Suggestions of Digital Transformation for Automobile Companies under the "Personal Information Protection Law"

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Abstract

The "Personal Information Protection Law" and "Several Provisions on the Management of Automobile Data Security (Trial Implementation)" were issued in August 2021, which means that personal informatization has entered a new era of full respect, safety, and regulation. Adapting to the changes of the times, auto companies are facing challenges and opportunities in digital transformation. This paper studies the aspects of personal information protection involved in the business services of automobile companies, and aims to build Front-end data collection, data process processing and related standard, increase private traffic, and create a professional middle platform as the core direction providing suggestions to automobile companies with digital transformation.

Keywords

"Personal Information Protection Law"; Standardization; Middle Platform.

1. Background Introduction

On August 20, 2021, the Standing Committee of 13th National People's Congress voted to adopt the "Personal Information Protection Law of the People's Republic of China", which will come into force on November 1, 2021. The "Personal Information Protection Law of the People's Republic of China" aims to make the principles and processing rules to be followed in the collection and use of personal information under the background of the information age, and represents the country's extremely serious legal stand on the protection of personal information. The law constructs the institutional guarantee of the digital economy and digital society, establishes normative and fair development requirements for the digital economy behaviors of various industries, and rationalizes the development of digital economic benefits.

Under this background, automobile companies carry a large amount of user sensitive information in their daily economic behaviors and generate economic behaviors of information flow. Based on the initial stage of digital transformation of automobile companies, auto enterprises need to respond in time, analyze possible compliance risks they face, order the impact in actual operation links, and adjust the specifications of business behaviors.

This paper aims to provide suggestions for the digital transformation of automobile companies by ordering the impact of the personal information protection law on the industry [1].

2. Law Interpretation

The provisions of the "Personal Information Protection Law" mainly involve clearly prohibiting big data-enabled price discrimination, strictly managing the flow of cross-border personal information, standardizing personalized recommendations, and making citizens' right to withdraw consent, etc.

The law clearly defines personal information as "various information" related to an identified or identifiable natural person recorded electronically or in other ways, etc., which responds to the issue of the interests of the people's personal relationship, and respond to the domestic people's appeal for protecting personal information.

Personal information includes general personal information and sensitive personal information. General personal information types include name, address, communication methods, etc.; sensitive personal information types include personal identification information, biometric information, positioning track information, transaction information, and communication records and contents that can be collected in other personal hardware devices, etc.

The law requires enterprises: the processing principles of personal information "should run through the entire process and all links of personal information processing", "inform-agree" is the core rule, and should protect the right to know and the power to make decisions of personal information processing.

3. Untangling of the Impact on Automobile Companies

3.1. Data Scope of Automobile Companies

On August 16, 2021, the Cyberspace Administration of China, the National Development and Reform Commission, the Ministry of Industry and Information Technology, the Ministry of Public Security, and the Ministry of Transport jointly issued the "Several Provisions on the Management of Automobile Data Security (Trial Implementation)", which will come into force from October 1, 2021.

"Provision" defines the scope of relevant data generated by automobile companies, including general data and important data. General data includes license plate number, vehicle model, mileage, road conditions, and behavioral data of in-vehicle systems. Important data involves vehicle flow, logistics, and other data that reflect economic operations, data related to the operation of automobile charging networks, video and image data outside the automobile including facial information, license plate information, etc., and personal information involving more than 100000 persons, data involving the country's sensitive administrative division geographic information and vehicle flow and other data. The contents of the data have involved the categories of sensitive information in the definition of personal information, the issuance and implementation of the "Personal Information Protection Law" are closely linked with automobile companies.

3.2. Impact on the Behaviors of Automobile Companies

Since the digital transformation of automobile companies, customer data has always been regarded as a very important core asset by automobile companies, if automobile companies cannot implement effective and compliant control over customer data, they will hit the legal red line.

First, the two key principles in the "Personal Information Protection Law" have a vital impact on the Front-end data collection of automobile companies, the principles are: (1) must follow the basic principles of legality, fairness, necessity, and integrity; (2) "inform-agree" is the core processing rule. The law has an impact on the online and offline data collection links of automobile companies, specifically in personal information processing methods, retention periods, permission changes and other actual behaviors, it requires enterprises to make corresponding changes at both the front and back ends.

Secondly, the "Personal Information Protection Law" gives information subjects the right to know and the power to make decisions, including the right to know personal information processing rules and matters, agree and withdraw consent, as well as the rights to query, copy, correct, and delete personal information, moreover, information subjects also have the right to restrict or reject others' processing of their personal information. The law causes vital impact on the data processing of automobile companies, specifically affect the standardization of data processing, such as data calculation, desensitization, empowerment, preservation, and deletion,

etc., which requires enterprises to establish standards for the standardization and timeliness of data processing.

Third, the "Personal Information Protection Law" provides that "no organization or individual shall illegally collect, use, process, or transmit the personal information of others", which has an impact on the data processing and empowerment of automobile companies, due to the huge number of users of the digital platform, it has strong control and dominance over the transactions and personal information processing activities of users on the platform, and it requires automobile companies to improve the transparency of data processing or reduce the accuracy.

Finally, the "Personal Information Protection Law" provides that "shall not illegally buy and sell, provide, or open the personal information of others", it has an impact on the behaviors of automobile companies to obtain sales leads, because the vertical media involved the issue of buying and selling user information without user authorization in earlier stage, at this stage, when dealing with vertical media, personal information trading risks should be avoided and try to reduce the dependence on vertical media, private domain users are directly served by automobile companies, and it is recommended that automobile companies try to improve private domain traffic.

4. Specific Suggestions on Digital Transformation of Automobile Companies

Four corresponding suggestions are provided based on the analysis of the impact on the behavior of automobile companies:

4.1. Standardization of Front-end Data Collection

Focusing on the "inform-consent" core principle, it is different from before the introduction of the law, vertical media leads are main, realize lead invitation through telephone invitation method, transform the lengthy and high-risk sales chain, after the introduction of the law, automobile companies are required to strictly implement the "Several Provisions on the Management of Automobile Data Security (Trial Implementation)" in Front-end data collection, moreover, inform that Front-end personnel strictly implement data security service standardization.

Analysis of present situation:

(1) Before obtaining the customer's phone number, it is necessary to give the customer the right to agree and close the information collection. The current risk lies in the access through vertical media, it believes that although the law has a greater impact on the industry, it is not disruptive change: this is because the Chinese consumers' protection awareness of personal information is not full enough at present, and most users will not directly refuse information collection; but this does not mean that the supervision of data collection of vertical media will be relaxed.

(2) According to the relatively mature personal information protection laws abroad, the follow-up personal information protection will be further increased, if the vertical media is required to provide a time-limited virtual number, contact the customer again after the virtual number expires, which need to obtain the customer's consent again.

Adjustment suggestions:

Drawing lessons from the current lead empowerment methods adopted by many enterprises (such as FAW-Volkswagen, FAW-Audi, SAIC-GM) (further enhance the value of leads through external data), the following improvement measures are further proposed for the back-end and Front-end operation processes:

(1) Back end: the risk of data collection and use is thing that the marketing department and digital department of the automobile companies must consider. For the collection of lead

information, the vertical media completes the first "inform-agree" authorization with the customer, this authorization can only be used inside the vertical media, the follow-up data exchange, analysis, and empowerment all require the vertical media to obtain authorization in advance, including the empowerment of leads by automobile companies, dealers contacting automobile owners, this also need to be included in the "agreement" reached between the vertical media and the customers.

(2) Front end: it is necessary to regularly organize and implement education and training of data security laws, make emergency plans of security incidents, and improve other measures prescribed by laws and administrative regulations. Since the law sets specific requirements for the exchange and use in the authorization of personal information, follow-up requirements or are further improved, this requires the front end DCC department and sales consultants to have the awareness of quickly obtaining the second authorization of customers, moreover, can quickly collect, organize, and return data.

4.2. Sensitive Data Processing

In order to respond to the standardized requirements of data processing of automobile companies, involving data operations, desensitization, empowerment, save, and deletion, it is recommended to give priority to improving the timeliness of data assets, and complete the necessary data processing work within an authorized time.

Feasibility assessment: this requires the enterprise's data center to increase the speed of information processing, so that the exchange, storage, and empowerment of data are completed within the validity period of information collection. In addition, the timeliness requirements for data return after the front end gets in touch with the customer also need to establish standards, and further enhance the information collection capacity and data return awareness of Front-end sales consultants.

4.3. Fuzziness and Modeling of Data Processing

Because the law clearly prohibits the use of customer sensitive information for precise matching, the means of obtaining information such as consumption, travel, and basic attributes through mobile phone numbers, this lead empowerment is directly prohibited by the law. When automobile companies use third-party data for processing or empowerment, how to standardize data processing and empowerment on public platforms or third-party platforms is a problem that needs to be solved when data empowerment.

The first is to fuzzily process the third-party data, and the fuzzy information will become the main data resource that the follow-up automobile companies can obtain, namely, through the integration and encryption of most sensitive information, then desensitize multiple pieces of sensitive information into digital (1, 2, 3) or grade (A, B, C), ensure that data can empower leads and cannot be reversed, so reduce the risk of information leakage.

The second is to model process data, internal data, and external data (including third-party data) are processed through data model on a closed platform, and sensitive information does not flow out or leak.

Feasibility assessment, at this stage, automobile companies generally can build data platforms, but the construction of data models that meet business needs is often done through third-party suppliers. Data fuzziness and modeling are very professional tasks, and it is difficult for the business side to directly connect with third parties, therefore, the enterprise is required to have team that understands both business and data model building to complete the above work.

4.4. Attempt to Develop and Transform Towards Private Domain Traffic

With the increasing difficulty and use requirements of third-party data acquisition, as far as enterprises with private domain users are concerned, they only need to obtain user

authorization once to "enjoy" the benefits of digitalization, which greatly reduce the risk of information transfer. At present, the automobile companies with the most private domain users in the market are often new power brands, such as Weilai, Xiaopeng, etc., the private domain operation of traditional automobile companies has just started (such as BMW), or private domain users cannot act due to the accuracy of customer acquisition (such as Lantu).

Feasibility assessment: at this stage, automobile companies are required to have the Internet thinking, break the information barriers between manufacturers and users (such as GAC AION), being closer to users can better operate their private domain users, this requires enterprise to have online customer operation and maintenance teams that conform to the digital age, so improve capabilities acquire customers online.

5. Suggestions on Mainly Building Standardized Middle Ground

5.1. The Contents and Characteristics of the Data Middle Ground

In traditional enterprise logic, the accumulation of raw data is the data assets of the enterprise, however, with the development of big data, artificial intelligence and database technology, untreated raw data can no longer represent the data assets of the enterprise, they must be interpreted and planned from the angle of business and application scenarios to generate value for the enterprise. Digital middle ground is the core system of digitization of enterprises in the future, which fully supports the development of Front-end marketing, sales, membership, and other Innovative businesses, connecting Front-end and back-end systems is the link between business data accumulation and data application scenarios, it is a mechanism that makes full use of enterprise data, ensure that enterprise data can be continuously converted into data assets to empower businesses. The emergence of the data middle ground architecture supplements the problem where data development and application development are due to the lack of synchronization of development capacities, resulting in the mismatch of response capacities, solves its efficiency, collaboration, and capacity problems, remove the restriction of slow speed of background data mining on the speed of Front-end application development.

The data middle ground is the enterprise-level architecture, and it is mainly connected to various business application scenarios through data interfaces to empower them [2]. The typical data middle ground has five capacities: 1. data aggregation and integration, structured governance over data under the conditions of integrated operation, while ensuring the availability and security of data, and have the characteristics of flexible deployment; 2. data extraction and conversion is the capacity to mine and analyze accumulated data, which can guarantee data quality and closely integrate with business; 3 auxiliary support capacities of multiple application scenarios, there are multiple analysis methods, which can transform unstructured data (such as natural language, etc.) into structured data that can be analyzed through deep learning algorithms for training and processing, also provide rich and friendly analysis and visualization application services, and provides convenient development environments to help the development of later data applications; 4. capacity to realize value, as the data mechanism of connecting Front-end applications, the data middle ground has outstanding capacities in managing data applications, business scenario refinement, and scenario data applications, etc.;; 5. data sharing capacity among applications [3], the data middle ground of the enterprise is shared and open asked on data security, share with all layers of business, so that data has fluidity, and enterprise developers can achieve "full use of applications."

The advantages of the data middle ground can be summarized from the value it provides for business and technology: the former provides business innovation opportunities and possibilities by liquidating data, it takes processed and managed data as basis, this logic empowers business model innovation; the latter benefits from its rich applications, high

accuracy, and data sharing characteristics, which reduces the cost of enterprise data management, supports a wide range of applications, and is highly developed.

The data middle ground transforms the data accumulated in the enterprise into data products, which is a powerful productivity tool, moreover, the formed capacity can feed back the business, forms the closed data loop to promote the sustainable and healthy development of enterprise decision-making and operation [4].

5.2. Suggestions on the Standardized Construction of Data Middle Ground

Based on the understanding of the "Personal Information Protection Law", when processing the internal transferred data of the enterprise, the data middle ground should give regulations on the access rights of sensitive user information, and the data that is open without permission needs to be fuzzy or desensitized, the protection of data and user records should also be taken into consideration. The data middle ground is the middle layer that connects the internal data and external applications of the enterprise, the empowerment for different directional businesses is different, in the construction process, the top layer of the data middle ground should add management and control to avoid the logic excessive permissions, and the data operations should be recorded, and achieve "can be ratiocinated and traceable". Moreover, abandon the previous idea when user information is regarded as the asset, and analyze the flow and conversion of user behaviors in different applications and scenarios, extract core and common information through mining, and convert the original "casting wide network" business form into "precise positioning" through the data middle ground construction

6. Conclusion

The introduction of the "Personal Information Protection Law" poses big challenges to the whole automobile industry, but also provides opportunities for automobile companies that can take the lead in reforms, how to grasp the wave of the times brought about by policy changes is the problem that all automobile companies need to think about and face.

This paper helps wide automobile companies' digital transformation and standardized data management at present by taking the law interpretation, the impact on the industry, feasibility suggestions, and the creation of the data middle ground that meets current requirements as the core contents.

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