
JUDICIAL REVIEW OF AUTOMATED ADMINISTRATIVE DECISIONS: A COMPARATIVE ANALYSIS OF GERMANY AND THE UNITED STATES

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ABSTRACT

The growing use of AI in public administration has created new constitutional issues for current governments. Algorithmic systems are currently used by administrative authorities in areas including risk assessment, police, immigration determinations, and welfare distribution. These technologies create issues related to accountability, transparency, procedural justice, and the safeguarding of basic fundamental rights, even while they ensure convenience and consistency.

This article seeks to examine how judicial review process respond to automated administrative decisions within the legislative frameworks of the United States and Germany. It proposes to analyse the standards of review under the U.S. Administrative Procedure Act and the Due Process Clause, and to compare them with Germany's constitutional principles of human dignity, proportionality, and the rule of law (Rechtsstaat). Through a comparative doctrinal approach, the study aims to assess whether existing models of judicial review are adequate to address the challenges posed by the use of AI in administrative decisions.

Introduction:

Artificial intelligence and datadriven technologies have started to change how current governments operate in recent years. Algorithmic systems are being used more and more by administrative authorities worldwide to assist or even make judgments in areas like benefit distribution, immigration evaluations, enforcement tactics, taxation, and fraud detection. The increased use of artificial intelligence in government decision-making has produced significant legal and constitutional problems. Administrative decisions frequently have an impact on people's rights and their daily life. As a result the modern legal systems have created mechanisms to ensure that administrative power is accountable, transparent and subject to judicial scrutiny. As a result lawmakers and scholars are starting to question if increasing reliance on algorithmic systems will cause or create effect on traditional system.so usually administrative law has always been based on decisions and that is backed by reasoning,now when AI is making such decisions in administrative actions the problem would be the black box aspect, because we wouldn't know on what basis the AI has reached such conclusion. When someone is affected by an administrative decision they have the right to know the reasoning behind it and if needed challenge it in court. Thus judicial review is essential to modern public law systems. Courts review administrative decisions to ensure that authorities adhere to just procedures and act within the limits of their legal power and provide rational justifications for their choices. In this way judicial review prevents the government from using its power arbitrarily or without cause, which is an essential protection of the rule of law.

As Cary Coglianese and David Lehr describe algorithmic governance represents a new stage in administrative decision making in which automated technologies influence or influence decisions that have a direct impact on people.³ Although these technologies can increase efficiency they also pose significant challenges for courts since highly complex processes make it more difficult for courts to understand and evaluate outcomes.¹Algorithmic opacity is an issue that is frequently discussed in relation to algorithmic decision making. Many advanced artificial intelligence systems use methods that are exceedingly complex and difficult to interpret. Because even professionals may find it difficult to explain how a specific output is generated these are commonly referred to as "black box"² . People who are impacted by

¹ Cary Coglianese & David Lehr, *Regulating by Robot Administrative Decision Making in the Machine Learning Era*, 105 Geo. L.J. 1147 (2017).

² Frank Pasquale, *The Black Box Society The Secret Algorithms That Control Money and Information* (Harvard Univ. Press 2015).

decisions may find it challenging to comprehend why a judgment was reached or how it might be contested when administrative authorities rely on these technology. According to Danielle Keats Citron when people are unable to effectively challenge decisions made by automated systems this kind of lack of transparency may compromise procedural justice³. If we see the functioning of the AI system is mainly based on the data that they are fed with so these data maybe biased and that output may lead to unequal decisions and any unfair discrepancies. And that is why judicial review of such automated or AI based decisions is required. This article tries to examines how judicial review addresses AI based administrative decision making within the legal frameworks of the United States and Germany. These two countries comparison would be helpful as they provide two different approach.

Automated Administrative Decisions in the United States

In USA all these AI tools and machine learning and other technologies are increasingly getting integrated into administrative decisions. The algorithmic systems are employed by federal agencies in order to enforce regulatory measures and other functions like policy analysis and also in public administration, These technologies help agencies deal with a lot of data. They make it easier for decision makers to find patterns and problems that they would not see otherwise. Various studies and empirical research on federal agencies show that these algorithmic systems have started to influence the decision making in the administrative sector. About 45% of the 142 major federal agencies surveyed in a thorough study for the Administrative Conference of the United States (ACUS) reported using or experimenting with artificial intelligence or machine learning systems to carry out governmental tasks⁴. The study found 157 AI use cases across 64 federal departments, demonstrating how algorithmic technologies are influencing many administrative governance sectors.⁵ Financial regulation, law enforcement, healthcare administration, intellectual property control and environmental monitoring are just a few of the industries that use these systems. Administrative agencies use natural language processing to look at a lot of text from things like forms and comments. Natural language processing helps agencies understand what people are saying in things like complaints and comments when they are making rules⁶. There are other NLP used in border

³ Danielle Keats Citron, *Technological Due Process*, 85 Wash. U. L. Rev. 1249 (2008).

⁴ David Freeman Engstrom et al., *Government by Algorithm: Artificial Intelligence in Federal Administrative Agencies* 6 (Admin. Conf. of the U.S. 2020)

⁵ Id

⁶ Cary Coglianese & Lavi M. Ben-Dor, AI in Adjudication and Administration, 86 Brook. L. Rev. 791, 796–800 (2021)

control security as such.

There are machine learning systems focus on the enforcing mechanisms. The **Securities and Exchange Commission (SEC)** has developed several algorithmic tools designed to detect potential violations of securities laws. Algorithmic tools have been incorporated into the **Social Security Administration's** disability benefits adjudication system in social welfare administration. To improve specialization and consistency in decision-making similar disability cases are clustered using machine learning algorithms and assigned to specific Administrative Law judges. Predictive analytics are also utilized to evaluate the chances that appeals will succeed allowing the government to prioritize cases for examination. In order to identify inconsistencies or violations from agency policy natural language processing technologies will also examine written decisions. The Securities and Exchange Commission uses algorithmic systems. To find possible violations of federal securities laws like accounting fraud and market manipulation the agency employs empirical techniques. In order to find suspicious irregularities and trends that might point to wrongdoing these systems analyze huge amounts of trading data. Regulators use the information when irregularities are found in deciding whether to initiate enforcement investigations. Also the United States uses automated systems to look for suspected fraud when people apply for unemployment benefits. The Michigan Integrated Data Automated System that the Michigan Unemployment Insurance Agency uses looked at unemployment claims data and made decisions that led to penalties and repayment obligations for the people who made claims. The Michigan Integrated Data Automated System made these decisions on its own. They had a big impact on peoples legal rights and the money they had to pay back. This is why the Michigan Integrated Data Automated System got into trouble with the law and people started to question if the system was treating people fairly and giving them the process they deserved. The main issue was about due process and if the Michigan Integrated Data Automated System was being fair to the people who made claims⁷. These automated determinations directly affected individuals legal rights. Predictive policing techniques like PredPol have been utilized by law enforcement organizations to examine past crime data and identify areas where crimes are more likely to happen. These forecasts help police departments allocate resources for patrols and develop enforcement methods⁸. These examples show us that how AI analytical tools increasingly

⁷ Robert N. Charette, Michigan's MiDAS Unemployment System: Algorithm Alchemy Created Lead, Not Gold, *IEEE Spectrum* (Jan. 24, 2018)

⁸ Maria Lungu, *Predictive Policing AI Is on the Rise—Making It Accountable to the Public Could Curb Its Harmful Effects*, *The Conversation* (May 6, 2025)

shape administrative decision making processes in the United States and highlight emerging concerns regarding transparency, accountability, and the role of judicial review when government actions rely on algorithmically generated information.

Judicial review of Automated Administrative Decisions in the United States

The growing use of artificial intelligence (AI) in administrative governance raises critical problems about how courts should examine administrative decisions based on algorithms. The Administrative Procedure Act (APA) and constitutional due-process standards control judicial review of administrative activity in the United States. The general foundation for judicial review of federal administrative action is established under the APA. Courts are required by the Act to set aside agency acts that are "arbitrary, capricious, an abuse of discretion, or otherwise not in accordance with law."⁹ Several significant Supreme Court judgments helped shape the evolution of this standard. In **Citizens to Preserve Overton Park v. Volpe**, the Court highlighted that judicial review requires a "searching and careful" examination of whether the agency checked all relevant facts and followed legislative requirements¹⁰. Similarly the Court determined that agency action is arbitrary and capricious in **Motor Vehicle Manufacturers Association v. State Farm Mutual Automobile Insurance Co.** if it relies on wrongful reasons or ignores essential elements of a problem or provides explanations that conflict with what is presented¹¹.

Courts have also addressed challenges to algorithmic decision systems used by government entities in other contexts as well. The Wisconsin Supreme Court looked at the use of the COMPAS risk assessment algorithm in criminal sentencing in **State v. Loomis** case. COMPAS is meant to evaluate the possibility of a defendant reoffending based on numerous statistical findings. The defendant contended that the use of the unknown algorithm violated due process because on what factor it is decided is not available to public knowledge. In this case the court rejected the constitutional challenge and said however there will be safeguards on use of such algorithms. This case also emphasised the issue of biases of such AI based tools and the limitations of it and the need for human oversight and decisions cannot completely rely on AI tools¹². In another case **Houston Federation of Teachers v. Houston Independent**

⁹ Administrative Procedure Act, 5 U.S.C. § 706(2)(A)

¹⁰ *Citizens to Preserve Overton Park, Inc. v. Volpe*, 401 U.S. 402, 416 (1971).

¹¹ *Motor Vehicle Mfrs. Ass'n v. State Farm Mut. Auto. Ins. Co.*, 463 U.S. 29, 43 (1983).

¹² *State v. Loomis*, 881 N.W.2d 749 (Wis. 2016).

School District the teachers challenged an evaluation system that relied on a statistical model developed by SAS Institute called Education Value-Added Assessment System (EVAAS) to evaluate teacher performance, they challenged it because they did not know on what basis the evaluation is done and the algorithm and calculations were not disclosed. The federal district court held that the use of the opaque algorithm violated procedural due process as the teachers could not meaningfully challenge employment decisions based on the system's outputs¹³. Also In **K.W. v. Armstrong**, the Ninth Circuit challenged an automated method used by Idaho's Department of Health and Welfare to calculate Medicaid benefits for people with developmental disabilities. Benefits were significantly reduced for the beneficiaries but they were not given enough explanations for how the automated system produced these results. The court ruled that its method likely violated procedural due process because affected individuals were denied meaningful notice and the ability to challenge automated decisions^{14 15}.

Some scholars also suggested and talked about the demand and need for "explainable AI in courts and other administrative sectors that allow decisionmakers and affected individuals to understand how algorithmic systems influence administrative decisions¹⁶ So as a result it is understood that the U.S. judicial review of AI based decisions do not fall under any separate or new category instead they are reviewed under existing doctrines of rationality, arbitrariness, due process and judicial deference.

Automated Decision-Making Systems in German Administrative Law

The use of automated decision-making systems in German public administration is still relatively limited the legal foundation for such systems has existed for several decades. When the *Verwaltungsverfahrensgesetz* (VwVfG)¹⁷ was passed in 1976 it already had rules for administrative acts issued "with the help of automatic equipment." These clauses were created to enable automated systems to support administrative procedures for repeated tasks¹⁸. In 2017 the legal framework was expanded with the adoption of § 35a VwVfG, which regulates fully

¹³ *Houston Fed'n of Teachers v. Houston Indep. Sch. Dist.*, 251 F. Supp. 3d 1168 (S.D. Tex. 2017).

¹⁴ *K.W. v. Armstrong*, 789 F.3d 962 (9th Cir. 2015)

¹⁵ *Federal Court Rules Against Idaho Department of Health and Welfare in Medicaid Class Action*, Am. C.L. Union (Mar. 30, 2016)

¹⁶ Ashley Deeks, *The Judicial Demand for Explainable Artificial Intelligence*, 119 Colum. L. Rev. 1829 (2019).

¹⁷ *Verwaltungsverfahrensgesetz* [VwVfG] [Administrative Procedure Act], May 25, 1976, BGBl. I at 1253, as amended (Ger.).

¹⁸ Jens-Peter Schneider & Franka Enderlein, *Automated Decision-Making Systems in German Administrative Law*, 1 CERIDAP 95 (2023)

automated administrative acts. There are two requirements must be met before a completely automated administrative decision can be made. First there must be a clear legal basis that permits the use of automated decision-making. Second, the authority must not have discretion in making the relevant decision¹⁹.

In certain administrative contexts AI-supported technologies have been implemented in particular for decision making. The Federal Office for Migration and Refugees' (Bundesamt für Migration und Flüchtlinge, BAMF) use of automated language-analysis technology in asylum procedures is one much discussed example. The Federal Office for Migration and Refugees (BAMF) employs an AI-based dialect identification technology (Language Biometrics Assistance technology - DIAS) to assist decision-makers in determining asylum seekers countries and/or regions of origin. The system has been in use since 2017 for specific Arabic dialects (Egyptian, Gulf, Iraqi, Levantine, Maghrebian) and since 2022 for Dari/Persian, Farsi, and Pashtu. DIAS determines an applicant's country or region of origin statistically by analyzing phonetic patterns in their speech²⁰.

German police have also experimented with algorithmic predictive policing systems aimed at crime prevention and operational planning. Precobs (Pre Crime Observation System) is one of the most frequently discussed systems, which has been deployed in various German states, including Bavaria and Baden-Württemberg, and was originally developed by the German business IfmPt - Institute for Pattern Recognition Technology. In order to find patterns linked to so-called "near-repeat" burglaries a criminological concept in which a burglary raises the possibility of another burglary happening nearby within a short amount of time the algorithm examines past crime data. PRECOBS creates projections that show the locations of potential future burglaries based on these statistical trends. These projections are used by law enforcement as preventive police strategies such as assigning patrols to such locations believed to have a high burglary risk. It provides analytical predictions that assist police officers in operational decision-making.

The police authorities in the federal state of North Rhine-Westphalia created SKALA (technology zur Kriminal Müntsauswertung und Lageantizipation) another predictive policing

¹⁹VwVfG § 35a

²⁰European Parliamentary Research Service, *Artificial Intelligence in Migration and Asylum Management* 5–6 (2020); Bundesamt für Migration und Flüchtlinge, *Speech Technology in Asylum Procedures* (2017); see also AlgorithmWatch, *Automating Society Report 2020: Germany* (2020) (discussing the use of automated dialect recognition by BAMF in asylum procedures).

technology that is used in Germany. In 2015, SKALA began conducting police operations and subsequently grew including several district police authorities. Not like PRECOBS which mainly uses historical crime data this SKALA uses a wider variety of data sources like these demographic and socioeconomic data for finding behavioral and geographical patterns related to residential burglaries. The system uses technologies like IBM SPSS Modeller and datamining techniques for predictions which help in police planning and making decisions. The Berlin police created their own predictive policing program, known as KrimPro (Kriminalitätsprognose). This algorithm, which was created internally by the Berlin State Criminal Police Office predicts potential future burglary locations using crime data and specific demographic data. The system generated predictions that were much more accurate than random statistical chance. KrimPro, like other predictive policing systems used in Germany, generates geographical forecasts help officers plan patrol activities ²¹.

Germany has incorporated advanced digital technologies and artificial intelligence systems into its tax administration as part of something as a bigger effort to modernize the economy. The Taxation Modernisation Act (Gesetz zur Modernisierung des Besteuerungsverfahrens) of 2016 revised the German Fiscal Code (Abgabenordnung) one of the key step in this direction. The reform enables the complete automation of recurring tax assessment operations by utilizing algorithmic and machine learning techniques. The modified regulations allow German tax authorities to issue, correct, withdraw, or cancel tax assessments through automated administrative procedures without direct human interaction in typical circumstances. Machine-learning-based risk-management systems are used to categorize taxpayers based on their risk profile helping with audit selection and compliance monitoring.² Authorities utilize web-scraping tools called X-PIDER to automatically collect publicly available information from websites, online marketplaces, and social media to detect potential tax consequences for business activity. Automated decision-making technologies are used to verify and correct tax returns²².

Judicial review of automated algorithmic administrative decisions in Germany

The Federal Constitutional Court's (First Senate) ruling on February 16, 2023 is a significant

²¹ Vepřek et al., *Beyond Effectiveness: Legitimising Predictive Policing in Germany*, 2 *Kriminologie – Das Online-Journal* (2020)

²² Germany – AI Country Report, TaxAdmin.AI, <https://taxadmin.ai/country/germany-ai-country-report/> (last visited Mar. 8, 2026)

case or example of judicial review of these algorithmic decision systems in Germany. In this decision the Court looked at the legislation passed by the German states Hesse and Hamburg which allowed police to deal with saved personal data using automated data analysis or interpretation for the purpose of preventing serious crimes. The Court examined §49(1) of the Hamburg Act on Data Processing by the Police (Hamburgisches Gesetz für die Datenverarbeitung der Polizei – HmbPolDVG)²³ and §25a(1) of the Hesse Security and Public Order Act (Hessisches Gesetz für die Mündentliche Sicherheit und Ordnung – HSOG)²⁴ both had same wording.

Under these provisions the police are allowed to process the stored personal data using automated analytical techniques which is actually a subject to case to case assessment to prevent serious criminal offenses listed in §100a(2) of the German Code of Criminal Procedure (Strafprozessordnung - StPO)²⁵ also to address threats to certain protected legal interests. The Court's primary constitutional challenge was whether authorities might analyze personal data using automated methods other than the specific evaluation that allowed the data collection in order to predict and prevent future criminal conduct.

The Court determined that the regulations did not offer sufficient safeguards governing the use of automated data analysis by applying the constitutional principle of proportionality. The Court noted that the law literally limit on the type and quantity of data that may be utilized for automated analysis or interpretation. The Court also noted that the authorities could not be justified simply because the technology for limitless data analysis may not be fully accessible and the clauses did not restrict the potential use of significant automated data analysis techniques. Thus, the Court ruled that §49(1) of the Hamburg Act on Data Processing²⁶ by the Police was invalid. However it permitted §25a(1) HSOG²⁷ to continue to be temporarily effective with limitations until new legislation could be passed with a deadline of September 30, 2023. This ruling shows the function of constitutional courts in examining algorithm-based data analysis tools employed by government agencies and making sure that these technologies

²³Hamburgisches Gesetz über die Datenverarbeitung der Polizei (HmbPolDVG) § 49(1) (Ger.)

²⁴ HSOG § 25a(1) alt. 1 (Ger.)

²⁵ Strafprozessordnung [StPO] [Code of Criminal Procedure], Apr. 7, 1987, BGBl. I at 1074, § 100a(2) (Ger.)

²⁶*Supra* 21

²⁷ *Supra* 22

adhere to proportionality standards and basic rights protections^{28, 29}

Also if we see the judicial review of AI based decisions in public administration is limited to existing framework of administration law. There is currently very little case law specifically addressing AI-based administrative decisions because the application of AI in German public administration is still mostly restricted to automated processing in standardized procedures and decision making tools. Courts examine these rulings under the governing administrative acts (Verwaltungsakte). Anyone gets affected by any administrative act could approach the administrative court and challenge such decisions by following the regular procedures of administrative litigation, This enables the courts to decide on the legality of such act including whether the authority acted within its statutory powers and followed procedural requirements and respected fundamental rights. German legislation allows for automated administrative decision-making in certain contexts, such as § 35a of the Federal Administrative Procedure Act (Verwaltungsverfahrensgesetz)³⁰. However fully automated administrative acts are only permitted if a legal rule authorizes automation and the decision does not involve administrative discretion. Similar sections exist in sector-specific legislation like § 155(4) of the Fiscal Code (Abgabenordnung)³¹ for automated tax assessments. In judicial review processes courts focus primarily on whether the use of automated or algorithmic systems follows those legislative criteria and general administrative law considerations such as legality, proportionality, and procedural fairness. Although German courts are yet to develop extensive jurisprudence on AI-based administrative decision-making the current administrative judicial review system provides mechanisms for individuals to challenge administrative decisions influenced by algorithmic or automated systems.

Comparative Analysis: Judicial Review of Automated system's Administrative Decisions in the United States and Germany

Germany and the United States both allow the use of algorithmic tools in public administration but their judicial review ways are different. Judicial review in the US is mainly carried out in accordance with the Administrative Procedure Act and focuses on whether agency action is

²⁸ German Federal Constitutional Court's Decision on Automated Predictive Policing Algorithms, *AI Regulation* (Feb. 22, 2023)

²⁹ Press Release No. 18/2023: Legislation in Hesse and Hamburg Regarding Automated Data Analysis for the Prevention of Criminal Acts Is Unconstitutional, Federal Constitutional Court (Feb. 16, 2023),

³⁰ Verwaltungsverfahrensgesetz [VwVfG] [Federal Administrative Procedure Act], May 25, 1976, BGBl. I at 1253, § 35a (Ger.)

³¹ Abgabenordnung [AO] [Fiscal Code], Oct. 1, 2002, BGBl. I at 3866, § 155(4) (Ger.)

capricious, arbitrary, or procedurally weak. In contrast, German administrative courts examine the legality of administrative acts within a ruleoflaw framework based on the idea of administrative legality finding that the authorities act in accordance with statutory regulation and constitutional principles.

Legal Basis for Automation

In Germany, fully automated administrative decisions require clear statutory authority. Automated administrative acts are only permitted under Section 35a of the Federal Administrative Procedure Act (Verwaltungsverfahrensgesetz, or VwVfG) in cases when automation is permitted by law and the decision does not require administrative discretion. Sector-specific laws like §155(4) of the Fiscal Code (Abgabenordnung) include similar provisions for automated tax assessments. Therefore German courts first consider whether the authority had a clear legal basis for automation when examining algorithm based administrative decisions.

In contrast, the United States does not require a particular statutory authority before using automated methods in administrative decision-making. Agencies may use algorithmic systems in their decision making unless a statute prohibits it. Thus judicial review is more concerned with whether the ensuing agency action complies with administrative law especially those set forth by the Administrative Procedure Act (APA) than whether automation was approved.

While the U.S. system mostly examines how the agency uses the technology in its decision-making process Germany imposes ex ante legal restrictions on when automation is acceptable.

Standard of Judicial Review

The APA standard in 5 U.S.C. §706 permits courts to set aside agency acts that are “arbitrary, capricious, an abuse of discretion, or otherwise not in accordance with law,”³² governs the review of administrative decisions in the United States. Courts consider whether an agency's conclusion is reasonable and backed by the administrative record when it uses algorithmic tools.

³² Administrative Procedure Act, 5 U.S.C. § 706(2)(A).

The administrative act (Verwaltungsakt) is subject to a legality examination by German administrative courts. Courts look at whether the authority follows constitutional principles including proportionality, procedural procedures, and statutory provisions. German law forbids fully automated decisions in discretionary circumstances therefore if automation was used in a situation needing administrative discretion the decision might be unlawful.

Treatment of Administrative Discretion

Under §35a VwVfG, automated systems in Germany are not permitted to exercise administrative judgment. If a decision involves individual review or discretionary judgment, it must be made by a human. Therefore when examining such decisions courts look at whether human discretion was unlawfully replaced by automation.

Even in cases where discretion is required administrative agencies in the US are permitted to use algorithmic techniques as long as they ultimately use judgment and provide an explanation for their decisions. Judicial review focuses on whether the agency effectively supported its decision and examined all relevant factors.

Overall evaluation:

Existing judicial review models include procedures for overseeing AI-based administrative decisions but they were developed for traditional human judgment and have significant disadvantages when applied to algorithmic governance.

The APA's procedural rationality review which is the foundation of the U.S. approach have trouble with opaque machine-learning systems but can potentially support algorithmic tools.

The German model includes greater statutory restrictions to prevent automated decisions but it still depends on traditional legality evaluation which may not adequately solve more complex technology.

As a result that existing judicial review frameworks are still applicable but may require adaptation particularly through stronger transparency requirements or improved documentation of algorithmic systems and increased statutory authority for courts to evaluate complex technologies.

Conclusion

The growing use of artificial intelligence in administrative decision making is a significant development in modern governance this would raise fundamental questions about accountability, transparency, and the role of courts in supervising algorithmically influenced administrative action. This article looked into whether the current judicial review methods in Germany and the United States can handle these issues. The analysis shows that both jurisdictions now use different institutional and doctrinal approaches to rely on standard administrative law principles rather than AI-specific review procedures.

In light of these results this article suggests that while current judicial review models are not inherently insufficient they do need to be carefully modified in order to continue being useful in the context of AI-driven administrative decisions. To ensure meaningful judicial oversight courts will need to improve the transparency and documentation of algorithmic decision-making processes and advance their ability to analyze technical evidence. Strong judicial review will be crucial to maintain the core administrative law concepts of legality, accountability, and individual rights protection, as public agencies will depend more on algorithmic tools, which would not be easy to interpret on what basis any decision is made.

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