatly improving overall business efficiency.*

Benefits of e-invoice from GST perspective are enumerated below:

Area	Outcome
Automation of reporting documents for various compliances in GST	• One time reporting of B2B invoice data in the e-invoice form will reduce the reporting of the same in multiple forms (GSTR-1, e-way bill etc.). • e-way bill can also be generated using e-invoice data. GSTR-1 can also be auto-populated with the e-invoice data. • It will become part of the business process of the taxpayer. • Substantial reduction in transcription errors as same data will get reported to tax department as well as to buyer to prepare his inward supplies (purchase) register. • On receipt of information through GST System, buyer can do reconciliation with his Purchase Order
Reduction of tax evasion	• Complete trail of B2B invoices. • System-level matching of input credit and output tax
Fraud mitigation	• Elimination of fake invoices

C. e-invoice – Schema *(Standard format)*:

Presently, businesses are using various accounting/billing software, each generating and storing invoices in their own electronic formats. These different formats are neither understood by GST System nor among the systems of suppliers and receivers. For example, an invoice generated by SAP system cannot be read by a machine which is using 'Tally' system, unless a connector is used. With more than 300 accounting/billing software products, there is no way to have connectors for all.

In this scenario, 'e-invoicing' aims at machine-readability and uniform interpretation. To ensure this complete 'inter-operability' of e-invoices across the entire GST eco-system, an invoice standard is a must. By this, e-invoices generated by one software can be read by any other software, thereby eliminating the need of fresh/manual data entry.

Since, there was no such standard for e-invoice in the country, as a first step, a standard/format for e-invoice has been finalized after detailed consultations with Trade/Industry Bodies *(CII, PHD, FICCI, ASSOCHAM etc.)*, as well as Institute of Chartered Accountants of India (ICAI). Though it is based on international standard (UBL/PEPPOL), it has been customised to cater to Indian business practices and requirements.

The Schema/Format was notified as ***[Form GST INV-1](#)***.

D. e-invoice – Process:

The documents covered by 'e-invoice' system are:

      i.   Invoices
     ii.   Credit Notes
   iii.   Debit Notes

        issued by notified class of taxpayers **to registered persons or for exports,** are currently covered under e-invoice.

Though different documents are covered, for ease of reference and understanding, the system is referred as 'e-invoicing'.

'e-invoicing' is not generation of invoice by a Government portal. **Taxpayers will continue to create their GST invoices on their own Accounting/Billing/ERP Systems. These invoices will now be reported to 'Invoice Registration Portal (IRP)'. On reporting, IRP will generate a unique 'Invoice Reference Number (IRN)', digitally sign it and return the e-invoice. A GST invoice will be valid only with a valid IRN.**

IRP will also generate a QR code containing the unique IRN along with certain other key particulars. The QR code (which can be printed on invoice) enables offline verification of the fact whether the e-invoice has been reported on the IRP or not *(using Mobile App etc.)*

E-invoice schema only mandates what particulars shall be reported in electronic format to IRP so as to receive signed e-invoice from IRP. On successful reporting of invoice in JSON format to IRP, the supplier receives a signed JSON from the IRP which also includes data of a QR code. This payload can be converted to readable format and populated into a PDF file also. If the taxpayer desires, he can print it as paper invoice, as he is doing today, by also placing entity

logo and other information, as needed. The PDF as well as the printed invoice will have to have the QR Code.

Cancellation/Amendment of Reported Invoice :

Where needed, the seller can cancel IRN for an e-invoice already reported within specified time.

Amendment of e-invoice already uploaded on IRP will be done **_only_** on GST portal, while filing GSTR-1. Amendment of invoices is not possible through the IRP.

To begin with, there will be only one IRP, but more IRPs will be added to provide sufficient availability, redundancy, speed and a diversified and distributed service to taxpayers with a choice.

E. e-invoice – Implications for Businesses:

The e-invoicing system won't entail much changes from the way businesses are issuing invoices presently. Businesses would not find much change since they would continue to see the physical or electronic (PDF etc.) output of the invoices in the same manner as it is today.

Necessary changes to enable such reporting of invoices to IRP and obtain IRN, will be made by ERP/Accounting and Billing Software providers in their respective software. The taxpayer can take services of GSPs as well, to report invoice data to IRP.

Multiple modes of reporting e-invoice will be made available so that taxpayer can choose one based on his/her need: *API based and GSP based*. Later, web-based and mobile app-based reporting will also be made available when coverage is increased by reducing the threshold of turnover.

F. e-invoice – Legal Provisions:

For viewing rules/notifications issued on e-invoice, please visit: **https://einvoice1.gst.gov.in**

G. e-invoice – Detailed Work flow:

The overall work flow of 'e-invoice' system is as follows:
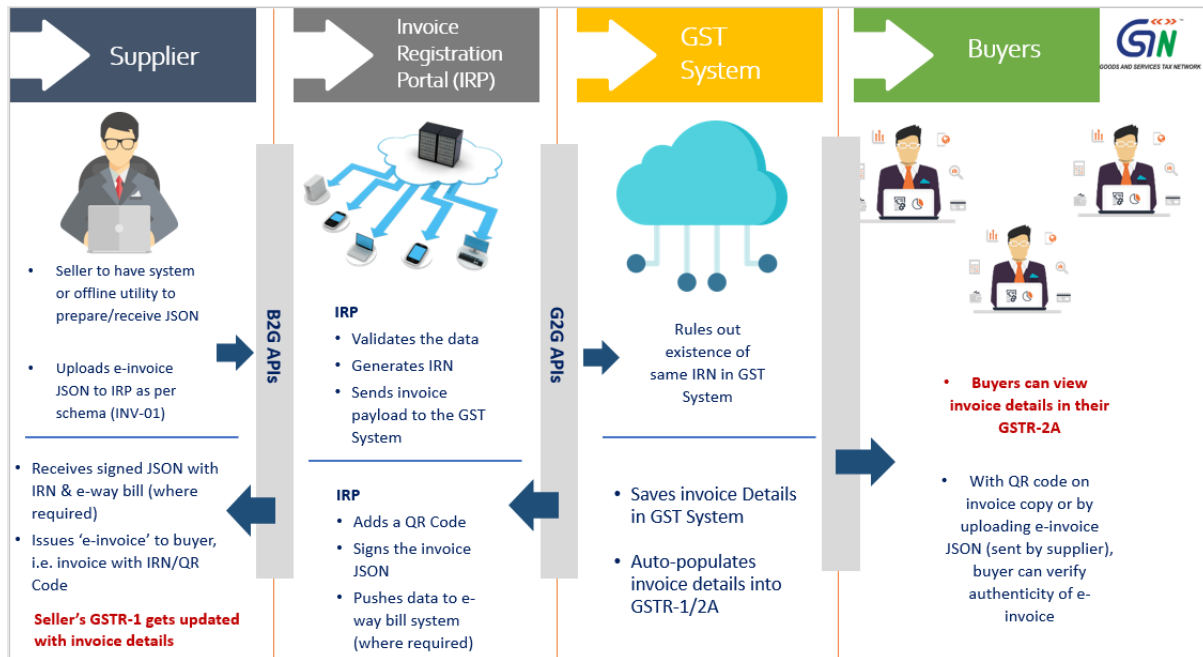
The above flow of e-invoice generation, its reporting/registration and receipt of confirmation can be logically divided into **two major parts:**

A. Interaction between the business (supplier) and the Invoice Registration Portal (IRP).
B. Interaction between the IRP and the GST/E-Way Bill Systems and the Buyer.

A. Seller-IRP Flow of Activities
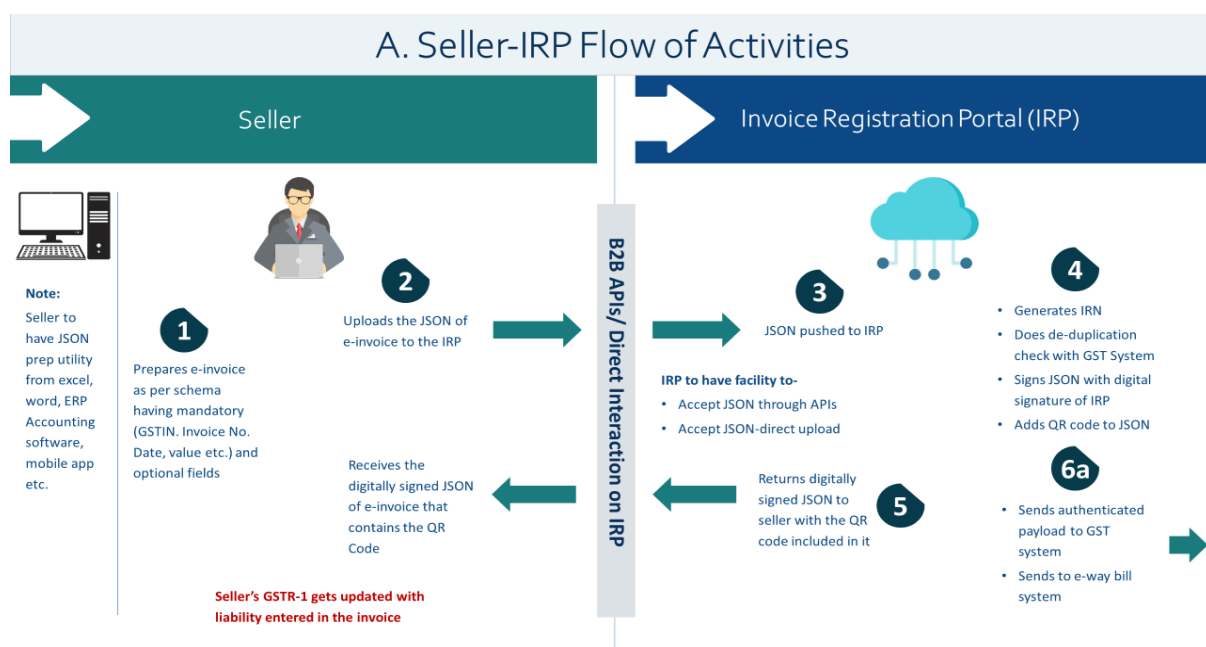
Part A: Flow from Supplier to IRP:

Step 1 is the generation of the invoice by the seller in his own accounting or billing system *(it can be any software utility that generates invoice including those using excel or MS-Word).* The invoice must conform to the e-invoice schema (standard format notified) and have the mandatory parameters. The optional parameters can be according to the business need of the supplier. **The supplier's (seller's) software should be capable to generate a JSON of the final invoice that is ready to be uploaded to the IRP. The IRP will only take JSON of the e-invoice. In case the taxpayer's billing software/ERP does not have capability to generate JSON of e-invoice as per notified Format, she should either ask the software provider to provide the same or take this service from others who are providing this as service.**

Note:

1. *Seller should have a utility that will output invoice data in JSON format, either from his accounting or billing software or his ERP or excel/word document or even a mobile app. [All accounting and billing software companies are being separately asked to adopt the e-invoice standard so that their users can generate the invoice in notified standard from the software and upload the same on the IRP.]*

2. *Eco-system of Fin-Tech companies has been created to provide this as a service. In case ERP/Accounting/Billing software does not provide the service, it can be taken from one of the providers.*

3. *The small and medium size taxpayers* who do not have accounting/billing software *can avail free accounting and billing systems offered by GSTN-empaneled providers. Currently, taxpayers having annual aggregate turnover below Rs 500 Cr are not required to report e-invoice to IRP.*

Steps 2 and 3: To upload and push the e-invoice JSON to the IRP by the seller. The JSON may be uploaded directly on the IRP or also through GSPs or through third party, if software is available for the same.

Step 4: The IRP will generate Invoice Reference Number (IRN), based on Supplier's GSTIN, Document Type, Document Number and Financial Year and check the same from the Central Registry of GST System to ensure that the same document (invoice etc.) from the same supplier pertaining to same Fin. Year is not being uploaded again. In computer science language, IRN is called hash.

On receipt of confirmation from Central Registry, IRP will add its signature on the Invoice Data as well as a QR code to the JSON. The QR code will contain GSTINs of seller and buyer, Invoice number, invoice date, number of line items, HSN of major commodity contained in the invoice as per value, hash etc. ***The hash computed by IRP will become the IRN (Invoice Reference Number) of the e-invoice.*** This shall be unique to each invoice and hence be the unique identity for each invoice for the entire financial year in the entire GST System for a taxpayer. [GST System will create a central registry where hashes sent by all IRPs will be kept to ensure uniqueness of the same]. Currently, GST System uses similar logic to ensure uniqueness of each B2B invoice which is uploaded as part of GSTR1.

In case the same document has been uploaded earlier, the IRP will reject it with an error code, back to the supplier.

Step 5 will involve returning the digitally signed JSON with IRN back to the seller along with a QR code.

Step 6 will involve sharing the uploaded data of document (invoice etc.) with GST and e-way bill system.

Part B: Flow from IRP to GST System/E-Way Bill System & Buyer:

The following diagram shows how e-Invoice data would be consumed by GST System for generation of e-way bill or populating relevant parts GST Returns, stated in Step-6 above.

B. IRP-GST System Flow of Activities
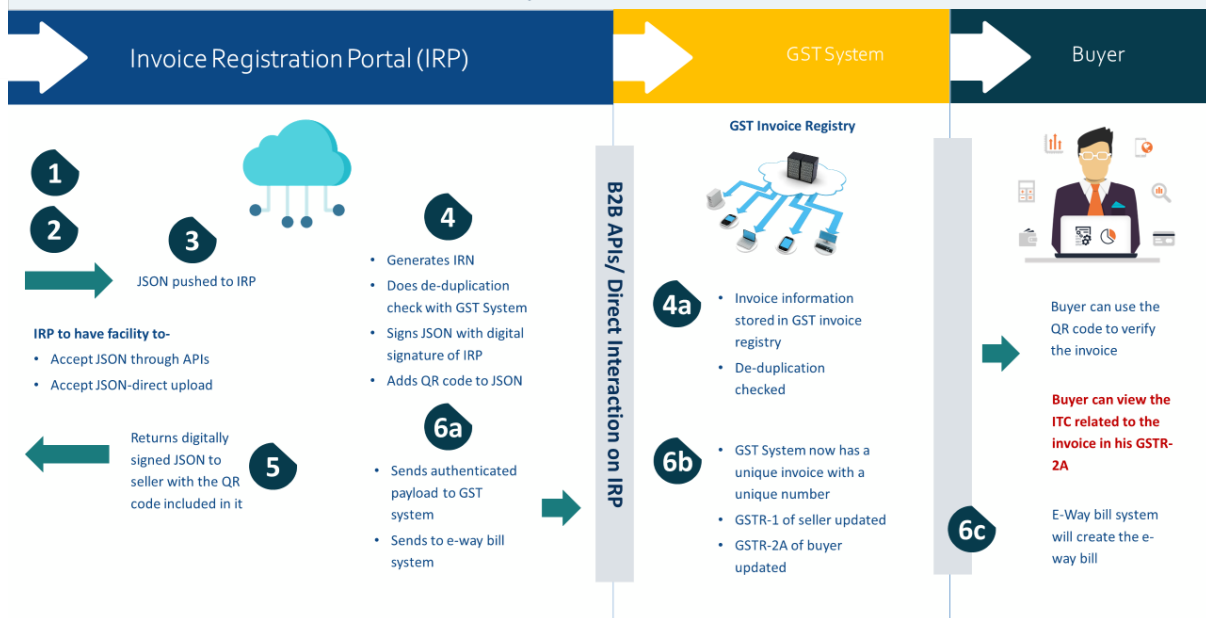
Step 6(a) will be to send the signed and authenticated e-invoice data along with IRN (same as that has been returned by the IRP to the seller) to the GST System as well as to E-Way Bill System.

Step 6(b) The GST System will update GSTR-1.

Step 6(c) The e-invoice schema includes parameters e.g. 'Transporter ID' and 'Vehicle Number', etc. that are required for creating and generating e-way bills. These can be entered if available with seller, at the time of generation of e-invoice so that e-way bill can be created using this data without any further requirement of data entry by the user. The e-invoice reporting software already allows reporting of e-invoice and generation of e-way bill with same data.

Note 1: The e-invoice standardized schema has mandatory and optional items. The e-invoice shall not be accepted in the GST System unless all the mandatory items are present. The optional items are to be used by the seller and buyer as per their business need to enforce their business obligations or relationships.

Note 2: Currently there is only one registrar (IRP) but very soon one more registrar will be added to provide 100% redundancy. Seller may send his e-invoice for registration to more than one registrar. The IRP will perform a de-duplication check with central registry maintained

at GST System to ensure that the IRN that is generated is unique for each invoice. Therefore, the IRP shall return ONLY ONE registered IRN for each invoice to the seller. In case of multiple registrars (more than one IRPs) only one IRP will return a valid IRN to the seller. Except one, all other IRPs will reject the request of registration.

Note 3: The QR code will enable quick view, validation and access of the invoices from the GST system from hand held devices.

H. e-invoice – Salient Features

a. Unique Invoice Reference Number (IRN):

The unique IRN will be based on the computation of hash of GSTIN of generator of document (invoice or credit note or debit note), Financial Year, Document Type and Document number like invoice number. This hash will be as published in the e-invoice standard and unique for this combination. This way hash will always be the same irrespective of the registrar who processes it.

To ensure de-duplication, the registrar will be required to send the hash to Central Registry of GST System to confirm whether the same has been reported already. In case, it has been reported by another registrar *(as and when more registrars/IRPs are added)* and the Central Registry already has the same IRN, then the registrar will reject the registration and inform the sender by sending appropriate error code. Only unique invoices from a taxpayer will be accepted and registered by the registrar.

b. Digital Signing of e-Invoice by Invoice Registration Portal (IRP):

After the invoice data will be uploaded on the IRP (Invoice Registration Portal), the IRP will generate the hash (as the IRN) and then digitally sign it with the private key of the IRP. The IRP will sign the complete e-invoice JSON payload (that includes the IRN/hash). Thereafter, this e-invoice signed by the IRP will be a valid e-invoice for the seller and can be used by the seller for his business transactions.

c. QR Code with key particulars:

The IRP will also generate a QR code containing the unique IRN (hash) along with some important parameters of invoice and digital signature so that it can be verified on the central

portal as well as by a mobile App. This will be helpful for tax officers to verify the authenticity of invoice during road checks when Internet connectivity may not be available all the time.

The QR code will consist of the following key particulars of e-invoice:

    a. GSTIN of Supplier

    b. GSTIN of Recipient

    c. Invoice number, as given by Supplier

    d. Date of generation of invoice

    e. Invoice value (taxable value and gross tax)

    f. Number of line items

    g. HSN Code of main item *(line item having highest taxable value)*

    h. Unique IRN (Invoice Reference Number/hash)

    i. Date of generation of IRN

<u>***Note:***</u> *It is the signed QR code which will be easily verifiable by taxpayers as well as Tax Officers to validate whether the e-invoice has been reported to the IRP and accepted by it, as it will contain both the IRN as well as the Digital Signature of IRP as proof of having received and registered the e-invoice. If the signed JSON is tampered then e-invoice will become invalid and the digital signature will fail.*

A Mobile App is provided for anyone to authenticate the QR code of the e-invoice and verify its basic details.

One can also verify the authenticity or correctness of e-invoice by uploading the signed JSON file or Signed QR Code (string) on e-invoice portal.

*****Note:*** *IRP will not store invoices. In order to achieve speed and efficiency, the IRP is a lean and focused portal for providing invoice registration and verification service, generation of IRN and the QR codes.*

d. Multiple Registrars/IRPs:

Multiple registrars (IRPs) will be put in place to ensure 24X7 operations without any break. To start with, NIC will be the first Registrar. More registrars (IRPs) will be added in due course.

e. Standardization of e-Invoice:

A technical group constituted by the GST Council Secretariat has drafted standards for e-invoice after having industry consultation. The e-invoice schema/template is since notified as **Form GST-INV-1**.

f. Multiple Modes for reporting e-invoice:

Multiple modes are available so that taxpayer can use the best mode based on his/her need:

     a. *API based (integration with Taxpayer's System **directly**)*
     b. *API based (integration with Taxpayer's System **through GSP/ASP**)*
     c. *Free Offline Utility ('Bulk Generation Tool', downloadable from IRP)*

Web-based / mobile app-based modes will also be provided in future.

g. Printing of e-Invoice:

The supplier receives signed JSON from the IRP. This payload can be received, converted to readable format and populated into a PDF file also. If the taxpayer desires, he can print it as paper invoice, as he is doing today, by also placing entity logo and other information, as needed. E-invoice schema only mandates what will be reported in electronic format to IRP and to receive the corresponding signed e-invoices from the IRP. While printing, QR code should also be printed, as it is one of the mandatory particulars under Rule 46 of CGST Rules.

h. Cancellation of e-invoice:

The seller can initiate cancellation of IRN of the e-invoice already reported, if that invoice is required to be cancelled by him/her. The cancellation of an invoice will be done as per procedure given under accounting standards and any other applicable rules/regulations. The cancellation will be allowed within specified time after generation of IRN.

The cancellation of e-invoice will be done by using the 'Cancel IRN' API (published on the e-invoice sandbox portal). The API will be a POST API and will require the IRN that is to be cancelled as the key parameter of the payload. Please refer the e-invoice sandbox portal for more details on the specifications and how to exchange and handle the payload and responses, respectively. The invoice number used for a cancelled invoice can't be used again.

i. Amendment of e-invoice already reported:

Amendment is possible through IRP. Amendment of e-invoices already uploaded on IRP will be done **only** on GST portal, while filing GSTR-1.

I. e-invoice – Sandbox/API Testing:

Please visit: https://einv-apisandbox.nic.in

J. e-invoice – Resources, Help & Feedback

FAQs:

e-invoice - FAQs on Law/Procedure

e-invoice - FAQs on IRP *(Log in, Registration, User Management etc.)* / Offline Utility

e-invoice - FAQs on APIs / Sandbox

Awareness Videos:

Visit: ***'e-invoice' play list on GSTN's YouTube Channel***

Help Desk:

For any technical issue with APIs/Sandbox/e-invoice portal/Offline Utility etc., please raise a ticket with ***GST Self-Service Portal***

Feedback/Suggestions:

Any other feedback & suggestions on e-invoice are welcome at ***e-invoice@gstn.org.in***

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