

AI-Powered Safety Nets

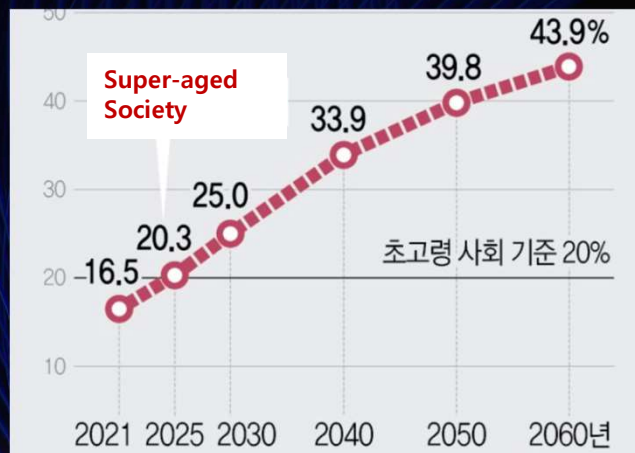
: Telecommunication Solutions for Social Protection

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September 2024

Background

“South Korea will be entering a super-aged society (over 65) by 2025”



Trends in the proportion of the elderly population
(%, Statistics Korea)

“One-third of single-person households consist of elderly individuals living alone, and the number of lonely seniors is gradually increasing.”

Background

The 3 aging-related issues SKT aims to address

Depression & Loneliness

"The suicide rate among those over 80 is at its highest"

"The number of depression patients in their 60s is the highest"



2018 Suicide Statistics by Age Group

Dementia

"The social cost of caring for older adults with dementia continues to rise"

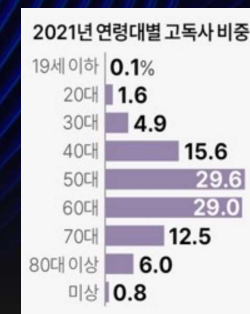


Social costs of caring for people with dementia

Lonely Death

"The number of lone deaths in South Korea continues to rise"

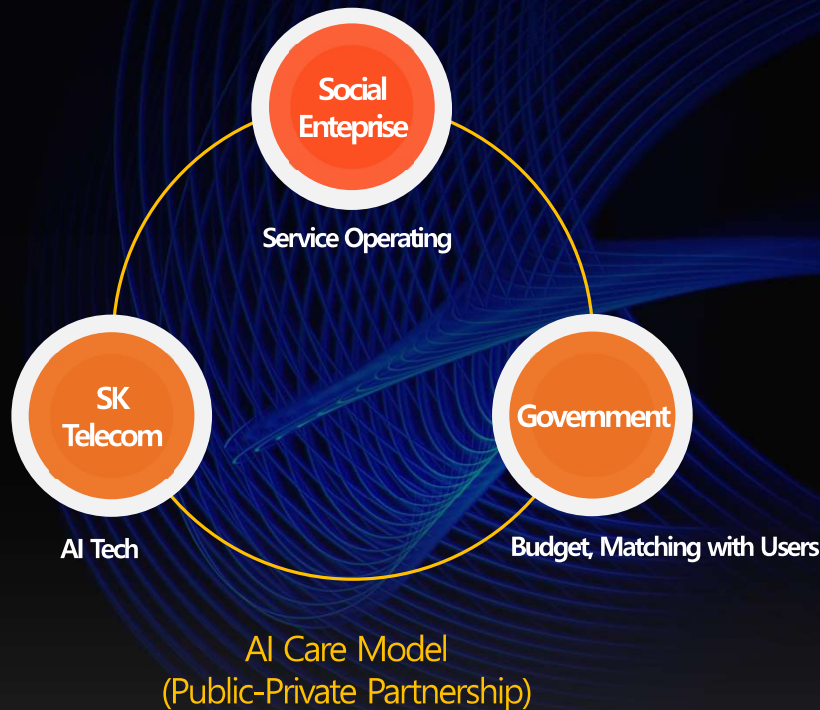
"The elderly and middle-aged have the highest rate of lonely deaths of any age group"



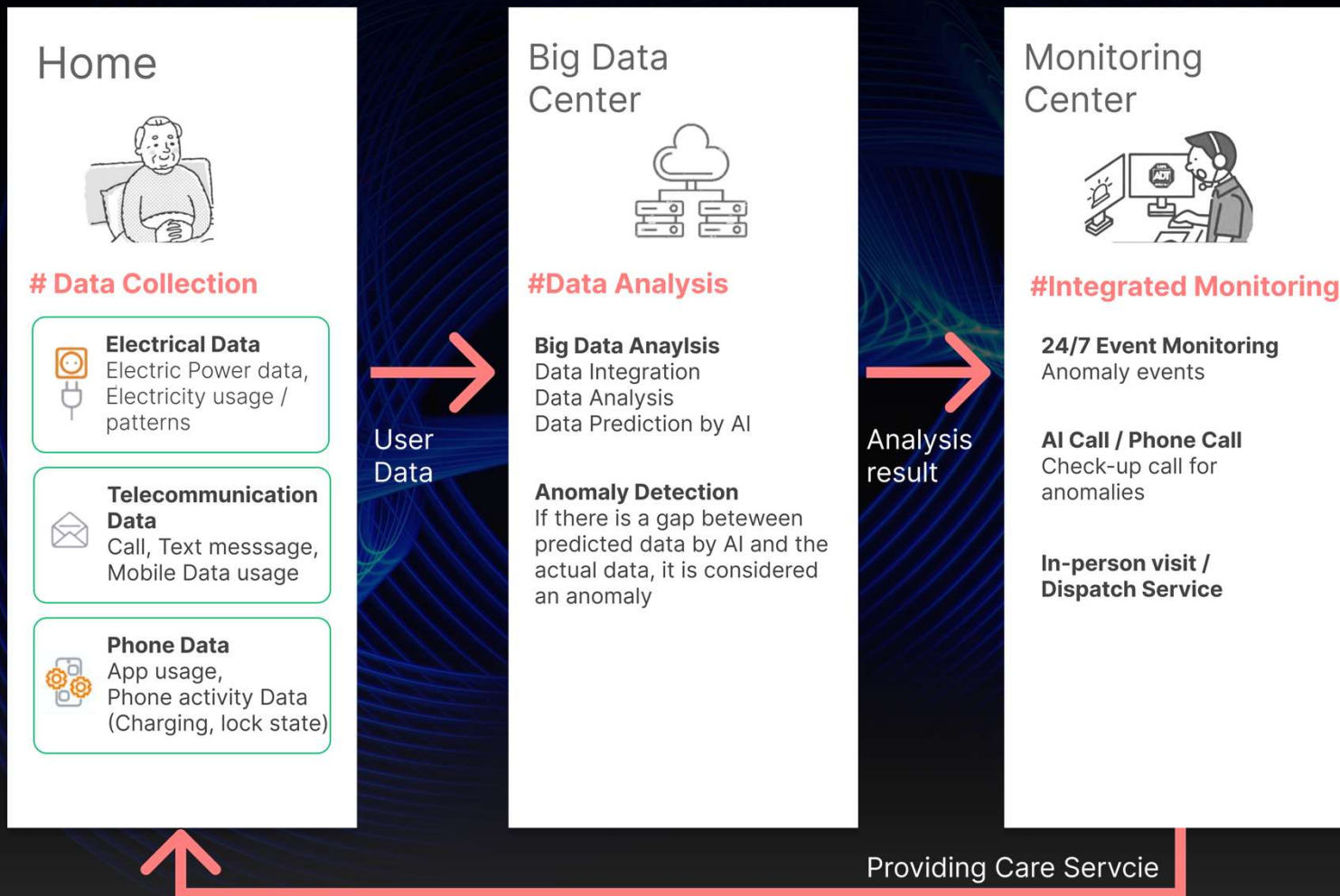
2021 Lonely Deaths Statistics by Age Group

AI Care

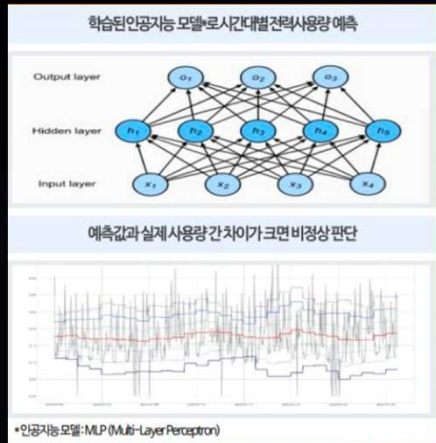
To solve the problem of an aging society, we created the **AI Care Platform**, which utilizes **SKT AI technology** to provide customized care services for the elderly living alone.



Big Data – Service Flow



Big Data – Analysis & Prediction Service



Deep Learning Model For Electrical Data Prediction



'Care App' collects and analyzes phone activity data

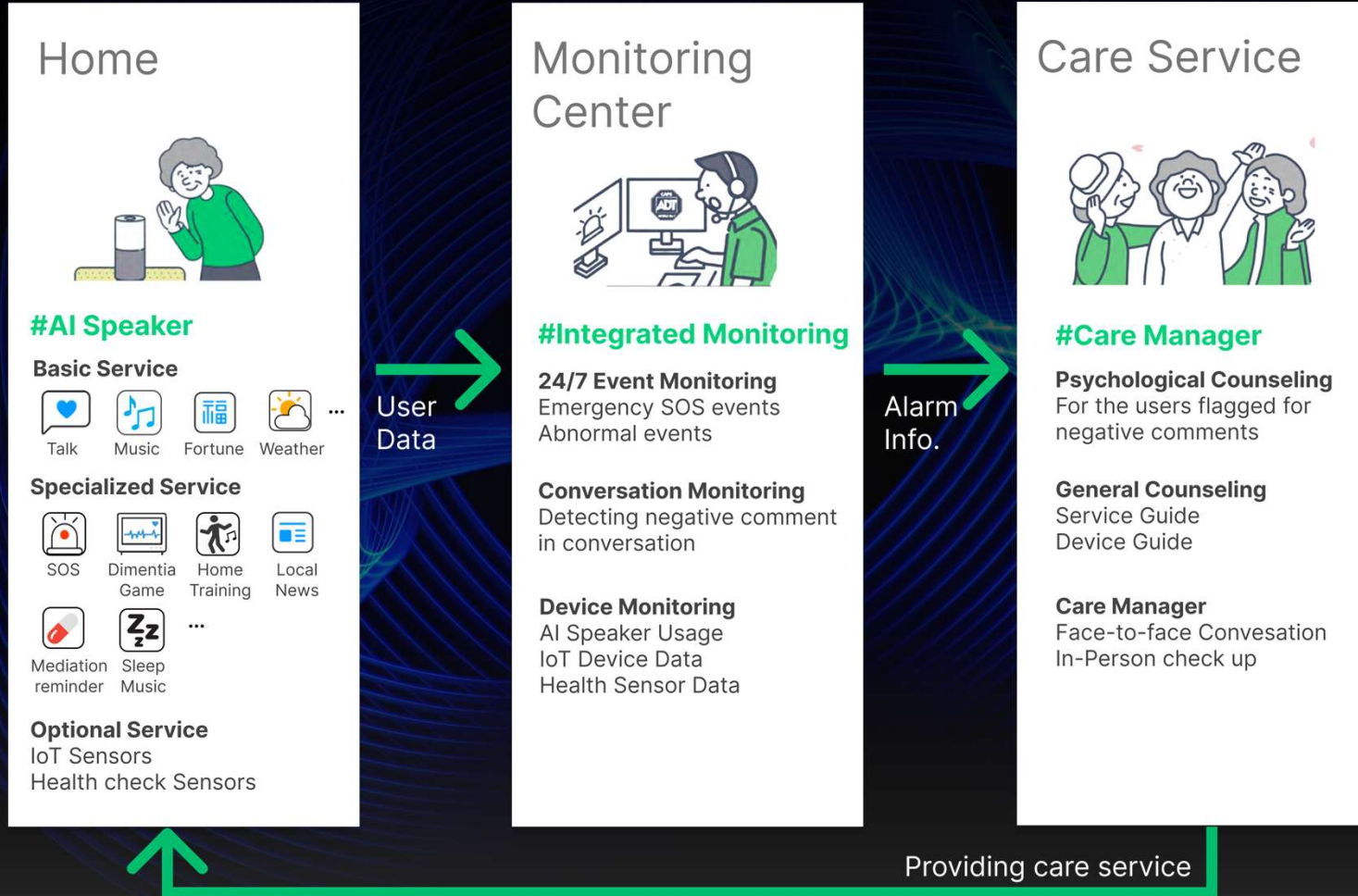


Time-series analysis For Telecommunication Data Analysis



Dispatch Service For anomaly

AI Speaker - Service Flow



AI Speaker – Conversation & Music

For elderly people living alone, simply talking to an AI speaker and listening to music can significantly **reduce feelings of loneliness and isolation**

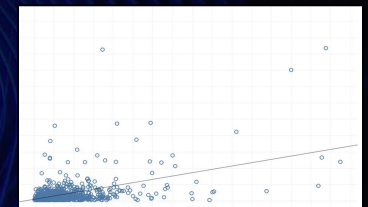
Service



Effectiveness

< Data Analysis >

The more the elderly interact with AI
the more **positive** their language is



< User Survey >

Happiness 7% UP
Loneliness 4% DOWN
(2019.04 ~ 2020.02, 670 elderly living alone)



AI Speaker – Specialized Service

Service

SOS (Emergency)

In the **emergency case** that elderly can't move, He/she can request rescue by **voice**.



[SOS Case]
"Aria, Help me!"



[Voice Recognition]
Send the SOS alarm



[24/7 Monitoring]
Calling back 3 times



[Rescue]
To the Hospital

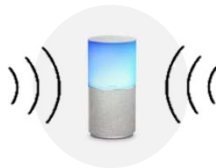
dementia Prevention Game

Playing **Game** with the effect of **delaying dementia**



"Aria,
Let's Start Brain
TokTok"

[Request dementia
Prevention Game]



[Voice Recognition]

"I give you a few
Quiz about the story
I told you"



[Playing dementia Game]
270 Quiz sets

Effectiveness

We have **saved** the lives of over **1,000** elderly so far.

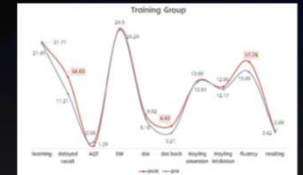
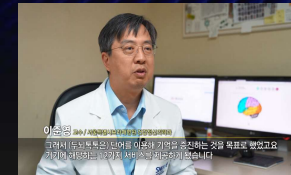
Total
Emergency
SOS
9,811



(2019 ~ 2024)

Total
Elderly
Rescue
1,025

'Brain Tok Tok' can **delay the onset of dementia**
(Long term Memory 15% / Fluency of speech 10%)



Clinical Research Results on 'Effectiveness of Dementia Prevention'
(Published in JMIR, February 2021)

AI Speaker - AI Monitoring Service

@Home

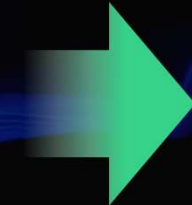

"Aria,
I'm so depressed and
thinking about suicide"



Unused or turned off
for long time

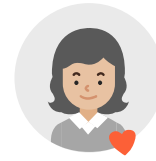


Anomaly detected
in the Health Sensor



@Monitoring
Center

[AI Monitoring & Care Service]



[Mental health counselor]

For user flagged as
negative comment



[Customer agent]

Service Guide,
Customer Service



[Care Manager]

In-Person Care

Device Installment



[Monitoring agent]

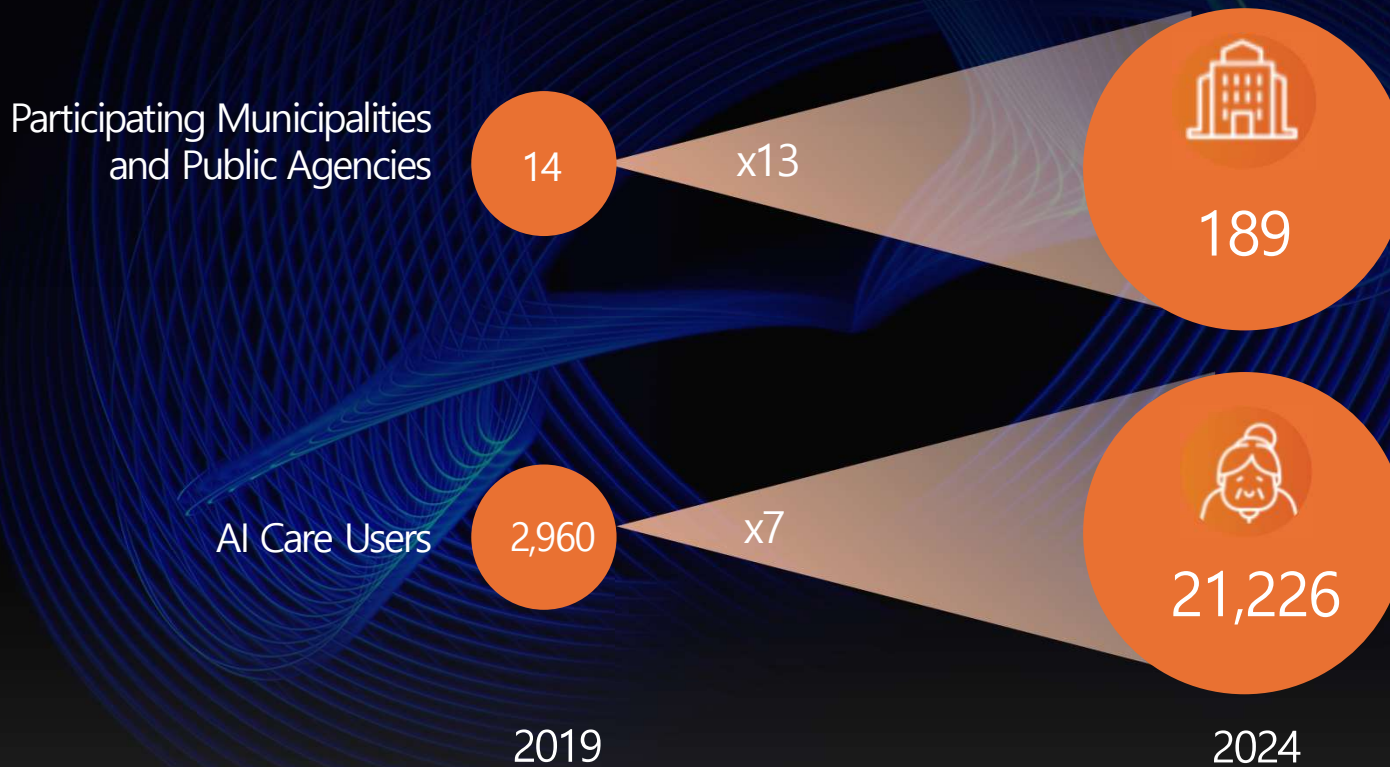
24/7 Emergency

Monitoring

AI data analysis,
24/7 Monitoring System

Achievement

Started in 2019,
we've continued to expand and help **21,226 seniors** nationwide this year with AI Care



Future of AI Care

Utilizing SK Telecom's LLM technology, we plan to integrate an **ESG LLM** into AI Call to provide **well-being status check conversations** for elderly care (October 2024)

Concept : Social Affection LLM

A warm conversation for lonely seniors

#empathize
#comforting
#Look out for their health and safety

Key Value

Social connections
emotional support
Health, safety care



Main Feature

- Natural conversation UX based on SKT's LLM Technology
- Personal Customized Memory
- Regular Check up (11 Topics : Meal, Health, social interaction, Emotion... etc)

The background features a complex, abstract pattern of thin, glowing blue lines. These lines are arranged in a series of overlapping, concentric, and somewhat chaotic loops and swirls, creating a sense of depth and movement. The lines vary in opacity, with some appearing brighter and more defined than others, set against a dark, almost black background. The overall effect is reminiscent of a digital or scientific visualization, such as a particle simulation or a data visualization of a complex system.

Thank you