Innovation for Intelligent Public Services:

Case of the Virtual Assistant Service for the Public

Ministry of
the Interior and Safety

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01 Background

Need to address the hassle involved in users **searching for the systems they need by themselves.**

Need to reduce limitations on the **provision of digital services and sharing of data across organizations.**

There is a need to encourage **the public sector to use private-sector digital services** commonly used by the public and expand those services by linking them with existing public services.

Despite the high demand for the introduction of digital assistant chatbots for civil petition consultation in the public sector, there have been few successful cases, **calling for government-wide adoption based on common infrastructure**.

02 Overview of the Virtual Assistant Service for the Public

Creation of a virtual assistant service that informs the public of the administrative information they need in advance and handles inquiries

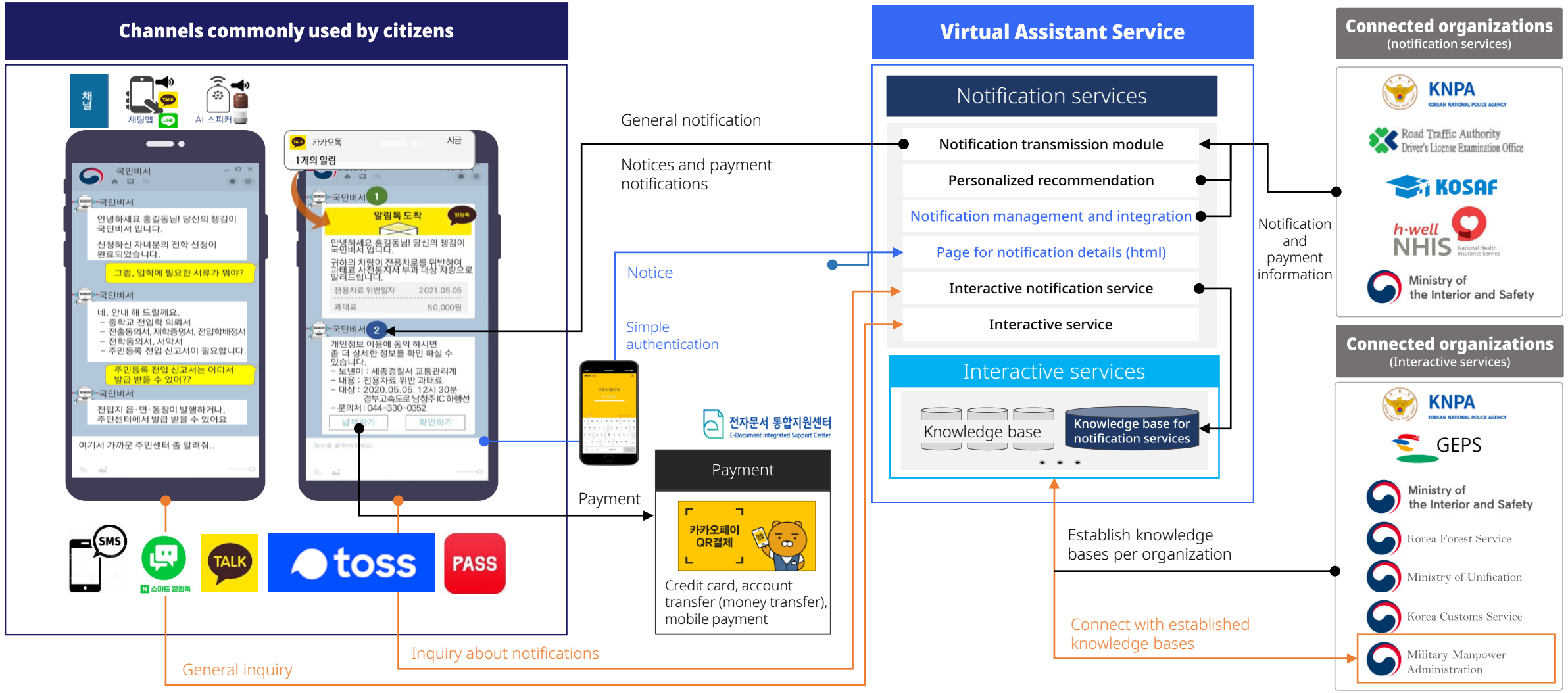
1 Notification services

Services to provide timely notifications of daily life-related information via applications commonly used by citizens (KakaoTalk, Naver app, Toss, etc.)

2 Consulting services

Non-face-to-face text and voice-based consulting services to answer people's questions about civil petitions and provide relevant instructions in real time

02 Overview of the Virtual Assistant Service for the Public : concept



02 **Overview of the Virtual Assistant Service for the Public :** features

Provides public services accessible from anywhere

- The public virtual assistant service enables people to get information on or apply for all services available to the public via a single channel.
- It digitizes the processes of sending notifications and receiving payments and enables easy payment for various government services.

Proactively provides personalized services

- Expands welfare membership by providing welfare services to individuals and households more proactively and streamlining the application processes.
- Expands the ”Subsidy 24” service, which allows people to check which government benefits they are eligible for all at once when they log in to GOV.KR or visit a community center.

03 **Service status:** progress on system establishment

- Re-designed administrative services to realize intelligent e-government (ISP, 2018)
- Implemented first phase of the project to create the virtual assistant service (Jul. 2020 to Feb. 2021)
- Launched the virtual assistant service for notification services (http://ips.go.kr) (Mar. 29, 2021)
  - Providing seven types of daily life-related information services, including traffic penalties, health checkups, and driving license renewal
- Launched notification service for COVID-19 vaccination appointments (Mar. 31, 2021)
- Began to offer notification service for the government's COVID-19 Relief Payment (Aug. 30, 2021)
- Started to provide personalized notifications for benefits through the Virtual Assistant Service for the Public (Welfare Membership)*
- Launched pilot version of the virtual assistant service consulting services (May) and continued operation of pilot services (by Sept.)
  - Opened civil petition-related consulting services in 11 types of administrative areas across 8 organizations, including information on recreational forests

03 **Service status 1:** 10 types of daily life-related information

Service coverage

No.	Name of institution	Name of notification service	Scope of service		
			Notification	Authentication	Payment
1	Korean National Police Agency	Notification before the traffic penalty payment deadline	○	○	○
2		Notification before the traffic fine payment deadline	○	○	
3	National Health Insurance Service	General health checkup date (including cancer checkup date)	○		
4	Korea Road Traffic Authority	Driver's license renewal	○		
5		School bus driver training	○		
6		Senior driver training	○		
7	Ministry of Health and Welfare	Welfare membership (customized salary)	○		
8	Korea Disease Control and Prevention Agency	COVID-19 vaccination appointment information	○		
9	Korea Student Aid Foundation	Application for national scholarship	○		
10	Ministry of the Interior and Safety	COVID-19 relief fund	○		

03 **Service status 1:** 7 types of daily life-related information

Flowchart of notification services

	Users	Private-sector channels	Virtual assistant service	Organization
Virtual assistant service application data	Apply for notification		**Store application data**	**Receive application data**
Receipt of virtual assistant service notification data	Receive notification data	**Transmit notification data**	**Transmit notification data**	**Generate notification data**
Transmission of notification results	Transmit notification results	Transmit notification results	Receive notification results	

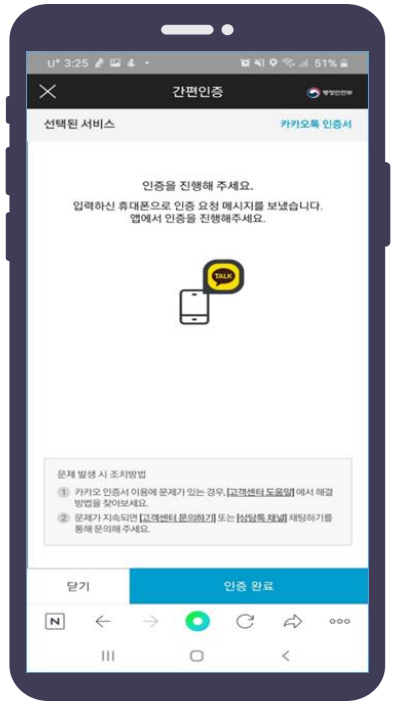
Reference:

How to sign up for **the Virtual Assistant Service for the Public** through simple authentication

1 Access the virtual assistant service

2 Select authentication services and enter information

3 Conduct authentication process

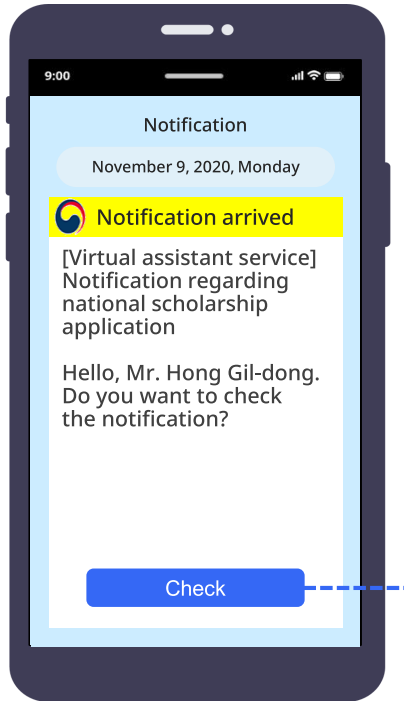


4 Complete

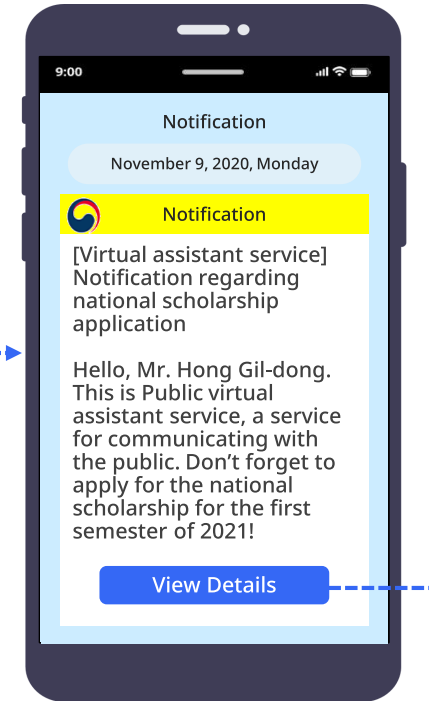
Reference:
Example of notification services (1/2)

Proactive notification scenario (2021): KakaoTalk

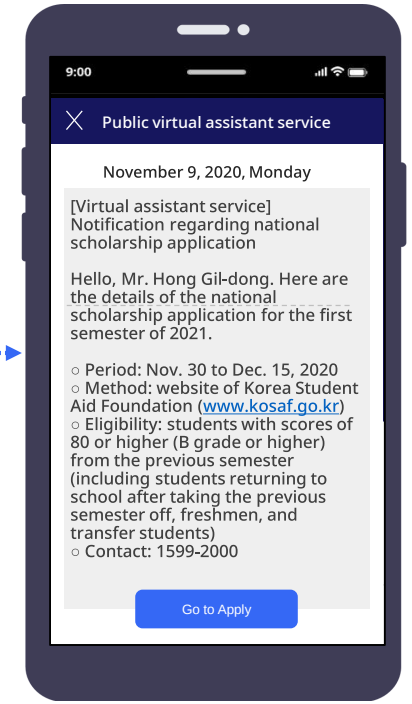
1-1 Proactive notification



1-2 View details



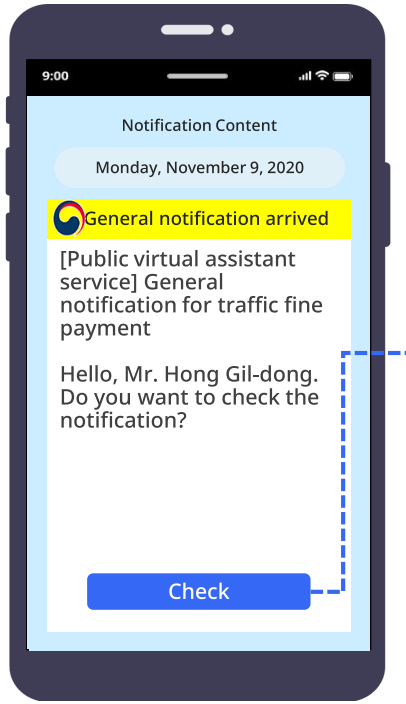
1-3 Check details



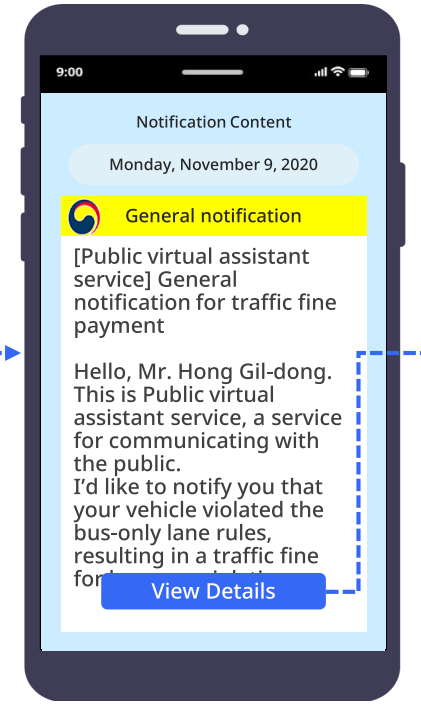
Reference:
Example of notification services (2/2)

Fine notification scenario (2021): KakaoTalk

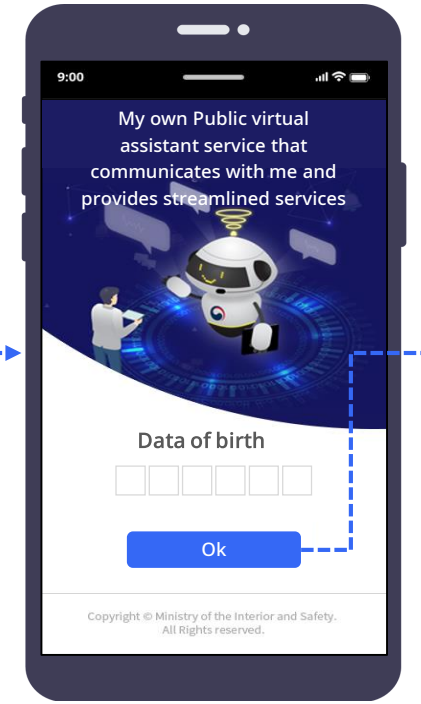
2-1 General notification



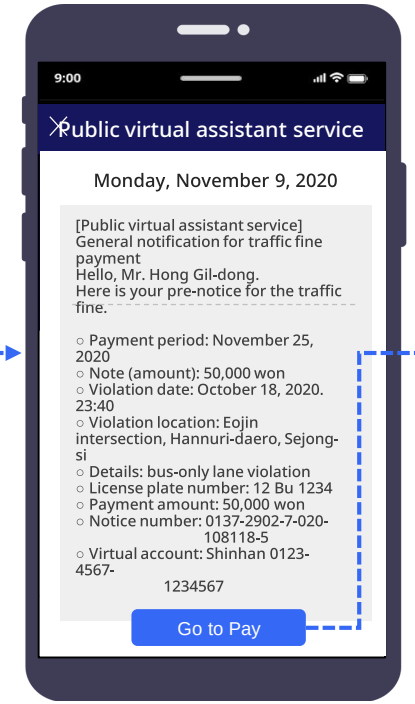
2-2 View details



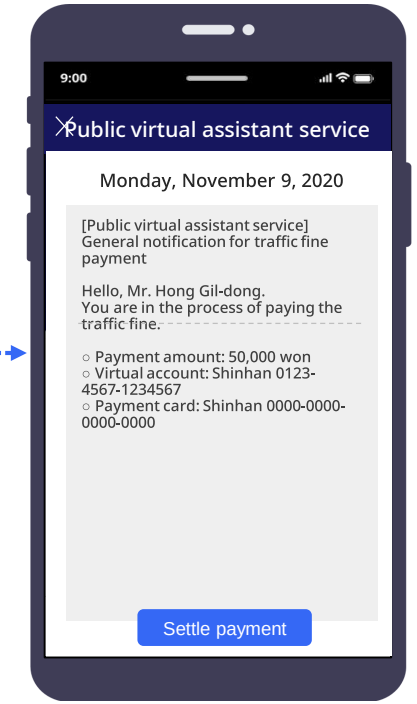
2-3 URL + date of birth



2-4 Check details



2-5 Easy payment



03 **Service status 2:** information on vaccination appointments

Service overview

- The Korea Disease Control and Prevention Agency and Ministry of the Interior and Safety built a cooperation mechanism to manage all aspects of the nationwide vaccination program, from making appointments and providing instructions on vaccination to issuing vaccine certificates.

Roles and operation systems of each organization

- **KDCA:** manages vaccination appointments (COVID-19 Vaccination System) and issues COVID-19 vaccine certificates (via “Coov” app)
- **MOIS:** provides instructions on vaccination (Public virtual assistant service services) and issues COVID-19 vaccine certificates (printed out from GOV.KR or issued as an e-certificate)
- **Private-sector apps:** sends vaccination notifications via KakaoTalk, Naver app, Toss, or text message

03 **Service status 2:** information on vaccination appointments

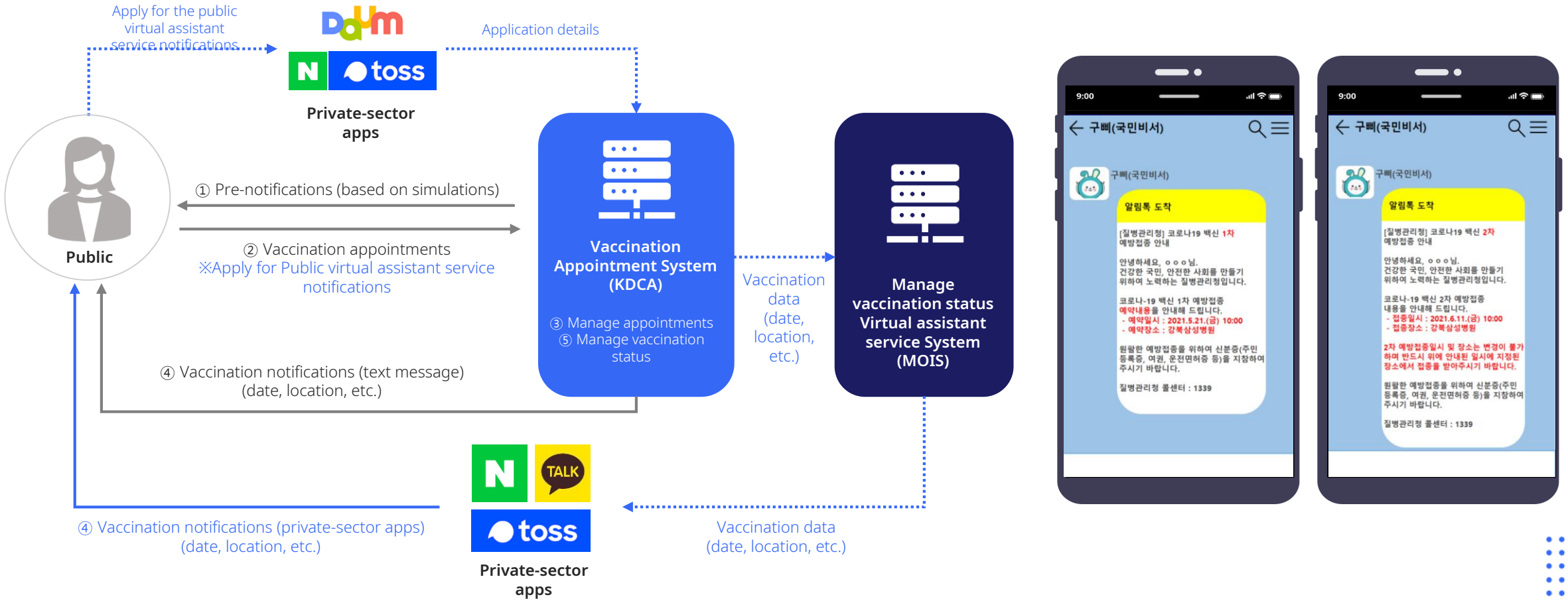
Vaccination notification process

- COVID-19 vaccination system → the Virtual Assistant Service for the Public → Send notification via private-sector apps
- Total of 7 notifications sent to each user,* with 166.9 million notifications sent to 27.83 million people who applied for the notifications (as of Sept. 9)

* Notification content

- ✓ **First dose:** appointment results, notification one day before vaccination date, results of vaccination on vaccination date, and guidance on reporting adverse effects
- ✓ **Second dose**: notification one day before vaccination date, results of vaccination on vaccination date, and guidance on reporting adverse effects

Reference:
Flowchart of vaccination notifications



03 **Service status 3:** notifications regarding COVID-19 relief payments

Service overview

- With the bill on “COVID-19 Relief Payment” passing the National Assembly (Jul. 25, 2021), a notification service for the payment was provided under the pan-governmental framework to address the challenge swiftly.
  - ✓ A total of 1.1 trillion won was handed out to households in the bottom 80% income bracket (20.34 million households, 88% of the entire population). The application process started in early September and the payments began to be made in mid-September through card companies, administrative agencies, etc.

Roles and operation systems of each organization

① National Health Insurance Service: built a database of eligible citizens

② Sido and SAEOL Administrative Information Systems of MOIS: check eligibility, determine payment amount, and make payment

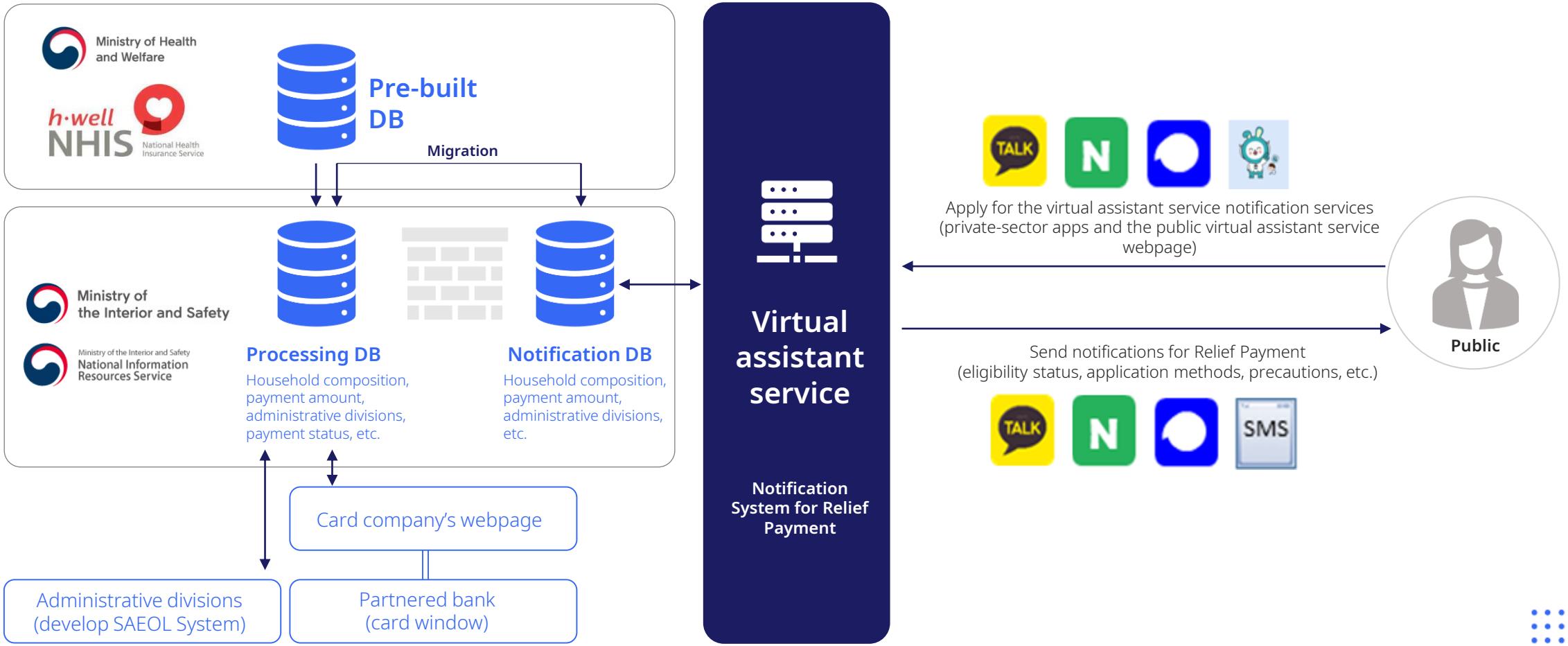
③ Virtual assistant service: provide notification of eligibility, payment amount, application period, and validity period

03 **Service status 3:** notifications regarding COVID-19 relief payments

Details of the virtual assistant service subscription and notifications for COVID-19 relief payments

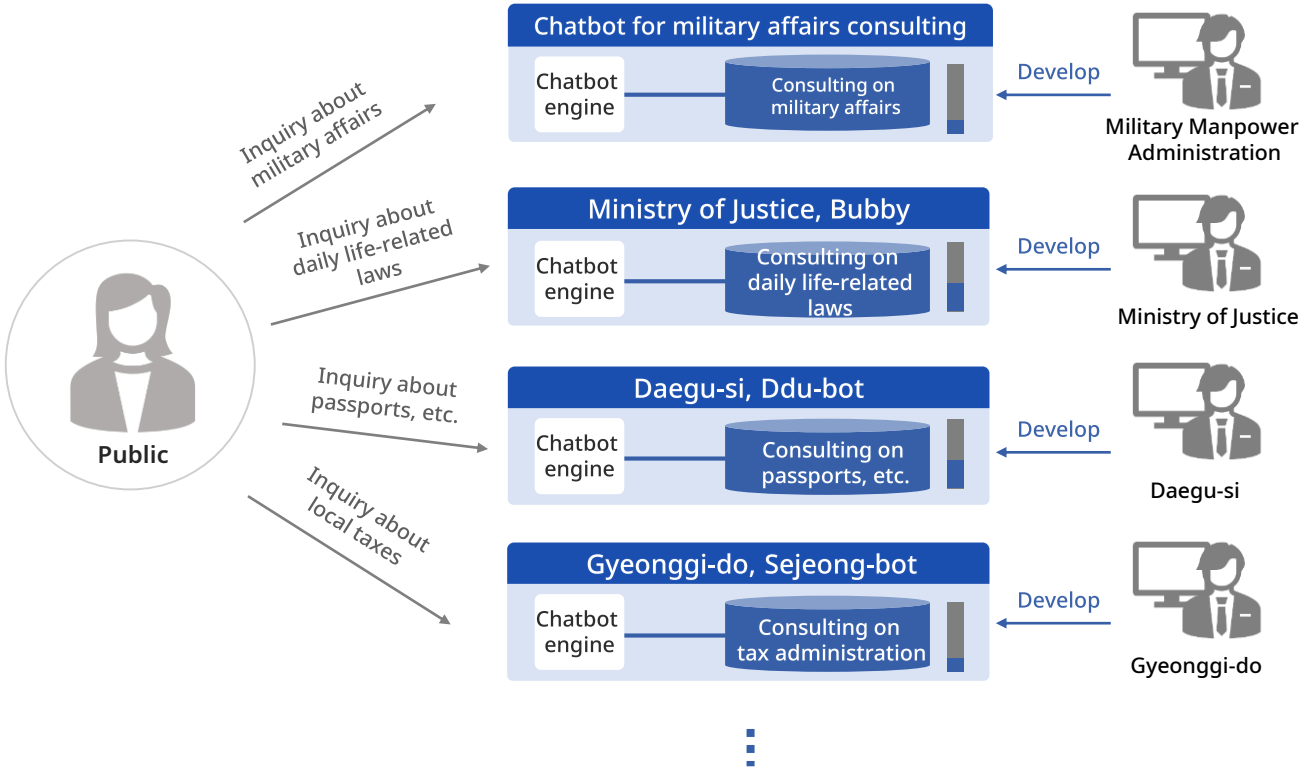
Type	Total	Naver app	KakaoTalk	Toss	Text message
Number of subscribers to the virtual assistant service (10,000)	1,274 (100%)	180 (14%)	332 (26%)	741 (58%)	21 (2.0%)
Notifications sent (10,000)	1,337 (100%)	207 (15.5%)	319 (23.9%)	795 (59.5%)	16 (1.2%)

Reference:
Flowchart of COVID-19 relief payment notifications



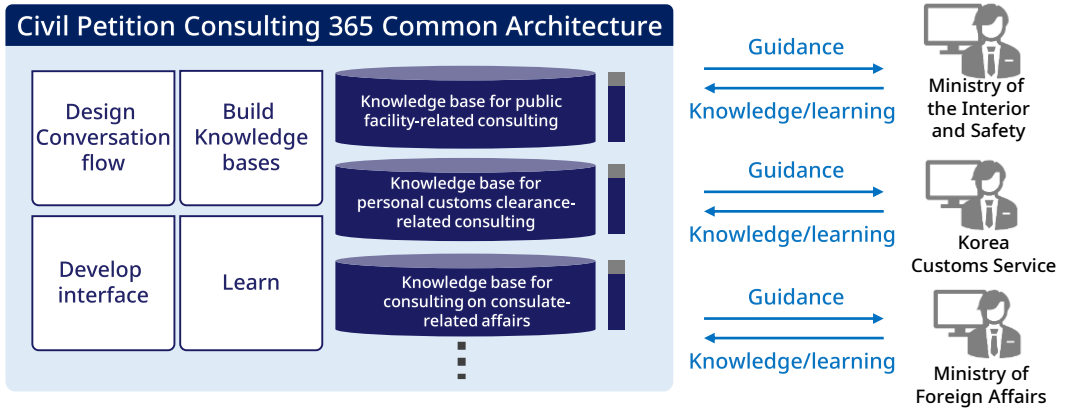
03 **Service status 4:** consulting services

Current

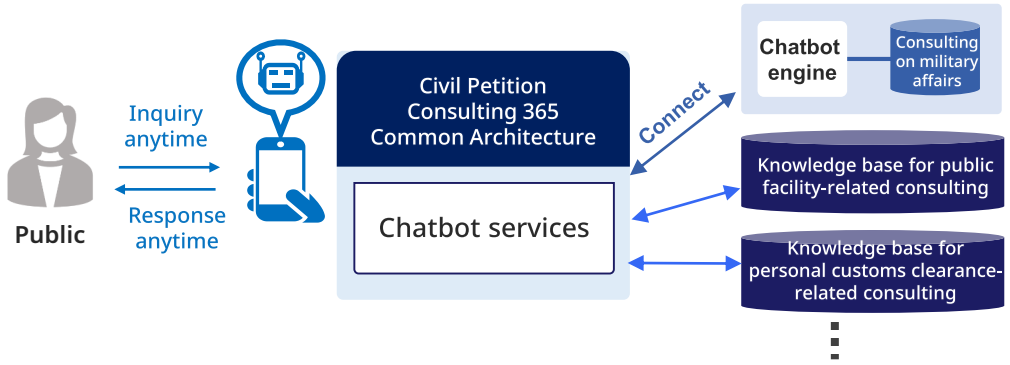


Chatbot services are individually developed by organizations with low service quality.
People need to use different chatbots for different topics.

Future

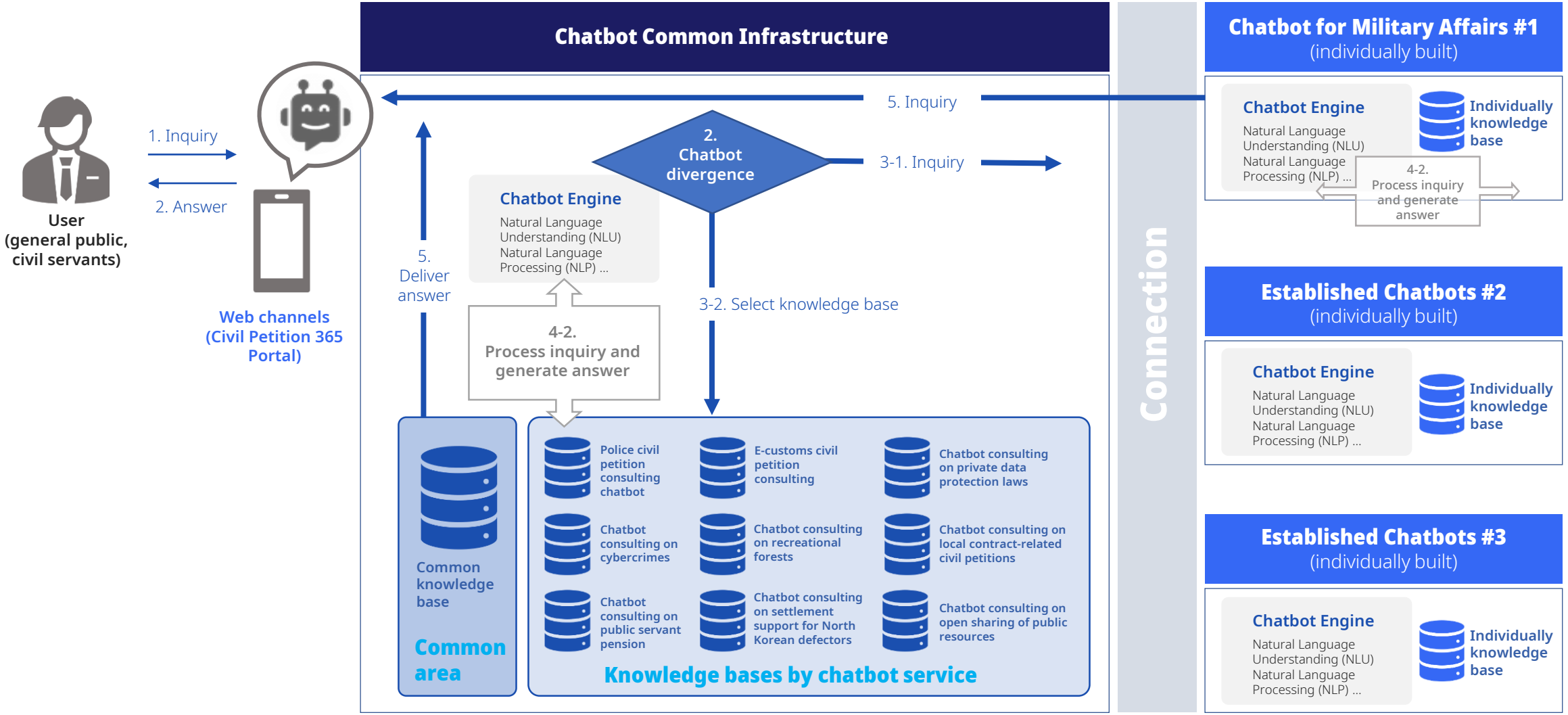


Design easy-to-use chatbot services and accumulate relevant know-how.



People can use consulting services from anywhere 365 days a year.

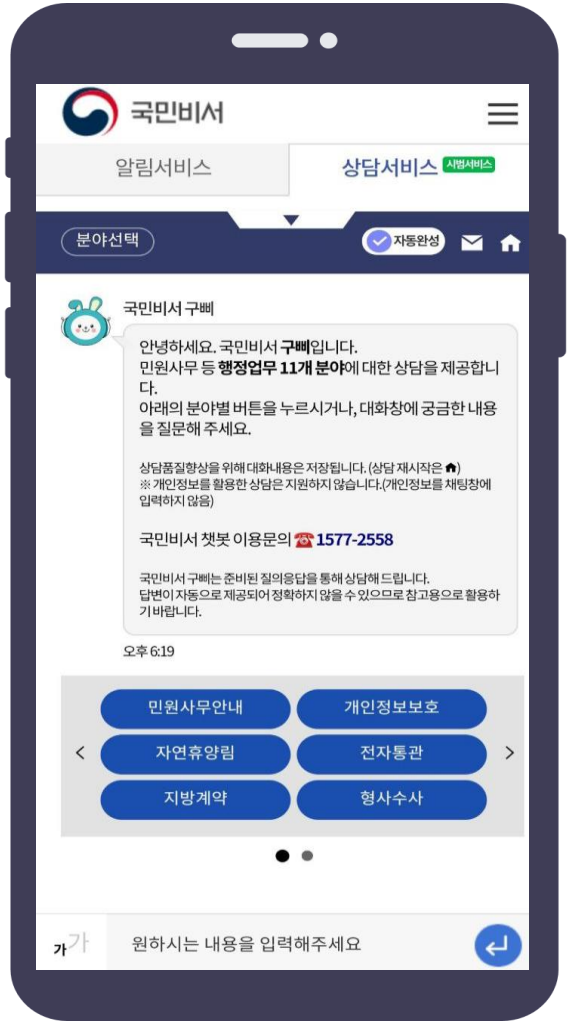
Reference:
Process of handling inquiries for consulting services

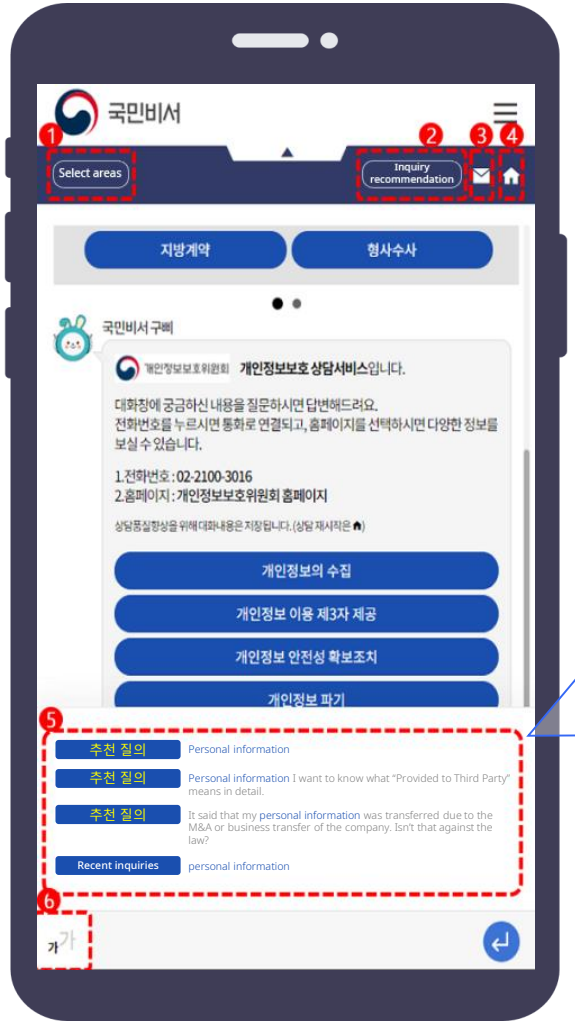


Reference:
How to use consulting services (1/2)

1

Access the virtual assistant service as part of consulting service





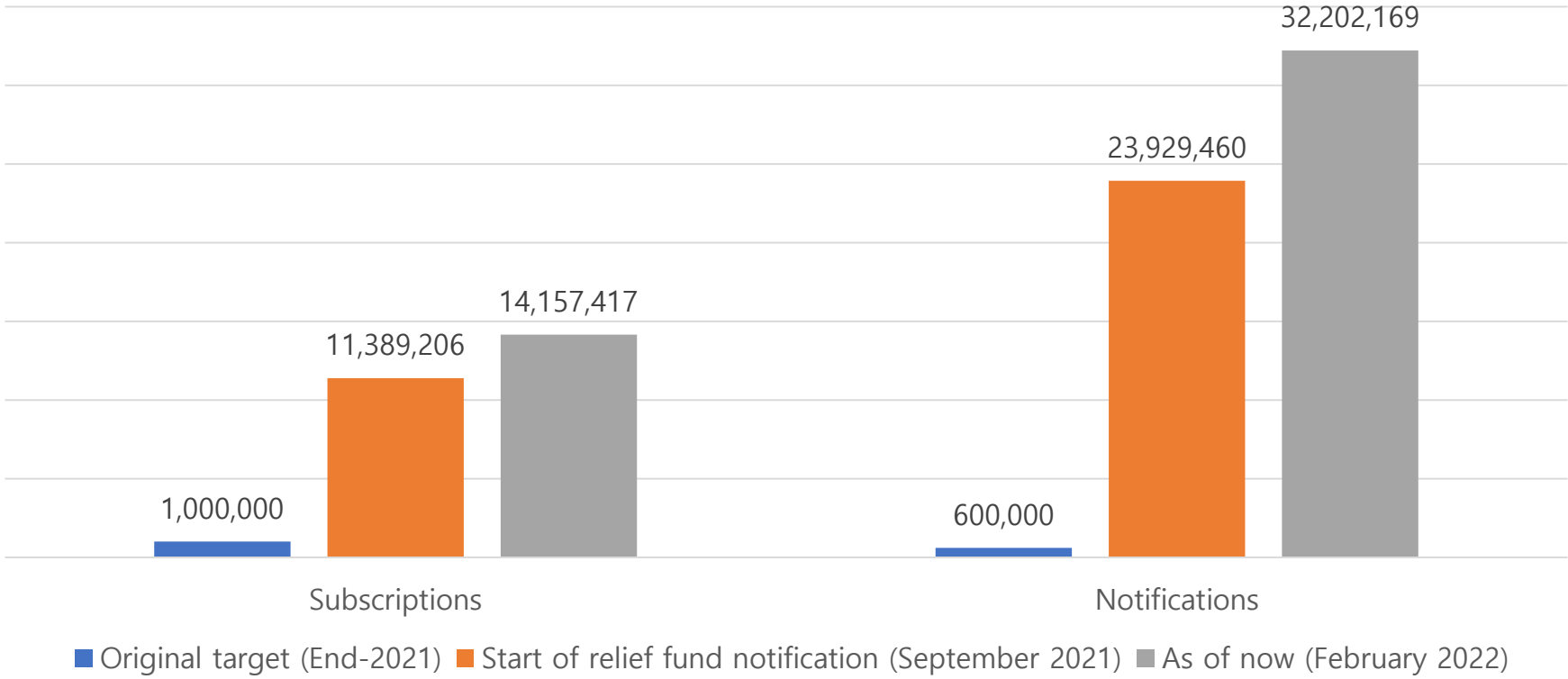
2

Inquiry and Answer by Area

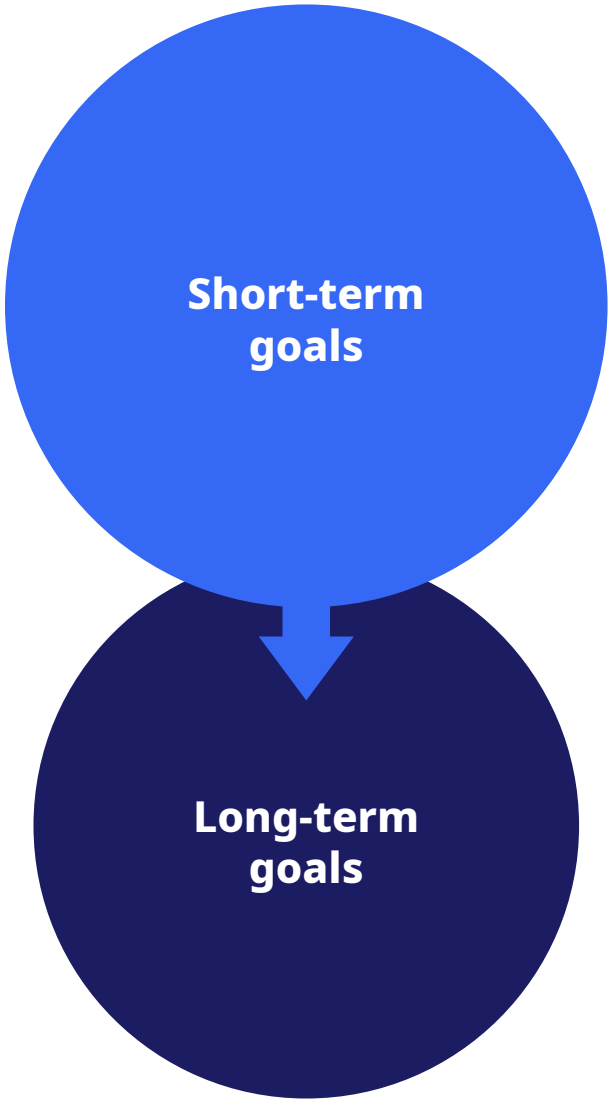
① Designate a chatbot for a selected service area and ask a question.
② Configure the Autocomplete feature.
③ Send this conversation with Guppi via your email.
④ Complete the consulting session, collect the user's review of the service, and display the home screen.
⑤ Autocomplete inquiries, display recent inquiries.

Performance and results

The virtual assistant service for the public exceeded the operational target by 1,200% in government-wide response to social issues



04 Future plans



✓ **3rd phase of the virtual assistant service for the public project (Budget of KRW 6,702 million, Sep. 2021 – Apr. 2022)**

○ To expand notification and consulting services* in areas closely related to people's lives and add e-bill notification service that can replace paper bills

- Notification

(2021) 10 types including vaccination information → (2022) Over 38 types including dormant saving account notification (cumulative), 41 types of electronic notification from the Korean National Police Agency, including confirmation of traffic law violations (new)

- Consulting

(2021) 11 types of administrative consultation, etc. →
(2022) 22 types, including consular service information (cumulative)

○ To increase service accessibility by expanding associated private channels (apps)* and allow for the selection of multiple apps to receive notifications

* (App) 3 kinds such as Naver App, KakaoTalk, and Toss in 2021 → Over 5 kinds in 2022 (cumulative)

✓ **To expand the virtual assistant service in a more personalized way by using intelligent technologies (AI, chatbots, etc.) in order to provide administrative services anytime, anywhere.**

Thank you

The Door to a Better World

Ministry of
the Interior and Safety