

GST 2.0: Navigating AI-Driven Compliance, Faceless Audits and the Techno-Legal Frontier

India's GST regime has evolved from a stabilisation phase "GST 1.0" into a technology driven "GST 2.0", powered by Artificial Intelligence, Machine Learning, and real time data analytics. This article examines three pivotal technological interventions, AI-driven fuzzy matching invoice reconciliation, decentralised faceless audits, and NLP-based predictive classification engines that collectively redefine compliance under the GSTN framework. While these tools enhance revenue buoyancy and curtail fraudulent Input Tax Credit claims through Social Network Analysis, they simultaneously create structural tensions with taxpayers' constitutional due process rights under Section 16(2)(c) and Rule 86A. Benchmarking India's model against the European Union's (EU's) VAT in the Digital Age (ViDA) initiative reveals an enforcement heavy approach that must be balanced with institutional trust. In this automated environment, the Company Secretary, as a "Techno-Legal Strategist," is pivotal, serving as a critical intermediary between algorithmic governance and administrative equity on India's road to "Viksit Bharat 2047".



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The strategic plan of the Ministry of Finance for "Viksit Bharat 2047" (NITI Aayog, 2023) accentuates the requirement for a tax system that is not only efficient, seamless and effective but also digitalised. The concept of digitalising tax process relies on the strong digital infrastructure provided by the Goods and Services Tax Network (GSTN). The GSTN has advanced from its initial role of processing transaction data to managing trillions of interconnected data points, thereby integrating regulatory compliance into corporate Enterprise Resource Planning (ERP) systems.

For the Company Secretary, this digital transformation substantially alters the professional jurisdiction. The modern Company Secretary can no longer afford to remain confined as a "filing officer" overseeing traditional submissions. The role necessitates a transformation into a "techno-legal strategist" proficient in deciphering complex algorithmic risks and advising boards on automated enforcement frameworks.

This study evaluates the operational and legal effectiveness of three fundamental technological interventions: AI-driven invoice matching, decentralized faceless audits, and predictive classification systems. It delves into the inherent structural tensions between the rapidity of automated enforcement and the constitutional entitlements of the taxpayer, offering pragmatic frameworks for corporate governance professionals who are navigating this automated regulatory landscape.

INTRODUCTION

The Goods and Services Tax (GST), introduced in 2017, has redesigned the landscape of India's fiscal federalism. In the path towards creating a common national market, it has been successful in alleviating the cascading trade barriers. The indirect tax regime has progressed from "GST 1.0", a phase of stabilisation challenges, rationalisation of rates and technological teething issues to "GST 2.0", powered by big data analytics, Machine Learning (ML) and automated enforcement mechanisms.

AI-DRIVEN INVOICE MATCHING: BEYOND GSTR-2B AND THE MECHANICS OF FUZZY MATCHING

a. The Evolution of the Matching Principle and Fuzzy Logic

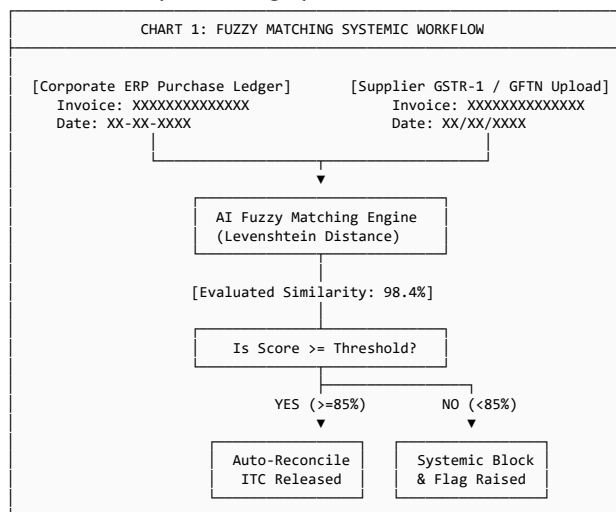
The "matching principle" is a core structural element of the invoice-based Value Added Tax (VAT) regime and acts as a statutory check to ensure that the Input Tax Credit (ITC) is allowed only if the tax corresponding to

the same has been deposited to the public treasury by the supplier upstream. This principle gave rise to much litigation in the early days of GST implementation because of the inherent conflict between the dynamic GSTR-2A and the static GSTR-3B filings. The e-invoicing ecosystem has been integrated with the e-way bill network in real time, leading to continuous automated reconciliation processes on and from 2026.

The primary enhancement in GST 2.0 is the shift from stringent validation of alphanumeric data strings towards adopting AI-driven Fuzzy Matching techniques. Often, minor but not fraudulent syntactical differences, such as added spaces, transposed characters in serial numbers, or differing date formats between a purchaser's paperwork and the vendor's stopped legitimate credit claims from passing the standard validation frameworks.

Alm & Blawatsky (2021) explicate that fuzzy matching techniques use machine learning algorithms to calculate the statistical probability that two different entries are linked to the same transaction. When the probability score is above a preset regulatory threshold, the system automatically reconciles the data stream, avoiding systemic alarms and relieving the administrative burden of manually correcting minor clerical errors.

Chart 1: Fuzzy Matching Systemic Workflow (Redacted)



Source: Authors' own illustration based on GSTN operational framework and AI fuzzy matching (Levenshtein Distance) methodology.

b. Social Network Analysis (SNA) and Bill Passing Syndicates

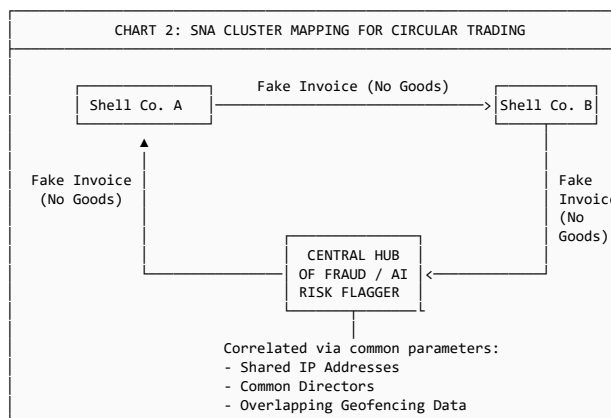
The GSTN uses advanced SNA techniques to correlate the macroeconomic structure of trade flows, going beyond simple bilateral ledger reconciliations. In the past, fraudulent groups have taken advantage of the system's shortcomings by establishing complex chains of shell companies that carried out 'circular trading', the practice of intentionally

producing counterfeit invoices without any actual movement of goods orchestrated to inflate the profits of a company, or to wrongfully claim and use ITC.

This issue is addressed by the SNA engine which looks at multi-dimensional network nodes. The algorithm sees transactions as graphical objects, tracking the speed, volume and geometric configurations of credit flows. The Central Board of Indirect Taxes and Customs (CBIC) (2025) indicates that the use of SNA models enables the department to reveal hidden interdependencies and identify the "Central Hubs" of systemic fraud. This is achieved by correlating discrete data parameters as follows:

- **IP Address Tracking:** Identifying instances where dozens of supposedly independent corporate entities upload invoices from identical IP addresses.
- **Common Directorship Overlaps:** Uncovering hidden patterns where dummy directors or common signees are recycled across separate, high volume trading nodes.
- **Geofencing Conflicts:** Detecting anomalies where overlapping geofencing records indicate that physical delivery of underlying goods is logistically unfeasible over the declared timeframe.

Chart 2: SNA Cluster Mapping For Circular Trading



Source: Authors' own illustration based on CBIC (2025) Social Network Analysis and Data Analytics for Tax Enforcement framework.

c. Statutory Friction: Section 16(2)(c) and Rule 86A

The automated application of tax regulations is susceptible to conflict with traditional principles of fairness. Section 16(2)(c) of the Central Goods and Services Tax (CGST) Act states that a registered supplier can claim ITC provided the tax on the supply has been deposited to the Government. In the case of GST 2.0, this provision is applied more strictly with the aid of risk assessment.

The GSTN engine continuously update a dynamic Risk Score for each registration. If there are some anomalies in the operational conduct of a vendor such as sudden spike in revenue without commensurate augmentation of infrastructure or consistent delays in filing of GSTR-3B despite healthy generation of e-invoices, the risk score is increased. When the risk level exceeds a predefined threshold, the system automatically initiates a Provisional Credit Block as per Rule 86A of CGST Rules. In this context, Osoba & Welser (2020) raise concern on the actions of automated algorithms that are devoid of the administrative adaptability required to acknowledge intricate commercial realities, frequently equating benign business liquidity challenges with deliberate tax evasion. This situation engenders structural friction between the swift nature of automated enforcement and the principle of fairness in law enforcement.

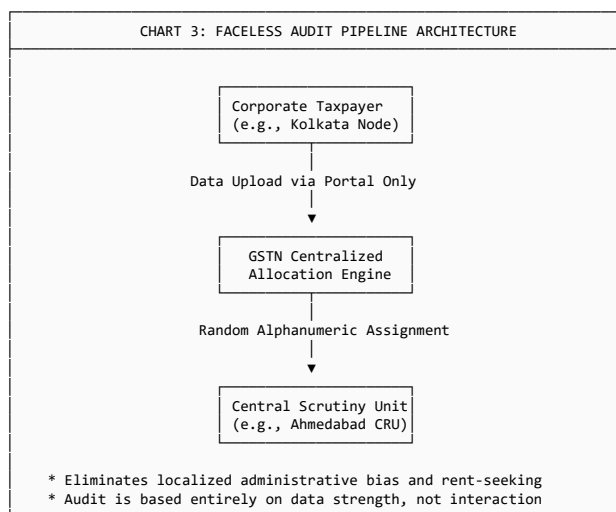
FACELESS AUDITS: EFFICIENCY VS. THE PRINCIPLES OF NATURAL JUSTICE

a. The Structural Mechanics of Geographic Decoupling

The GST department has successfully implemented its broad Faceless Audit process by end 2024, based on centralised electronic systems used in direct taxation. This paradigm shift replaces the traditional physical interface between corporate tax executives and regional tax officials with local interactions in a centralised, algorithmically governed audit framework.

Centralised risk profiles identify cases for in depth examination, and a proprietary distribution algorithm systematically assigns cases to a Centralised Review Unit (CRU). This methodology is based on geographic decoupling, which means a company based in Kolkata can have its books audited by an audit team based in Ahmedabad, with all the interaction happening through the secured GST portal.

Chart 3: Faceless Audit Pipeline Architecture



Source: Authors' own illustration based on CBIC (2024) *Manual on Faceless Audit and Assessment in GST*.

This structure represents a tangible improvement in institutional integrity from the corporate governance perspective. It reduces local administrative bias and eradicates possibility for informal inter-personal negotiation. This shifts the auditing procedure to a neutral, fact based process, where the results depend exclusively on the empirical precision of the presented digital records.

b. The Legal Challenge of “Nuanced Interpretation” and Written Advocacy

Faceless assessments are good for regular computational verifications such as whether a company's external liabilities match with the e-way bills generated by them. However, they face substantial challenges in terms of intricated legal interpretations. Tax legislation is often interpretative in nature especially with respect to classification of “Composite Supplies” or complex “Works Contracts” in infrastructure projects.

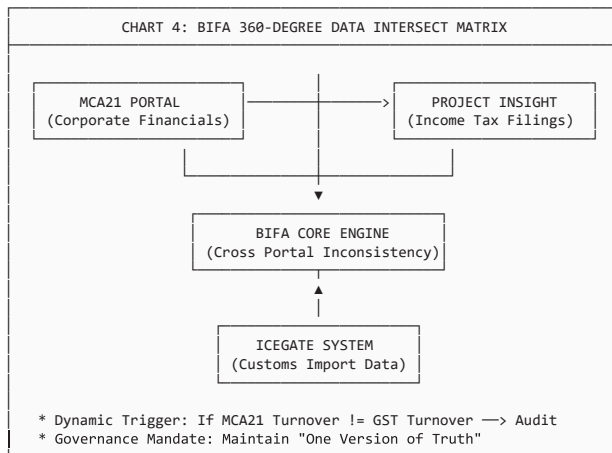
This limitation was addressed in the landmark ruling of **Bharat Mint & Allied Chemicals vs. Commissioner (2022)**, where the High Court emphasized that Section 75(4) of the CGST Act makes a personal hearing mandatory whenever an adverse order is contemplated. Furthermore, in **Samsung India Electronics Pvt. Ltd. vs. DCIT (2022)**, the court observed:

“A faceless assessment scheme does not mean that a person is deprived of a personal hearing. Technology must function as an operational enabler, not a structural barrier to the principles of natural justice.”

The professional obligations of the Company Secretary are thus transformed in this faceless regulatory framework. Without a physical place for the verbal articulation of the business models, the persuasive power of the professional defence is completely dependent on the quality of the written submissions. Each corporate response is a legal document that must be carefully constructed, complete, data supported, and self-contained. The Company Secretary must ensure that exact legal drafting corresponds to consistent data presentation so that complex corporate processes can be easily comprehended by remote, cross jurisdictional evaluators.

c. Business Intelligence and Fraud Analytics: The Cross Portal Analytical Engine

At the heart of the faceless audit system sits the Business Intelligence and Fraud Analytics (BIFA) platform. BIFA is not just another database. Rather, it is a powerful tool that pulls data from different government sources, weaving together a detailed, digital profile of every corporate taxpayer. If a company reports an aggregated revenue figure to the Registrar of Companies (ROC) via the MCA21 portal that deviates from the cumulative turnover declared in its monthly GST returns, the BIFA engine automatically identifies the statistical variance and triggers a systemic audit flag.

Chart 4: BIFA 360-Degree Data Intersect Matrix

Source: Authors' own illustration based on GSTN Business Intelligence and Fraud Analytics (BIFA) platform architecture.

REDUCTION OF CLASSIFICATION DISPUTES: PREDICTIVE ENGINES AND NUDGE THEORY

a. Resolving Borderline Classification Conflict

Indirect tax litigation in India has always struggled with intricate disputes over the classification of goods and services under the Harmonized System of Nomenclature (HSN) and Services Accounting Codes (SAC). For years, courts have been tied up with cases hinging on vague definitions such as, whether a snack counts as a traditional 'papad' or processed food product, or if a frozen paratha should get taxed like a regular roti. To tackle this recurring problem, GST 2.0 now uses Predictive Classification Engines (PCE) at the core of e-invoicing. This shift aims to cut down on endless litigation by making classification decisions more consistent.

The Company Secretary has the best opportunity to emerge as a pivotal strategic interpreter facilitating an essential linkage between algorithmic frameworks and the foundational tenets of law. By integrating technological acumen with profound legal knowledge, governance professionals can guarantee that the pursuit of digital efficiency is harmonized with administrative equity.

b. NLP-Driven Nudge Theory and "Algorithmic Consensus"

When a corporate billing operator enters a raw product description into the e-invoice terminal, the PCE uses Natural Language Processing (NLP) models to analyse the text and suggest the correct HSN or SAC code required by law. This real time suggestion system draws from a constantly updated legal database that includes:

- Judicial Precedents: Rulings from the Supreme Court and High Courts.

- Advance Tax Rulings: Decrees issued by the Authority for Advance Rulings (AAR).
- Sectoral Peer Benchmarking: Comprehensive sectoral statistical data that monitors the specific classification codes utilized by over 90% of commercial operators within the same business vertical.

Applying behavioural Nudge Theory, it reduced new systemic classification disputes by 40% between 2024 and 2026 (Department of Revenue, 2026). However, this type of automated consistency brings its own risk: Algorithmic Consensus. If the PCE sets a higher tax rate, say 18%, using cautious peer data, yet the legal team argues, quite convincingly, that a 12% rate is correct, the system tags any override as "High Risk." At this point, the Company Secretary has to do some heavy lifting by weighing the risks and rewards, and then apprise the board whether to stick with the system's safe harbour recommendation (which might make audits easier) or to challenge it and fight for their interpretation of the law.

c. Integration with the Health Security Se National Security Cess Act, 2025

This classification conundrum has been further exacerbated by the enactment of the Health Security Se National Security Cess Act, 2025, which introduces an auxiliary levy on certain luxury and demerit commodities to finance strategic defence infrastructure. PCE algorithms have been enhanced to assess the interplay between the fundamental GST rate and this targeted cess during the real time generation of invoices (Ministry of Finance, 2025). The Company Secretary may take up additional responsibility to ensure that corporate systems are impeccably

synchronized with these automated computations, thereby safeguarding the organization against potential interest claims and penalties under the new regulatory framework.

THE "BLACK BOX" OF AI: A CRITICAL EVALUATION OF SUBSTANTIVE EFFICACY

a. Algorithmic Bias and Structural Self-fulfilment

While the operational benefits of these automated systems such as accelerated refund processing and instant registration turnarounds are clear, their long term value must be evaluated through the lens of administrative justice.

A principal risk associated with automated tax enforcement is Algorithmic Bias. Machine Learning algorithms are developed utilizing historical audit databases. In instances where past enforcement measures

disproportionately, targeted particular sectors such as Real Estate due to historical documentation practices, artificial intelligence systems will persist in identifying that sector as intrinsically high risk. This scenario can engender a self-perpetuating cycle in which specific industries endure constant, automated oversight, while other sectors exhibiting dynamic fraud patterns remain insufficiently analysed. Research disseminated by the World Bank (2025) emphasizes that the integration of artificial intelligence in fiscal governance necessitates the accompaniment of independent, periodic Algorithmic Audits. These evaluations are crucial to ensure that automated risk assessment models do not inadvertently exhibit bias against Micro, Small, and Medium Enterprises (MSMEs) that may present a typical data patterns due to limited digital literacy, rather than a conscious intention to circumvent tax obligations.

b. Procedural vs. Substantive Efficacy

To ensure fiscal stability, it is imperative to establish a distinct differentiation between procedural efficacy and substantive efficacy. The existing GSTN framework accomplishes notable procedural efficiency by enhancing processing velocities and submission deadlines. Nonetheless, substantive efficacy, the ability to reliably ascertain the accurate legal tax obligation continues to require further development.

For example, in the event that a regional telecommunications failure or a central portal dysfunction inhibits a corporate taxpayer from submitting a return punctually, the automated system is devoid of the contextual insight necessary to differentiate between an external technical impediment and a deliberate non-compliance. Automated enforcement mechanisms, including the abrupt annulment of registration or automatic credit suspension through rigidly defined protocols, may function as overly simplistic administrative tools that threaten the continuity of legitimate business activities in response to trivial operational discrepancies.

GLOBAL COMPARISON: INDIA'S DIGITAL TAX JOURNEY VS. INTERNATIONAL BEST PRACTICES

To benchmark India's progress under GST 2.0, it is instructive to compare the GSTN framework with the European Union's **VAT in the Digital Age (ViDA)** initiative (European Commission, 2022). The same appears in Table 1.

Table 1

Evaluation Dimension PDF	India's GST 2.0 Framework	European Union (ViDA) / OECD
Data Architecture	Centralized, real time transaction clearing via unified GSTN.	Fragmented across 27 member states; ongoing challenges with uniform Digital Reporting Requirements (DRR).

Evaluation Dimension PDF	India's GST 2.0 Framework	European Union (ViDA) / OECD
Classification Automation	NLP-driven Predictive Classification Engines embedded at invoice generation.	Mostly decentralized; rely on retrospective audits or customized corporate rulings.
Taxpayer Protections	Enforcement heavy; uses automated provisional credit blocks (Rule 86A).	Broad regulatory "Safe Harbors" protecting buyers who rely on automated suggestions.

Source: Compiled from CBIC (2025); European Commission (2022); World Bank (2025).

While India has established a nimble transaction clearing system conducive to its extensive and varied economic landscape, the comparative examination reveals that developed OECD nations provide enhanced administrative safeguards for taxpayers who depend on the recommendations generated by automated systems. The Indian framework continues to be predominantly enforcement oriented, posing an ongoing challenge in reconciling the rapidity of automated processing with the taxpayers' institutional trust.

THE EVOLVING ROLE OF THE COMPANY SECRETARY IN GST 2.0

In this highly automated regulatory landscape, the Company Secretary's position is vital to corporate governance. The profession must transition beyond retrospective compliance to claim a central role in **Techno-Legal Governance**.

a. Implementing Forensic Governance and Pre-emptive Compliance

The modern Company Secretary should champion **Forensic Governance** within the corporate structure, executing internal data audits before regulatory algorithms identify anomalies:

- **Data Integrity Audits:** Continuous reconciliation of internal ERP records against data hosted on the GSTN, fixing data variances before they trigger automated inquiries.
- **API Management:** Overseeing the security protocols and transmission reliability of corporate APIs connecting internal financial platforms directly to government nodes.
- **Risk Heatmaps:** Formulating internal risk scoring dashboards that mirror the BIFA engine, allowing corporate management to view their regulatory risk profile in real time.

b. Strategic Board Advisory and Environmental, Social, and Governance Integration

Corporate boards need to be apprised that under GST 2.0, tax compliance risk has evolved into an immediate Reputational Risk. An algorithmically generated Show Cause Notice or an automated credit block is more than a standard legal dispute. It serves as an external indicator that a company's digital integrity may be compromised. The Company Secretary shall have to take up the onus to advise the board on these risks, integrating tax data transparency metrics directly within the organization's broader Environmental, Social, and Governance (ESG) reporting framework.

c. Enhancement of Professional Value

To enhance professional value within this automated tax environment, the following actions are recommended for corporate governance professionals:

- **Certification in Forensic Tax Analytics:** Professionals should upskill in data analytics, SQL, and data management to understand the algorithmic logic underlying systemic risk models.
- **Digital Documentation Management:** As faceless audits rely entirely on written documentation, organizations should build verified digital records repositories. This includes maintaining geotagged logistics records, digital inventory tracking logs, and secure, verified contracts to quickly address automated inquiries.
- **Advocacy for “Human-in-the-Loop” Governance:** The members of ICSI should advocate for formal administrative channels designed to handle algorithmic errors. This includes supporting the introduction of specialized grievance processes where experienced tax officers can review and adjust automated system flags driven by technical errors or platform disruptions.

CONCLUSION: THE ROAD TO VIKSIT BHARAT 2047

The digital transformation of the indirect tax framework in India signifies a fundamental reconfiguration of the economic governance. The deployment of artificial intelligence enhanced invoice reconciliation, faceless auditing procedures, and predictive classification algorithms has fostered an efficient, scalable, and resilient tax administration that mitigates revenue loss and propels the aspiration of a cohesive national marketplace.

Nevertheless, as the nation strives towards “Viksit Bharat 2047” (NITI Aayog, 2023), the ultimate efficacy of the tax ecosystem will be evaluated not exclusively on the basis of total revenue generation, but also through the lens of

transparency, consistency, and equity afforded to taxpayers. In this automated environment, the Company Secretary has the best opportunity to emerge as a pivotal strategic interpreter facilitating an essential linkage between algorithmic frameworks and the foundational tenets of law. By integrating technological acumen with profound legal knowledge, governance professionals can guarantee that the pursuit of digital efficiency is harmonized with administrative equity.

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