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Big Data Platform Construction & Service
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Review of the Construction of the Big Data Platform(slide2)

The data platform was established in 2016. It has experienced five periods, including the initial construction, exploration, growth, operation, and transformation.

During the initial construction period, we built a big data cloud platform. We collected national tax data. We got a dynamic national perspective of tax big data.

During the exploration period, we created national demonstration applications to make big data useful for staff from different departments. We started to research big data model, and began to build the structure of data governance.

During the growth period, we improved our data link to make data more in time. We developed more applications and supplied data for more production systems.

During the operation period, we established data operation system. We organized a competition to promote the use of tax big data. 36 teams which represent for their provinces came to the competition. They did data query and analyze about the same topic. This competition took more and more staffs to the world of the big data, and updated their skills. We opened space for independent exploration, so that more staff with information skills can join this work.

During the transformation period, we organize data for service, and try to use data to drive business process innovation.

Maintenance Guarantee and Verification Mechanism(slide3)
In order to ensure the daily operation of big data on the cloud platform, we established an operation and maintenance guarantee mechanism and a data verification mechanism.

The key to operation and maintenance guarantee mechanism is "early detection, early warning, and early treatment".

For early detection, we developed data link monitoring program and operation and maintenance tools. With these tools, we could detect problem at once.

For early warning, the tools will trigger an exception alert. Our staff will get the information and inform downstream data users to suspend data use in a timely manner.

After we get the warning, our staff will start to analyze the reason of the problem

immediately, and coordinate with related personnel for troubleshooting.

Big Data Service(slide4-8)
After years of construction, the big data construction of the cloud platform of the STA has begun to take shape. The data has been collected at the two levels of the STA and the provincial bureau to support the big data service.

I'd like to summarize big data service with four words, "full, fast, detailed and accurate".

The first is full, which summarized into seven categories of data. These data cover all aspects of taxation work, and involve the basic processes of various economic entities' business activities.

The second is fast. Data such as tax revenue and tax management processes are updated in real time, for example, value-added tax invoices and tax declarations are updated in T+1 day which means the data of the day can be updated the next day. Most other data can also be updated in T+3 days. This not only ensures the rapid implementation of tax source monitoring, but also lays a solid foundation for the economic operation monitoring.

The third is detailed, all kinds of data can be correlated and drilled down in accordance with the unified national standards to finely depict the operational status of taxation in different fields.

Finally, it is accurate. Taking the value-added tax invoice data as an example, it can completely and accurately reflect the entire operation process of various economic entities. Once invoices are issued, they enter the system directly, and every invoice issued is recorded. This all determines the accuracy of our tax data.

Big Data Ecological Environment(slide9)
We rely on the cloud platform of STA to build a nationwide centralized and unified tax big data platform, which used to centralize, broaden and integrate internal and external data resources, unify and standardize the scope of data application, provide comprehensive and rich decision-making and reference support for all demand entities, and also build an open and collaborative tax big data ecological environment, effectively absorb the advanced experience of the State Administration and various provincial bureaus in data analysis.

In addition, it gathers professional talents, gradually form a benign interactive pattern that promotes mutual learning, and effectively promotes the national tax system the ability utilization in data analysis. It is used to support the data analysis needs of the State Administration and the provincial bureaus.

From five levels of cloud platform, data, algorithm, service and application, develop the capabilities, improve the reuse of resources and maximize the value of the data platform. It has created a comprehensive big data application ecosystem including intelligent analysis applications, empowering business applications, and external sharing applications.

Customized Application(slide10)

Currently, we establish a unified customized application for the STA users, personalize customized application for the departments and some provinces. We also do public information service for society.

Firstly, the unified customized application for the State Administration level mainly reflects issues related to national tax changes, tax collection and management status, and taxpayer characteristics.

Secondly, the personalized customized applications for the departments and provinces are mainly based on the work responsibilities and priorities. We develop data services for global or regional management of specific businesses to support business innovation.

Thirdly, the public information service oriented to society is mainly the service activities actively provided by the STA for the purpose of promoting social and economic development. By utilizing the centralized information of big data, we serve taxpayers, social organizations, and other government departments.