

'Shanghai-format' data exchange solves info usage and management dilemmas

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It's a dilemma faced by all government regulators worldwide — how to improve data usage to boost the economy and build a smart society, while also ensure data security and a fair and transparent system.

Shanghai's answer is embodied in the debut of the new Shanghai Data Exchange and a growing ecosystem, covering data trade and transaction innovation, drawn from various sectors, regulations and laws.

The new exchange is designed to improve data usage and connect "isolated data islands" to boost the city's digital hub construction. Over 20 projects from eight sectors, including finance, public utility and transportation, completed their listings on the first trading day of the exchange. More than 100 projects are in the pipeline for listing soon.

Shanghai Mayor Gong Zheng unveiled the exchange during the Global Data Ecosystem Conference 2021 on November 25.

The conference, held for the first time nationwide, attracted organizations and firms dealing in data transaction, data asset evaluation, data security and other sectors.

Rather than just a data exchange

A complete industry ecosystem in Shanghai, also covering auditing, law and IT infrastructure, is key to the data exchange's sustainable development.

"It requires a whole ecosystem rather than traders and an exchange," Dou Yifan, an associate professor at the School of Management, Fudan University, told Shanghai Daily in an exclusive interview.

Shanghai has unique advantages as the data exchange is on trial operation for several years, with data usage experiences and application scenarios, especially in finance credit and digital marketing, Dou said.

School of Management at Fudan University is one of major think tanks to help draft trade mechanisms for the Shanghai Data Exchange and Dou is a key member of the project.

According to a paper by researchers including Dou, firms'



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internal data are increasingly valuable, with booming AI technology development, when merged with each other for inter-firm analysis and predictions. However, the inter-firm data transactions represent a novel challenge on pricing due to the complex nature of data, such as quality information asymmetry, lack of pricing standards and the negligible marginal cost.

Meanwhile, large-scale data transactions and making a profit from them are quite "tricky." Unlike commodities, data are virtual goods with privacy restrictions, little quality transparency and limited standards for pricing, according to the paper, which indicated 18 factors to influence data trade.

Therefore, the data trade process should be attended by traders, technology providers, lawyers and various organizations to establish an ecosystem, Dou added.

The research echoed local industry regulator's opinions which mentioned "five difficulties" in the trade.

They cover rights confirmation, price evaluation, trust, entry and regulation and supervision, said officials at Shanghai Commission of Economy and Informatization, the city's top industry regulator.

Active market response

Despite the challenges of trade design and data security, no one can deny the huge potential of the Shanghai Data Exchange.

On its first trading day, several organizations became the first

batch of traders in the exchange, including industry giants and local tech startups.

The Industrial and Commercial Bank of China and Shanghai Electric Power reached a deal between the finance and energy industries involving data integration and usage.

Banks will now be able to easily access data from public utilities and mobile carriers when deciding on loans to businesses, thus reducing their risk exposure.

China Telecom's data service subsidiary signed a deal with a government-authorized research institute, making it the exchange's first data trade deal in the telecommunications industry.

The subsidiary has four types of data: population, network signal, geographic information and network behavior. It uses AI and knowledge graphs to process data, and can deeply mine social and commercial aspects, such as traffic predictions and commercial building location choice services.

Shanghai-based Intsig has listed two data service products in the exchange based on its Qixinbao platform. Qixinbao has a database covering 230 million enterprises and 100 billion lines of data under 1,000 "labels" such as company information and industry, fundraising, shareholder, judicial information and credit. It can provide media report

analysis, risk control, trademark and patent inquiry and investment reports based on deep data analysis.

The exchange marked a "fundamental change" in data usage among enterprises and society. Data have become more valuable assets to boost the economy and fuel innovation across various industries, said Michael Zhen, chairman of Intsig.

The data service will also be used in e-commerce, fintech and ease-of-use interface design, said e-commerce giant JD.

Located in the Pudong New Area, the data exchange will boost the district's digital transformation and fuel related industries, with output over 500 million yuan (US\$78.6 million), local officials said. In Zhangjiang, more than 300,000 people will work in the data-driven industry by 2025.

In Shanghai, there are more than 3,000 firms with "data" in their names, one-third of them founded after 2020. It means great potential of the whole data-driven ecosystem, said Fudan's Dou, citing industry sources.

Dos and Don'ts for data usage

Exchange chairman Zhang Qi said the organization's digital data trading system can guarantee real-time listing and trading and ensure that every operation

is traceable.

The Shanghai data transaction expert committee, consisting of 31 experts in the fields of legal compliance, financial transaction, data industry and data security, also has been set up.

The exchange mainly targets enterprise and organization users. All data usage and trade will be done under strict rules, such as "data to be used but not seen" to protect individual data security and personal privacy, experts said.

Data security is drawing more attention nationwide as China strengthens data and personal information protection and releases new laws, such as the Personal Information Protection Law implemented to take effect since November.

A local law specifically for data usage and management will take effect next year, covering detailed regulations about how the government handles data collected from residents.

The law will classify public data into three categories in terms of whether it can be accessed by third parties. Data on information and the privacy of individuals, business secrets and classified commercial information are not accessible, while other types of data will be either conditionally or unconditionally accessible to the public, according to the new law.

