Digital Transformation for Social Services

AI-based Social Service Open Platform

2021 Symposium of International Social Security Association (ISSA)
2021. 11. 10. (WED)
The Korean government’s social security system is composed of three different structures, Social Insurance, Social Service and Public Aid, under the article 34 of Korean Constitutional Law and their relevant laws.
The Social Security Information Service is a chief institution which integrates, manages and uses the social security information. Also it aims to support the enforcement of policies as planned, and to realize customized welfare policies.
Major Information Systems

Social security information system (Haengbok-E-eum)

- The system supports the selection of beneficiaries and post-management of 360 types of social services from 21 governmental departments with the wide use of personal data provided by 178 different institutions.

- Under the Act on the Use and Provision of Social Security Benefits and Search for Qualified Beneficiaries such as one’s income, property information, beneficiaries’ payment history, information of individuals eligible to the social security programs are managed securely through the Hang-Bok-E-um.

Social security information system (Pan-Government)

- The system informs the eligibility, the contents and the process of each social security programs, prevents social welfare frauds such as taking benefits without legal grounds, support administrative works for government employees, transfers the application of social security programs between different institutions and manages data such as one’s history on what social security programs have taken before.
Major Information Systems

Public healthcare information system

- Public Health Information System provides the integrated working platform for 3,500 public healthcare institutions nationwide.
- The system is to support administrative works by computerization, to assist the establishment of effective policies based on relevant statistics and evidences, and to offer useful healthcare information for the public.

Social service electronic voucher system

- Social Service Electronic Voucher Information System plays a core role in improving efficiency and transparency of financial management in the area of social welfare.
- The system enables to manage the entire process of using social service electronic vouchers by computerized processes, from the application of the service to the payment and settlement, that ensure the convenience and easiness for users, social service institutions and local governments.
Major Information Systems

**Integrated childcare information system**

- Childcare Integrated Information System is to use the childcare service more convenient and transparent and to make simple in processing works for childcare service providers and government officials.

- The system manages the use of “i-Happiness Card”, a voucher for the payment of childcare service, for the easiness, supports administrative works for childcare service providers and discloses relevant information that affects to the quality of childcare services.

**Social welfare facilities information system**

- Social Welfare Facilities Information System is designed to improve work efficiency and enhance transparency in managing social welfare facilities.

- The system supports to simplify accounting with respect to subsidies, donations and tax incentives, to manage employee's salary and facilities' assets and the information of donators, and to allow online reporting works to local governments as to the management of budgets and subsidies.
Major Information Systems

Vulnerable senior support system
- Vulnerable Senior Supporting Information System aims to support the safety of solitary seniors, elderly people living alone, and the disabled individuals.
- The system is designed to alert those with installed equipment such as detecting sensors and gateway, from unexpected events, i.e. gas leak and fire, that may lead to lethal damage or death. The system automatically sends emergency messages to fire station if the unexpected events happened.

“Bokjiro,” the most representative portal for Korean welfare
- The portal, Bok-Ji-Ro, enables to search the right social security programs, to apply for one of the social security programs, to report social welfare crimes such as taking benefits without legal basis.
- G-Health, similar to Bok-Ji-Ro, is a web portal for the public, is to provide public health information and services with the cooperation of nationwide 3,500 healthcare institutions. The portal, G-Health, enables to issue online certificates with regard to personal healthcare, to inform healthcare services provided by the healthcare institutions and to offer healthcare newsletter weekly for registered users.
Social Security Information Service (SSIS)

**Before**

Absence of the system, social security services are available only by visiting

- Ministry of Health and Welfare
- City Hall
- County office
- Gu-office
- Dong-office
- Township office

- Misappropriation of subsidies
- Increase in illegal beneficiaries
- Welfare blind spots

**After**

Opening of integrated social welfare network

- Ministry of Health and Welfare
- City Hall
- County office
- Gu-office
- Dong-office
- Township office

- Integrate systems to activate inter-regional linkages
- Prevention of illegal receipt of welfare benefits
- Integrated management of welfare services
Social Security Information Service (SSIS)

1. Next-Generation Social Security System
   - ‘Welfare Membership’
   - ‘Welfare Wallet’

2. AI-based detection system prevent social welfare frauds
   - Big data, AI, RPA-based fraudulent supply detection system

3. Activation of the k-new deal in the field of social security
   - Expansion of smartphone payment
     Blocking illegal supply and demand using QR codes
   - Non-face-to-face conversion, innovation of public service
Social Service

2020.06.11.  ▶️  2021.06.30.  2019.07.16.

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Process of Social Services

Social Security System
- Send application details
  - E-voucher system
    - Business support
    - Card issuance
    - Payment verification
    - Fund management
  - Production payment card
    - Local government
      - Financial institution
        - Production payment card
          - Deliver the card
            - Mobile carrier
              - Service payment
                - Service provider
                  - Request
                    - Provide
                      - Users
                        - Pick up card
                          - Card issuance
                            - Payment verification
                              - Fund management
                                - Card issuance
                                  - Business support
                                    - Send application details
                                      - E-voucher system
                                        - Production payment card
                                          - Deliver the card
                                            - Mobile carrier
                                              - Service payment
                                                - Service provider
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                                                      - Provide
                                                        - Users
                                                          - Pick up card
                                                            - Card issuance
                                                              - Payment verification
                                                                - Fund management
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                                                                              - Production payment card
                                                                                      - Deliver the card
                                                                                         - Mobile carrier
                                                                                           - Service payment
                                                                                             - Service provider
                                                                                               - Request
                                                                                                 - Provide
                                                                                                   - Users
Process of Social Services

Apply for Qualification
- Apply the social service
- Confirmation of eligibility
- Reception the application

Collection
- Visit/document investigation
- Collect the results of Investigation
- Held the deliberation committee

Determination of Qualification
- User selection
- Transmission of selection results
- Check the selection details

Card Issuance
- Apply the voucher card
- Card production/delivery
- Create Voucher

Pay the Coinsurance
- Pay after use
- before use
- Create Voucher

Contract
- Service provision
- Write a record
- Payment of cost

Insufficient digitalization of information
Insufficient non-face-to-face countermeasures
Insufficient provision of information on institution selection and decision-making
The Need for Innovation

Increase in unused social service vouchers due to COVID-19

<table>
<thead>
<tr>
<th>Voucher Name</th>
<th>2018. 11.</th>
<th>2019. 11.</th>
<th>2020. 11.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Amount of Unused</td>
<td>Percentage of unused</td>
<td>Amount of Unused</td>
</tr>
<tr>
<td>Total amount</td>
<td>44</td>
<td>3.47%</td>
<td>52</td>
</tr>
<tr>
<td>Pregnancy/Maternity</td>
<td>3</td>
<td>4.55</td>
<td>4.6</td>
</tr>
<tr>
<td>Investment in community</td>
<td>17</td>
<td>9.15</td>
<td>19</td>
</tr>
<tr>
<td>housekeeping/care</td>
<td>0.6</td>
<td>3.11</td>
<td>0.7</td>
</tr>
<tr>
<td>developmental rehabilitation</td>
<td>12</td>
<td>12.75</td>
<td>13</td>
</tr>
<tr>
<td>language development</td>
<td>0.08</td>
<td>13.62</td>
<td>0.08</td>
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<tr>
<td>Parent counseling</td>
<td>0.16</td>
<td>16.54</td>
<td>0.16</td>
</tr>
<tr>
<td>Support for disabled</td>
<td>11</td>
<td>1.25</td>
<td>14</td>
</tr>
</tbody>
</table>

(Unit: million dollars)
The Need for Innovation

- Increased non-use of social service vouchers
- Restrictions on face-to-face social services due to prolonged COVID-19

Increased restrictions on social services for vulnerable groups due to COVID-19
The Need for Innovation

Prolonged Corona 19 → Corona Black → The Golden Time ended

[Corona Black - Tears of a family with developmental disabilities]

"Expert views on policies and alternatives for DD"

Corona 19, Suicide of disabled student and mother
Jeju economic newspaper, 2020-03-17

They don't know how to ask for help
Active matching using the system is required
For customized support, understand the demand

* DD: Developmental Disability
Direction of Digital Social Service

**In the short term**, AI-based social service matching and recommendation

- Safely **connect** optimal social service users and providers despite the COVID-19
- Facilitate the use of unused vouchers
- Elimination of welfare blind spots

**In the mid to long term**, providing digital social services based on DTx

- Continuously guarantee social services for the vulnerable groups in the post COVID-19
- Facilitate use of unused vouchers that were not used due to COVID-19
- Eliminate side effects of COVID-19 (Corona Blue, Corona Red, Corona Black, DD)
Direction of Digital Social Service

User-customized
AI-based Social Service Open Platform

User based Service Delivery System

Expansion of Service Availability

Provide AI-based Social Service Solution

Provision of Regular Non-Face-to-Face Service

Enhance User Experience

Strategies

• Foundation for data acquisition
• AI-based matching/suggestion service
  - Intelligent searching

• Non-Face-to-Face Service
  - Non-Face-to-Face contract/payment
  - Self-diagnosis and match the expert

• DTx-based Social Service
  - Provide rehabilitation service

• Omnichannel based communication service
  - Mobile service experience
  - Chat-bot consultation

• Expansion of matching field

Vision

Purpose

Directions
Direction of Digital Social Service

Digital Healthcare
: Digital technology being used during healthcare

Mobile Healthcare
: Mobile technology being used during digital health care

Medical
: Specialized medical areas such as prevention and treatment

- Patient care,
- Surgical operation,
- Drug dispensing, etc.

Digital Therapy
- PTSD Therapy using VR
- Game for ADHD

Smartphone sleep aid app
Remote/Monitoring Telemedicine

Aimed – Somryst (Insomnia)

Hi-semitalk (Dementia)

DoBrain (Development Disorder)
Direction of Digital Social Service

Providing Platform for Digital Social Security Service

- Developmental Disability Clinic
- DTx Start up
- Social Service Provider
- Developmental Disability Clinic
- Bokjiro
- Volunteer Center
- Demand of Social Services
- DTx-based Link the digital social service
- Link the welfare resource
- Self-supporting institution
- My data
- Suggestionism

Support for the disabled
- Pregnancy and Childbirth
- Developmental Disability
- Dementia
- Diabetes
- ADHD
- Health and welfare

Supply of Social Services
- Register the information

My data

Information of Social Service Demand

Matching/Recommendation
Use of social services and welfare resources

AI-based

Direction of Digital Social Service

Platfrom
Thank you