

► ILO Brief

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Good Practices in Social Security in China (2): The Smart Human Resources and Social Security Joint Innovation Laboratory in Nanning City, Guangxi Province

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► Preface

The digitalization of social insurance administration can improve its efficiency, capacity and management while also facilitating the innovation and optimization of public service delivery – for the benefit and increased well-being and security of the insured population. Thus, China's social insurance institutions from central to local levels have made great efforts in digital transformation and innovation. The *Smart Human Resources and Social Security (HRSS) Joint Innovation Laboratory* in Nanning is an example of a successful collaboration between the central and local governments in digital transformation.



Smart HRSS Joint Innovation Laboratory, Nanning City, 2021 © MOHRSS

► Overview

Nanning is the capital city of Guangxi Province, located in southwestern China. As of 2023, the city had a permanent population of around 8.94 million inhabitants,¹ with 7.8 million people covered by pension insurance, work-related injury insurance and unemployment insurance.

In 2018, the Bureau of Human Resources and Social Security of Nanning (Nanning HRSS) took the initiative to develop the first integrated system for all HRSS services in China, called the Smart HRSS system, exemplifying digital transformation and model innovation at a local level. On this basis, in 2021, the Information Centre under the Ministry of Human Resources and Social Security (MOHRSS) jointly established the *Smart HRSS Joint Innovation Laboratory* ("the Lab") with the Municipal Government of Nanning.

The Lab is committed to exploring new applications of advanced technologies such as Big Data and Artificial Intelligence in the field of HRSS in order to innovate social security management systems as well as service delivery. Products developed by the Lab can improve the efficiency and quality of public services at the local level while also providing inspiration for the upgrading of HRSS systems all around the country.

1 <https://www.nanning.gov.cn/sjfw/sjjd/t5905605.html>.

► Working mechanism

The Lab was jointly built by the central and local governments. At the ministerial level, the MOHRSS Information Centre is in charge of providing overall guidance. At the local level, the Nanning HRSS and other local departments are responsible for the daily running of the facility and undertake research under the helm of the Municipal Government of Nanning.

The Lab has established a tripartite cooperation mechanism involving the Government, enterprises and research institutions to jointly carry out the innovation work:

- In terms of government, the Lab office is located in the Nanning HRSS, which is in charge of administering social security services and promoting cooperation between different departments to increase overall service efficiency.
- In terms of enterprises and research institutes, including Neusoft, China Merchants Bank, Guangxi University, Guilin University of Technology, Guangxi Institute of Mathematics and others, they have participated in providing intellectual and technical support to explore new service delivery models, apply risk control mechanisms from the financial industry to the social security fund, and promote the rapid transformation and application of the latest information and communication technology (ICT) in HRSS administration.

► Flagship product: The smart HRSS system and innovative business model

Issues addressed

The social insurance field is characterized by a wide range of policies, services and clients. There are many common problems with administrative processes at the local level, including:

- fragmentation of administrative resources, such as data, IT systems and offline service desks;
- lack of specifications and standards of service items, resulting in confusion in internal administration;
- administration-oriented rather than service-oriented IT systems.

In Nanning, prior to 2019, administration of the HRSS system was scattered among more than ten independent IT systems. In terms of service delivery channels, there were as many as 23 websites and apps. The offline service halls and desks were also set up separately according to service type and process. For example, there were separate service halls catering to employment and social security. Inside the service hall for social insurance, service desks were classified by registration procedures and application procedures for receiving benefits, and so forth. For different services within social insurance, applicants were obliged to repeatedly gather and hand in paperwork and queue up for long periods of time. Sometimes, for the same service, there were different requirements for the online and offline channels.



Job fair live streaming at Smart HRSS Joint Innovation Laboratory, Nanning City, 2021 © MOHRSS

Innovations

In order to solve these problems, the Nanning HRSS launched the Smart HRSS project in 2018, creating the following innovations:

- Integration of data resources and IT systems. Ministerial data standards were applied to unify the data format and pool together diverse units into one standard database. At the same time, the more than ten IT systems were abolished and replaced by a unified Smart HRSS IT system developed strictly in accordance with the technical framework developed by the MOHRSS, which fully integrated all Nanning HRSS services administration.
- Creation of a new service model that features a one-stop-hub for online services. As part of this initiative, 23 websites and apps were removed and a unified e-service portal was established, consisting of four elements: website, social media account, app, and self-service all-in-one kiosk. Today, 99 per cent of HRSS services within Nanning city can be accessed online, at any time. In terms of offline service provision, previously sectoral and administrative barriers have been removed, and the original service halls and desks transformed into

comprehensive HRSS service halls. Now, customers can apply for any HRSS service at any HRSS service desk throughout the city.

- Division of all administrative processes into three procedures: acceptance, handling and feedback. Once an application is received at a counter or via a platform, it is classified and allocated automatically by the system to service staff, which guarantees equality of service. Feedback is provided to the applicant by text messages during the process, ensuring transparency in administrative processing and staff operations.
- Building an interoperability-based service model. On the internal side, more than 150 internal interoperable service items are offered to customers. Externally, the Smart HRSS system connects horizontally with 21 other departments such as the Bureau of Big Data of Nanning and the China Construction Bank of Nanning, by means of an interface upon which a *Data Exchange Platform* has been built with HRSS data as the core and data sharing from other parties as support. This platform provides the technology support to realize more than 60 inter-institutional interoperable items by automatic data comparison and intelligent analysis.
- Transforming service delivery from reactive to proactive. For the convenience of customers, some new applications have been provided to greatly reduce the number of procedures, forms and paperwork and even exempt the applicant from making an application. For example, taking advantage of data sharing, intelligent review and automatic comparison, an eligible unemployed person can be screened out and notified automatically by the system, after which that person can receive unemployment insurance benefits on an immediate basis simply through the facial recognition action process.



Nanning Smart HRSS Integrated Monitoring Platform, Nanning City, 2021
© MOHRSS



Blockchain + HRSS Application Platform, Nanning City, 2021 © MOHRSS

► Application of advanced ICT

Since 2021, the Smart HRSS Joint Innovation Laboratory has actively explored the applicability of advanced technologies in the HRSS field, achieving more than 20 outcomes, including Smart Talents, Enterprise HR Cloud and Optical Character Recognition (OCR) automatic identification. For example, job seeker profiles are created by big data to monitor and serve graduates from universities and other key groups experiencing employment difficulties; the *Blockchain + HRSS Application Platform* has been built upon the Smart HRSS system to create a secure and trustworthy ecosystem of data sharing, which has loaded multiple blockchain + applications, including electronic labour contracts, credit authorization and joint supervision of the HRSS fund. The Lab also conducts training in Large Language Models for the industry, exploring the creation of intelligent staff that can replace service consultants and processing staff.

► Key lessons

The innovative practices of the Nanning HRSS and the Smart HRSS Joint Innovation Laboratory have provided much useful experience for HRSS institutions throughout the country:

- Technical support is essential. The Lab fully applies the most cutting-edge ICT to improve HRSS administrative processes.
- Standards and norms are the foundation. From the underlying administrative data to the operation of service staff at the front desk, the Nanning HRSS has carried out all-round and whole-process standardization construction.
- Good governance is key. The Nanning HRSS has continued to construct service-oriented government and transformed the service model from a reactive to a proactive one.

► Impacts and the way forward

As a pioneer in the digital transformation of China's social insurance administration, Nanning's implementation model, characterized by integration and unification, along with its advanced applications, has been upgraded and widely promoted across the country.

Countless innovative actions have been undertaken by social insurance institutions at various levels across China, particularly in leveraging advanced technologies such as Artificial Intelligence, Robotic Process Automation and Large Language Models. Consequently, China's social insurance administration is poised to advance to a new stage of intelligent administration.



Social security officials from Shenzhen City (Guangdong Province) visiting the Lab, Nanning City, 2022 © MOHRSS



智慧人社联合创新实验室
SMART HUMAN RESOURCES AND SOCIAL SECURITY
JOINT INNOVATION LABORATORY

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