



Investor Relations
4Q 2022



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Table of Contents

Chapter 01
Prologue

Chapter 02
Company Overview

Chapter 03
Product & Service

Chapter 04
Subsidiary & Overseas Branches

Chapter 05
Financial Performance

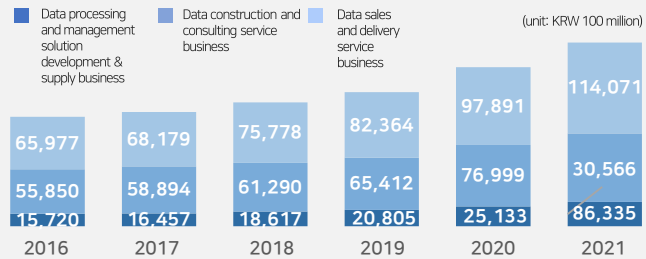
Chapter 06
Road Map



Massive Increase in Data due to Digitization

Increase in linkage between systems and number of business servers

[Korean Data Industry Market Volume]



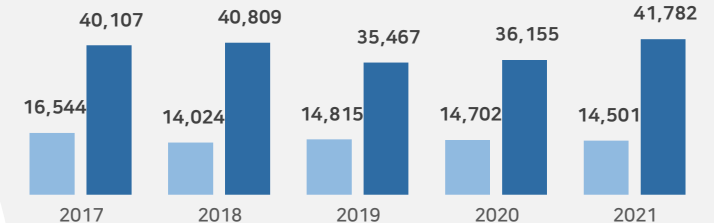
* 2022 Data Industry White Paper (Korea Data Industry Promotion Agency)

Continuous Expansion of IT system

Non-face-to-face vitalization, IT system expansion/investment through digitalization

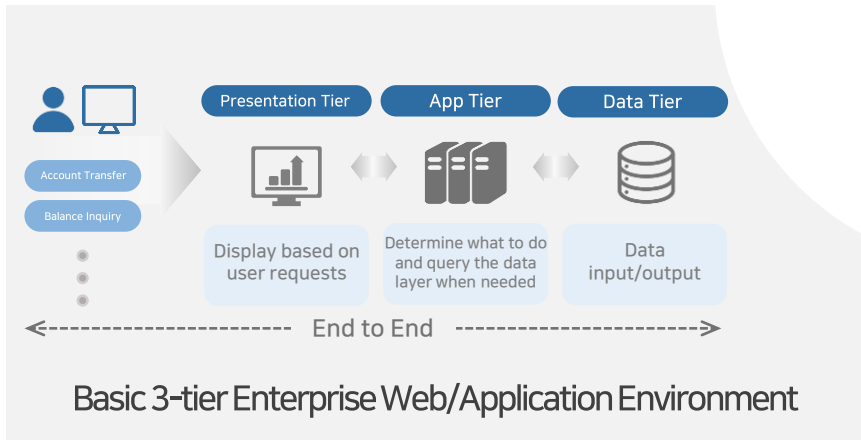
[Ordered informatization business in the last 5 years]

No. of Projects(Cases) Business Scale(KRW 100 million)

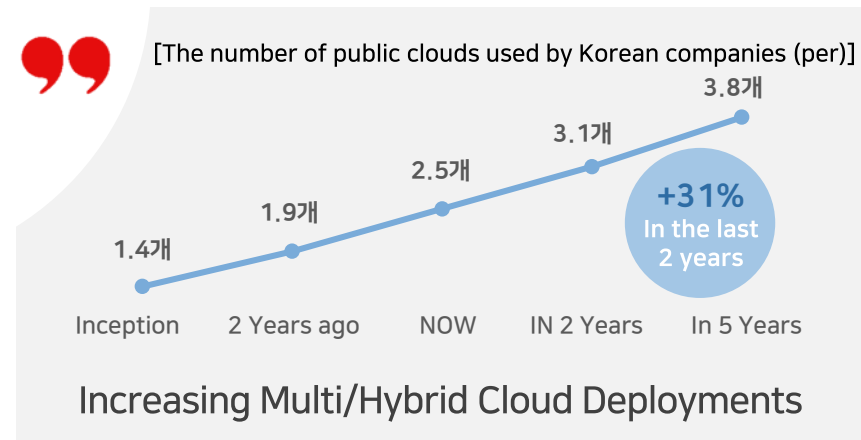


* 2022 Ministry of Public Administration and Security Public Sector Statistical Report

Integrated Corporate IT System Monitoring is a Must!

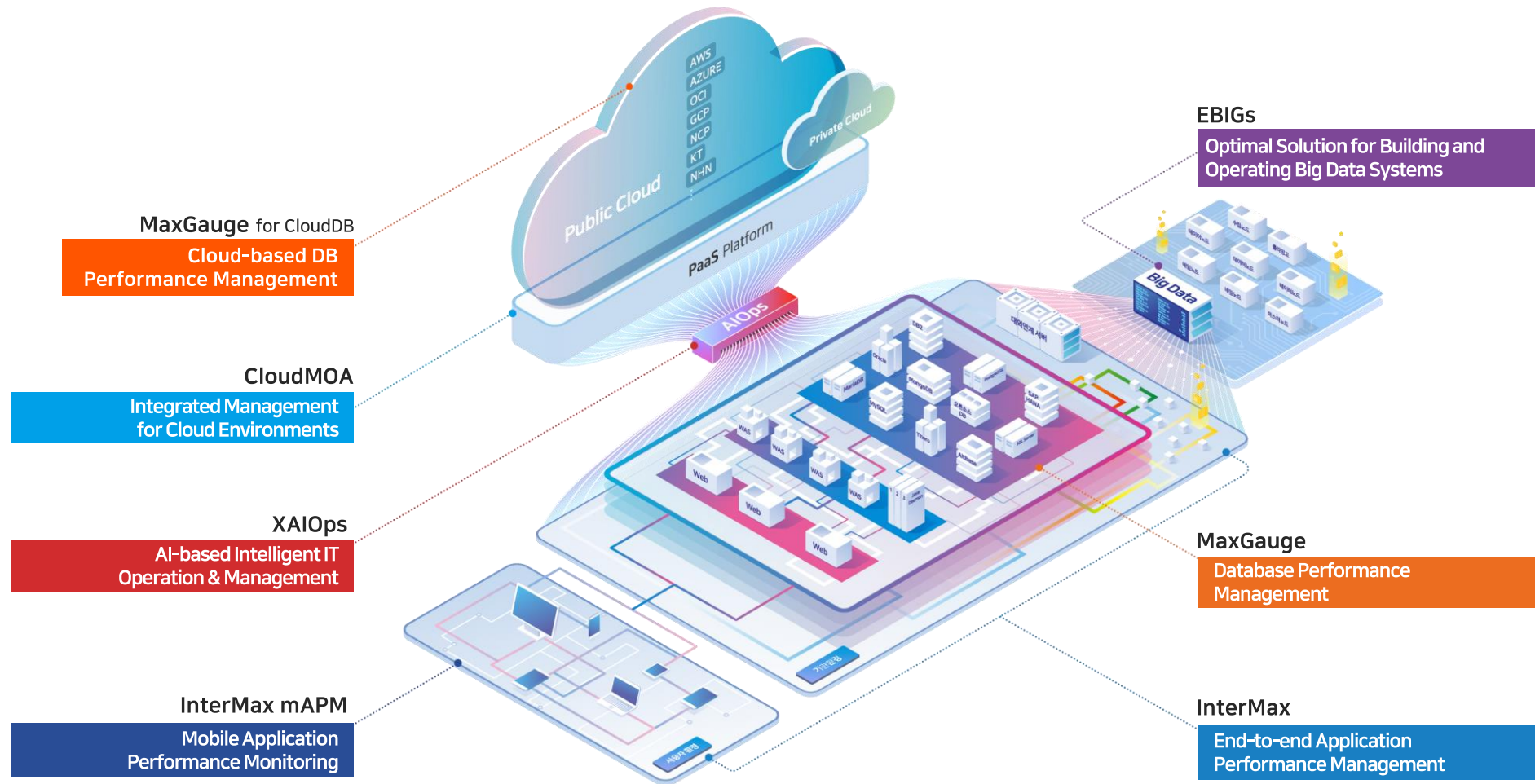


Growing Complexity of Enterprise IT Environments



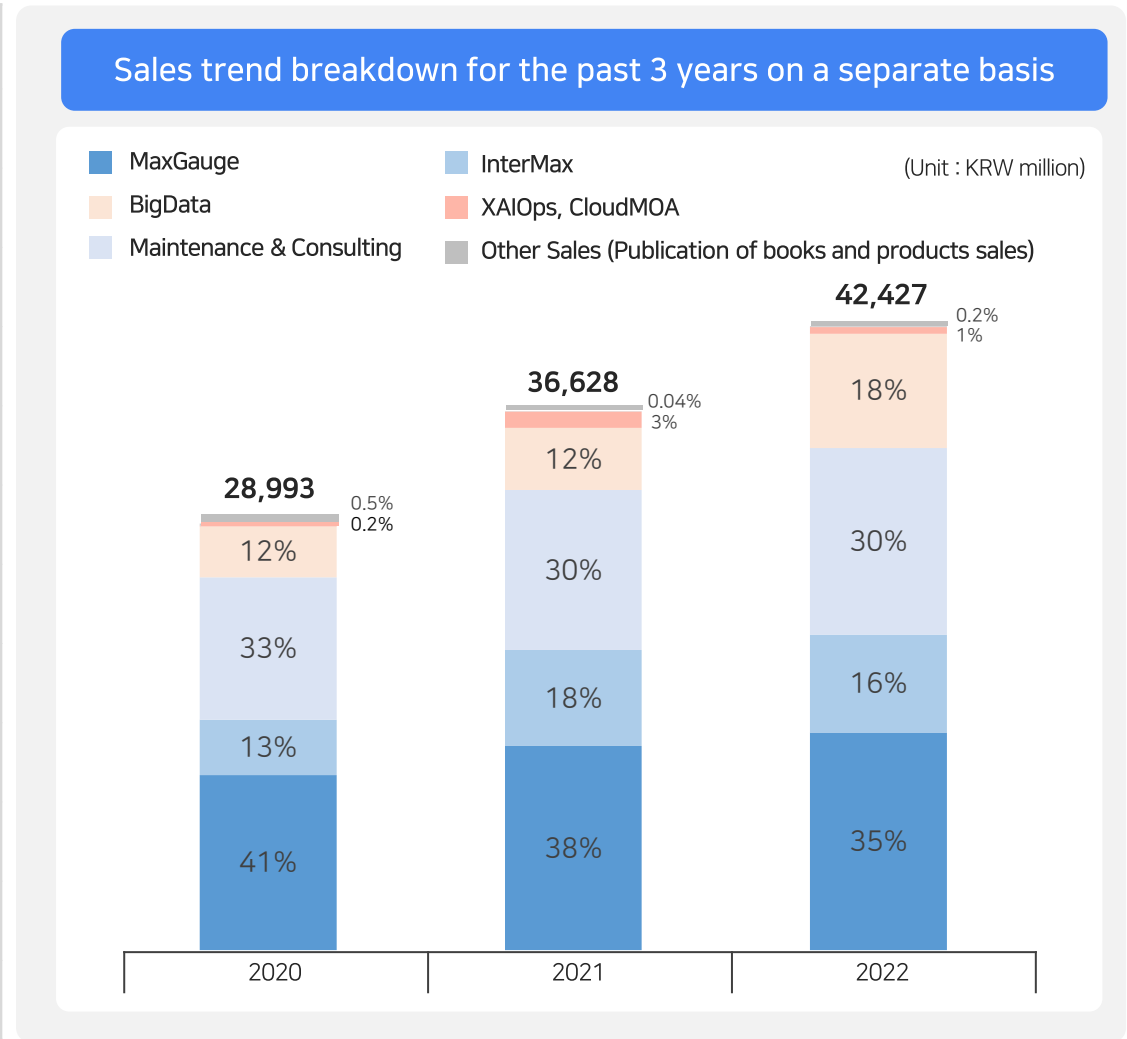
Growing Cloud Environment Adoption

Provide corporate IT system performance management and monitoring solutions



Sales Breakdown A virtuous cycle of sales expansion through additional adoption and maintenance of existing customers, cross-selling/bundling/influx of new customers

구분		2019	2020	2021	2022	CAGR in the past 4 yrs
EXEM	MaxGauge (SW)	9,997 (40%)	11,904 (41%)	13,877 (38%)	14,781 (35%)	13.9%
	InterMax (SW)	3,975 (16%)	3,764 (13%)	6,535 (18%)	6,671 (16%)	18.8%
	BigData (SW & Services)	1,714 (7%)	3,457 (12%)	4,239 (12%)	7,763 (18%)	65.5%
	XAI Ops (SW)	-	37 (0.1%)	1,065 (3%)	352 (0.8%)	208.4% (past 3 yrs)
	CloudMOA (SW)	-	16 (0.05%)	37 (0.1%)	106 (0.3%)	157.4% (past 3 yrs)
	Maintenance & Consulting	8,918 (36%)	9,675 (33%)	10,860 (30%)	12,688 (30%)	12.5%
	Other Sales ¹⁾	182 (1%)	140 (0.5%)	15 (0.04%)	66 (0.2%)	-28.7%
SINSIWAY (Subsidiary)	Petra (SW)	2,151 (32%)	3,514 (48%)	4,174 (52%)	4,620 (48%)	29.0%
	PetraCipher (SW)	2,154 (32%)	1,174 (16%)	1,190 (15%)	2,227 (23%)	1.1%
	PetraSign (SW)	70 (1%)	52 (0.7%)	35 (0.4%)	25 (0.3%)	-29.1%
	Maintenance	2,300 (34%)	2,506 (34%)	2,595 (32%)	2,798 (29%)	6.8%
	Other Sales ²⁾	141 (2%)	31 (0.4%)	61 (0.7%)	53 (1.0%)	-27.8%



※ In the case of the above table, figures are based on separate/individual financial statements 1) Sales of products such as publication of books 2) Sales of products, rent, etc.



About EXEM

EXEM Corporation

- Inception : January 2001
- Stock Listing Date : June 26, 2015
- Capital : 3.6 Billion KRW (End of 2022)
- Sales : 55.1 Billion KRW (consolidated standard at the end of 2022)
- Workforce : 295 (March 2023)
- Affiliated Companies (End of 2022)

Category	Company Name	Investment Stake(%)
Main Subsidiary	SINSIWAY(DB Security)	50.24
Subsidiary	EXEM JAPAN Co.,Ltd.(Japan)	75.00
Subsidiary	EXEM CHINA Co.,Ltd.(China)	63.16
Subsidiary	MAXGAUGE, INC.(US)	91.00
Related Company	l'mCloud(Big Data, AI)	22.75

CEO

Profile

Academy Background & Education

- Seoul National University(Diplomacy and Global Politics major)
- Postech (SW Engineering, master's degree)
- KAIST AIM Course Completion

Experience

- POSCO, Information System department, EIS development
- POSDATA Consulting Department, CASE TOOL Consultant
- Oracle Korea, DB Technical Consulting Team, Oracle Tuning Consultant




EXEM Co., Ltd.
Chongarm Cho (CEO)





Milestones

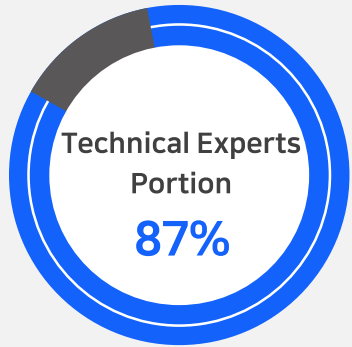
<ul style="list-style-type: none"> EXEM 1.0 Entry into DB Monitoring EXEM 2.0 Business Expansion into Total Performance Management 	<ul style="list-style-type: none"> EXEM 3.0 Preparation of the 4th Industrial Revolution(Starting Big Data Business) 	<ul style="list-style-type: none"> EXEM 4.0 Leading role in the 4th Industrial Revolution through the implementation of new technologies, including AI and cloud.
<ul style="list-style-type: none"> 2001 Established EXEM DBMax (the Previous version of MaxGauge) Launched 2002 KT NT IT certification acquired at one time Jang Young-shil Award 2008 InterMax Launched, New Excellent Technology(NET) Award Established EXEM JAPAN, EXEM CHINA   2011 10.5 Billion(KW) Revenue Breakthrough 2012 Korea IT Innovation Award 'Company that people want to apply for' Award One of the Korea 100 Best Companies to work for 2014 Established MAXGAUGE.Inc  President's award of merit for venture development Best company to work for in 2014 	<ul style="list-style-type: none"> 2015 Listed on KOSDAQ  Entry into Big Data Solution Market Shares Acquisition of SINISWAY (50.24%) & I'mCloud(25%) 20.7 Billion(KW) Revenue Breakthrough 2016 Entry into Big Data Consulting Market with the launch of Flamingo Merged Cloudine, Co., Ltd 27.5 Billion(KW) Revenue Breakthrough 2017 KEPCO's largest big data integration platform construction project (Korea Electric Power Corporation) Orders received from Kakao bank, K bank, Citi bank 33.7 Billion(KW) Revenue Breakthrough 2018 Partnership with KNIME, Designated Partner of Match-up AI/Big Data project (Ministry of Education) 32.4 Billion(KW) Revenue Breakthrough (with 3.5 billion coming from overseas branches) 	<ul style="list-style-type: none"> 2019 Commercialization of AI & Cloud XAIOps, CloudMOA Launched 34.5 Billion(KW) Revenue Breakthrough 2020 CloudMOA /XAIOps Orders received from Hyundai Card and KDN 39.2 Billion(KW) Revenue Breakthrough 2021 CloudMOA /XAIOps Orders received from major financial clients including Busan/Shinhan and Woori Bank. CloudMOA SaaS Version, MaxGauge for HANA Launched 47.3 Billion(KW) Revenue Breakthrough 2022 MaxGauge for CloudDB (PostgreSQL, Oracle) Launched EBIGs Launched Relocation to the new EXEM headquarters in Magok 55.1 Billion(KW) Revenue Breakthrough 2023 Ready for SaaS Business MaxGauge for CloudDB (MySQL, MariaDB) Launched Integrated SaaS Solution DataSaker Launch (to-be)

Organizational Structure

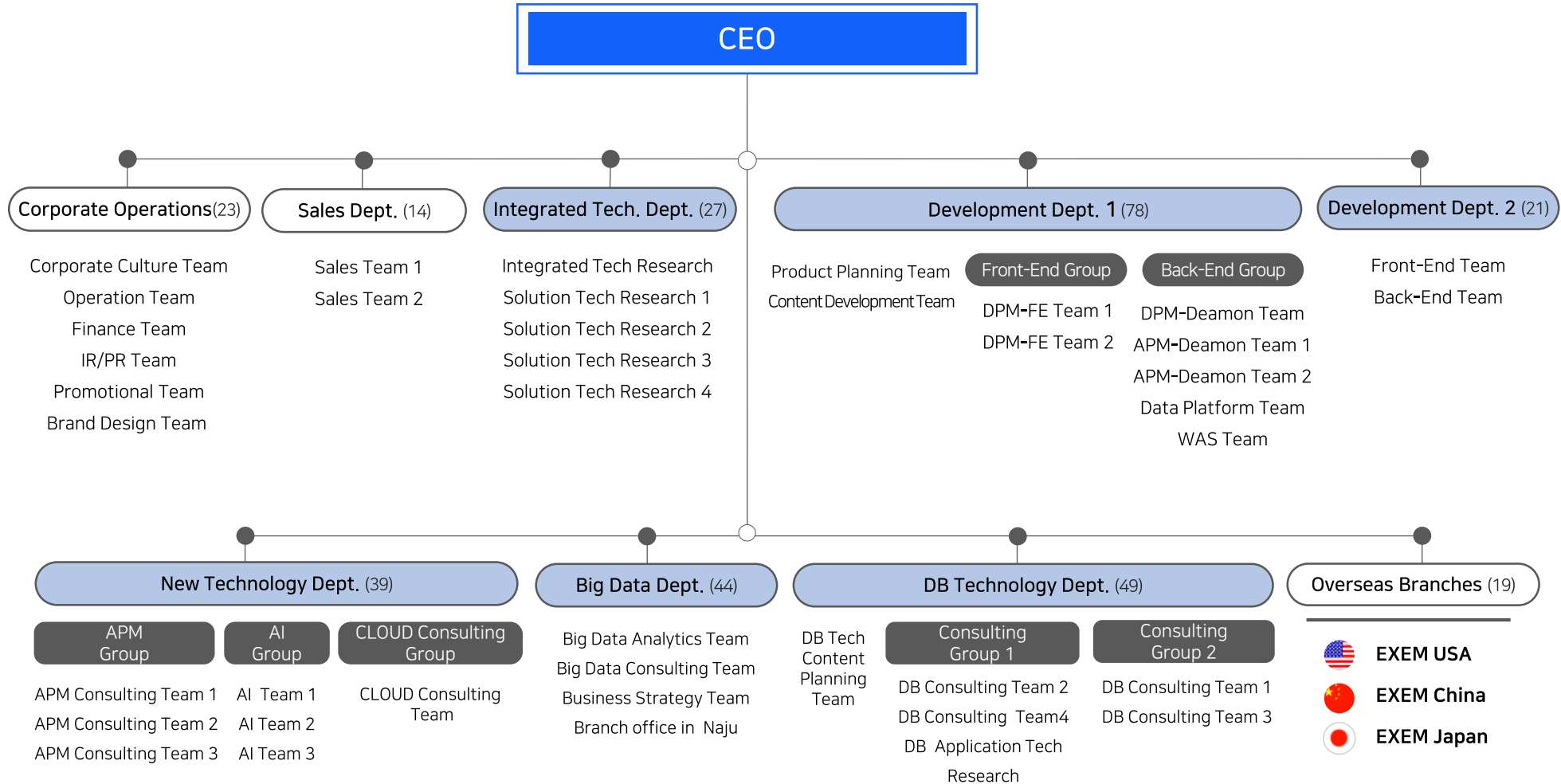
Developers/Engineer Organization (258/295)

(※ calculated in Mar.2023, () : No. of employees)

Technical Experts Status





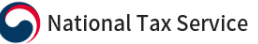














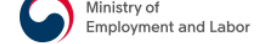





















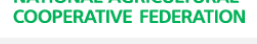















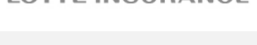













■ Technical
■ Sales and Management



Main Domestic Customers by Industries

Acquired 630+ References, mostly Finance/Manufacturing/Public institutions.

Financial Sector	Public Sector	Manufacturing & Service Sectors
  	 	  
  	 	  
  	 	  
  	 	  
  	 	  
  	 	  
  	 	  
  	 	  
 		 

MaxGauge Best Database Performance Management Solution in Korea

+ AI IDC 2022 Domestic market share 50%+



✓ Standard database performance management SW in Korea

Real-time Performance Monitoring

Smart Analysis

Down-Time Minimization

Response Time Optimization



✓ STRENGTHS : **Having the best DBA consultants/developers in Korea**
System investment ROI and DBMS management efficiency improvement

- [Accuracy] Real-time monitoring, analysis in seconds/minutes/days, diagnostic reports from various perspectives
- [completeness] Real-time monitoring, diagnosis, analysis, tracking based on Top-down methodology
- [Stability] Up to 10~15% of CPU utilization in case of 2,000 sessions
- [Extensibility] Extend monitoring of open-source DBMS and Cloud DB such as Oracle Exa DB and MongoDB

✓ References



No.1 solution in DB performance management field



No.1 Market Share in Financial Sector of Korea Domestic Market



Delivered to 630 large domestic customers



Delivered to 29 countries around the world

MaxGauge Market Expectations due to various DBMS monitoring including Non-relational/Cloud/Open-source

MaxGauge Lineup(DBMS Monitoring Targets)

No.	DBMS Name	DBMS Type
1	Oracle	Relational/Commercial
2	SQL Server	Relational/Commercial
3	DB2	Relational/Commercial
4	Tibero	Relational/Commercial
5	Altibase	Relational/Commercial
6	MySQL	Relational/Open-source
7	MariaDB	Relational/Open-source
8	PostgreSQL	Relational/Open-source
9	MongoDB	Non-relational/Open-source
10	AWS RDS (Aurora, MySQL, SQL Server)	Relational/Commercial
11	HANA DB	Relational/Commercial
12	Cloud DB (Oracle, PostgreSQL, MySQL, MariaDB)	Cloud

Continued expansion of the DBMS market, growth of DBPM-related industries (Unit:100 million KRW)

Classification	'19	'20	'21 (estimated)	CAGR ('19~'21)	Comment
DBMS	7,510	8,979	11,062	21.4%	Relational/Cloud DBMS/Other DBMS
Data Management Solution	5,203	6,022	7,151	17.2%	DBMS Solution Included
Data Consulting	3,189	4,194	5,147	27.0%	DBMS Performance Consulting Included

(※ Source : kdata, 2021 Data Industry Whitepaper)

Cloud DB is growing rapidly (accounting for half of global DBMS market sales as of 2021)

Year	Cloud DBMS	On-premise DBMS
2017	~10%	~90%
2018	~15%	~85%
2019	~25%	~75%
2020	~40%	~60%
2021	~50%	~50%

(※ Source: Gartner Blog, DBMS Market Transformation 2021)

Growing Demand for Open Source DBMS Overwhelming Commercial Use

Year	Open-source DBMS	Commercial DBMS
2013	~35%	~65%
2014	~38%	~62%
2015	~42%	~58%
2016	~45%	~55%
2017	~48%	~52%
2018	~49%	~51%
2019	~49%	~51%
2020	~49%	~51%
2021	~50%	~50%
2022	~50%	~50%

(※ Source: DB-Engines, Popularity of open source DBMS VS commercial DBMS)



Application Performance Management Solution through End-to-End Tracking Transactions



✓ E2E performance management solution proven by large corporations and financial institutions

APM-E2E Integrated Analysis	Real-time performance/failure /transaction monitoring	Transaction tracking for all E2E segments	Statistical and analysis reporting
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✓ **STRENGTHS** : *Integrated management of Web-App-DB performance, waiting, and failure*

- [Accuracy] Real-time monitoring, failure detection, cause analysis and tracking through UX-based dashboard
- [Complete] User-WAS-DB performance management integrated environment
- [Stability] Less than 1%~3% of CPU usage when profiling overload at all times, by 300 users
- [Extensibility] Cloud environment support (AWS, Azure, Private Cloud)

✓ **References**

KB Kookmin Bank	WOORI BANK	SAMSUNG	K bank
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Verified by large financial institutions and manufacturers



Essential products for DevOps monitoring environment



Individual monitoring + transaction tracking integrated solution



3 Patents acquired for InterMax

InterMax mAPM Mobile Application Performance Management Solution



✔ 'Mobile app terminal-service level' mobile performance monitoring solution

Real-time mobile app performance monitoring

App quality verification and detailed error analysis


Service utilization analysis

Diverse customer pattern analysis


✔ STRENGTHS : Real-time monitoring, event/Device/NW/user detailed analysis

- [Accuracy] Real-time · multi-app integrated monitoring and analysis through UX-based dashboard
- [Complete] Detailed call trace linkage tracking of delayed transaction through APM (InterMax) linkage
- [Convenience] Applied only by simple API call, performance delay/crash cause analysis is provided
- [Extensibility] Hybrid app integrated monitoring, various customer behavior analysis for marketing use

✔ References



- Instantly identify and determine the cause of each transaction problem in the mobile app
- Realization of marketing through analysis of call center customer service types and behavior information



Official mobile app (OnBid) performance status, immediate identification of problem areas, and detailed causes of exceptions and crashes



Performance management No.1 core technology installed



Essential solution to improving the quality of mobile apps when non-face-to-face services are becoming more important.



Integration with APM solution · Detailed analysis



Increase marketing usability through customer service type analysis



InterMax Increasing demand for End-to-end Monitoring of WAS Linking monitoring solutions is expected to boost cross-selling, bundling opportunities, and win-back.

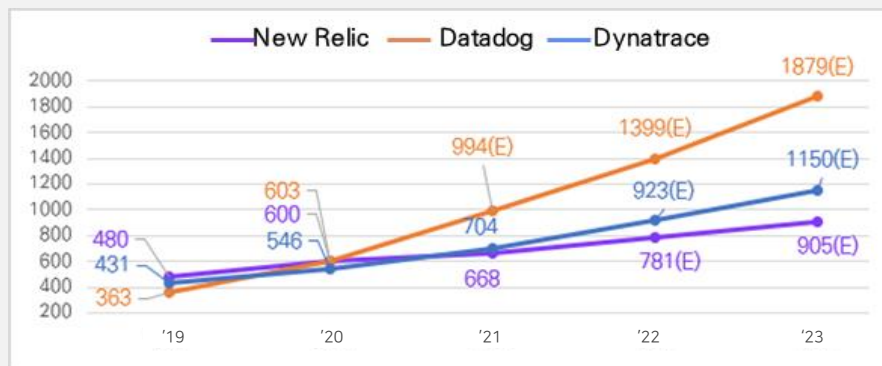
Gartner Functional Dimensions of APM

- End-user experience monitoring
- Application discovery, tracing and diagnostics
- Infrastructure monitoring
- AI for IT operations(AIOps) and analytics

(※ Source : Gartner, 'Magic Quadrant for Application Performance Monitoring and Observability', 2022)
(※ Source : Gartner, 'Magic Quadrant for Application Performance Monitoring', 2021)

3 Gartner Magic Quadrant for APM Leaders Show Consistent Growth

(Unit : USD million, E is short for estimated)



Powerful WAS Monitoring + End-to-End IT Monitoring



Integrated Monitoring by linkage with MaxGauge, CloudMOA, InterMax mAPM, XAIops



EBIGs Big Data Management Platform for Hadoop Installation and Operation Management Solution



✓ Integrated management platform for Hadoop cluster and data analysis

Hadoop Eco-based operating platform

Real-time big data performance monitoring

Multi-tenant data analytics

KEPCO big data operation and management platform

✓ STRENGTHS : Big data operation and management 'Multi-in-One' innovation

- [Accuracy] Real-time/post-monitoring and perfect traceability of Hadoop echo components
- [Completeness] Provide Big Data services including Data collection, storage, processing, analysis, visualization
- [Convenience] Convenience of WEB, Workflow-based data purification and batch operation
- [Analysis scalability] Provides advanced analysis environment by supporting multiple users and various analysis languages



Apache Hadoop Support

Reflect customer's diverse Hadoop platform operation management requirements



A variety of data collection, storage, processing and advanced analytics environments

✓ References



XAIOps Korea's first deep learning-based IT operation intelligence (AIOps)¹⁾ solution



Korea's first deep learning-based AIOps



AI-enabled load prediction, anomaly detection, root cause analysis



Minimize cost of service interruption loss
Support for non-disruptive IT operation

✓ Korea's first deep learning-based AI technology-equipped IT operation intelligence solution

Real-time intelligent monitoring	Detect anomalies before failure	Forecasting future loads	Intelligent Alarm
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✓ STRENGTHS: 24/7 non-disruptive IT operation support through intelligent monitoring

- [Accuracy] Deep learning-based accurate real-time anomaly detection, future load prediction
- [Complete] Precise root cause analysis by detecting parts that are difficult for humans to recognize
- [Convenience] Reduce MTTR²⁾ by supporting failure detection, prediction, preemptive response, and quick recovery before failure
- [Extensibility] Provides a learning/prediction environment by supporting large-scale system data collection by various channels

✓ References



1)AIOps: Artificial intelligence for IT Operation 2) MTTR (Mean time to repair): is a maintenance metric that measures the average time required to troubleshoot and repair failed equipment.

CloudMOA Cloud-native Architecture Integrated Management Solution



✓ All-in-One Integrated Monitoring of Hybrid Cloud Environments

Support for various cloud platforms

Cloud Native Architecture

Detection of anomalies using AI

Multi-dimensional service level monitoring

✓ STRENGTHS : Cloud Architecture Monitoring 'All-in-One' Innovation

- [Accuracy] Large-scale integrated control and intuitive monitoring through multidimensional topology view
- [Complete] Supports service operation without failure through AI-based anomaly detection and sparse log analysis
- [Convenience] Automatic management of monitoring targets using container-based agent installation method
- [Extensibility] Perfect cloud environment support (Private, Public, Multi, Hybrid)

✓ References

Hyundai Card

BNK Busan Bank

DOUZONE

Mobile-phone Carrier



Hybrid cloud environment support



Effective Kubernetes Monitoring



Advanced analysis environment with AI technology applied

Plans to Strengthen Market Leadership in Big Data, AIOps, and Cloud Integrated Management

EBIGs Digital platform secures opportunities for 500+ domestic customers amid gov's push and shift to paid foreign solutions

Budget and market growth for big data project with digital platform gov't implementation.

Market Category	2018	2019	2020	CAGR ('19~'21)
Development and supply of big data integrated platform solutions	1,949	2,231	2,866	28.4%

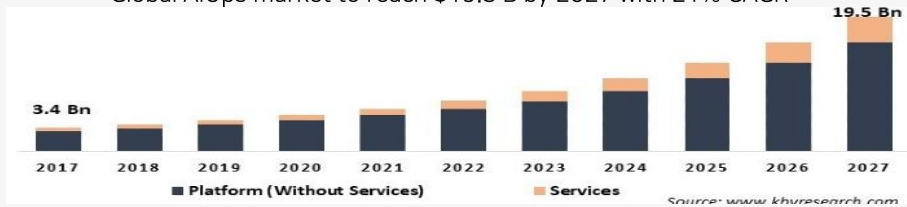
(※ Source : kdata, summary of '2021 data white paper)

Market opportunity due to full charge-up of Hadoop free distribution and Cloudera ↑

Paid Solution	Price
CDH (Cloudera Distribution for Hadoop)	\$10,000/node
HDP (Hortonworks Data Platform)	\$10,000/node
CDP (Cloudera Data Platform)	\$10,000/node

XAIOps Expected domestic market increase in adoption due to global financial and public demand for stable business/administration services

Global AIOps market to reach \$19.5 B by 2027 with 21% CAGR

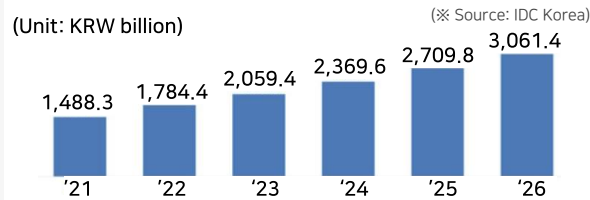


AIOps actively adopted in public admin, military, legal and healthcare overseas

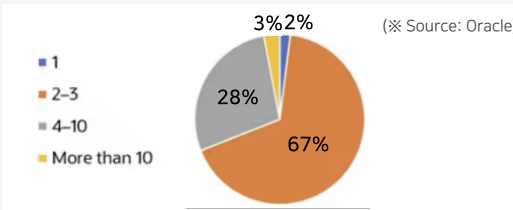
U.S. Department of Defense, Army/Air Force, NASA, Department of Homeland Security, Department of Agriculture, Department of Justice, Department of Health and Human Services, NASDAQ, New York City, various ministries/research institutes, Dutch courts, British Driver's Licensing Authority, Sweden's Bleking Regional Commission, UAE national health insurance company, Ministry of Electronics and Telecommunications Technology of India, Bahrain Electronics Authority...

CloudMOA Public/Private Cloud adoption to drive operational management efficiency solution utilization.

Domestic Public Cloud Market to grow at 15.5% CAGR until 2026



98% of global enterprises adopt/planning multi-cloud



Convert 10,000 public information systems to the cloud by 2025





Consulting Service : IT performance management/cloud/big data/artificial intelligence consulting through years of experience and methodology

4th industrial revolution
intelligent information
technology



AI



Mobile



IoT




Cloud



Big Data

DB Performance Management

performance monitoring of online banking system DB



E2E Performance Management

Monitoring the performance of the entire automation system



Electric Power Big Data

Construction, utilization, and operation of Korea's largest electric power big data




Pan-Government Big Data

NIA Big Data Center Operation



AI Tech Tree

Pohang University of Science and Technology Artificial Intelligence Tech Tree




Manufacturing AI, Smart Factory

AI-based manufacturing situation diagnosis/prediction
Manufacturing big data-based situation analysis and optimal decision support




Cloud

Building the AWS Cloud




Cloud

Cloud integrated control




Smart Transportation

Korea Expressway Corporation C-ITS¹⁾ Big Data Center



Retail Data Analysis

Fashion product planning effect analysis

Large domestic apparel company 


Big Data Analysis of Postal Business

Diagnosis of the 130-year-accumulated postal business data status



AI-based IT operation intelligence

AI-based load prediction, anomaly detection, root cause analysis



1) C-ITS (Cooperative-Intelligent Transport Systems):C-ITS is a system that provides accident-related information such as traffic conditions, sudden stop, and fallen objects to the driver in real time.



EXEM Academy : Maximize customer value through knowledge accumulation and sharing



(From 2017 to Dec.2022)

EXEM TV recorded more than **241,000** total video views

25 books published

288 online education contents shared, more than **1,500** cumulative webinar viewers

Provided **1,250** hours, **250** offline lectures, and educational program to **5,598** people

EXEM Books



- Publishing professional technical books using the know-how of technical research and consulting experience
- A total of 25 books have been published since 2005.

EXEM TV



- Official IT Knowledge YouTube Channel
- EXEM TV educational content recorded more than 211,000 total online views
- EXEM seminar and webinar video sharing

EXEM Cartoon



- Easily understandable cartoons explaining
- complex and difficult IT knowledge and big data-related information

Webinar



- Online sharing service of high-quality IT expertise (Web + Seminar)
- Realistic practical training using video, audio, and chatting

Educational Seminar



- Lectures and seminars on key technologies and trends in the 4th industry for domestic industry, academia, and research institutes

※ 'Matchup' program, a short-term job certification course tailored to the Ministry of Education Operation of big data representative institutions and AI educational institutions ('18 05 ~ '21 03)

Posts

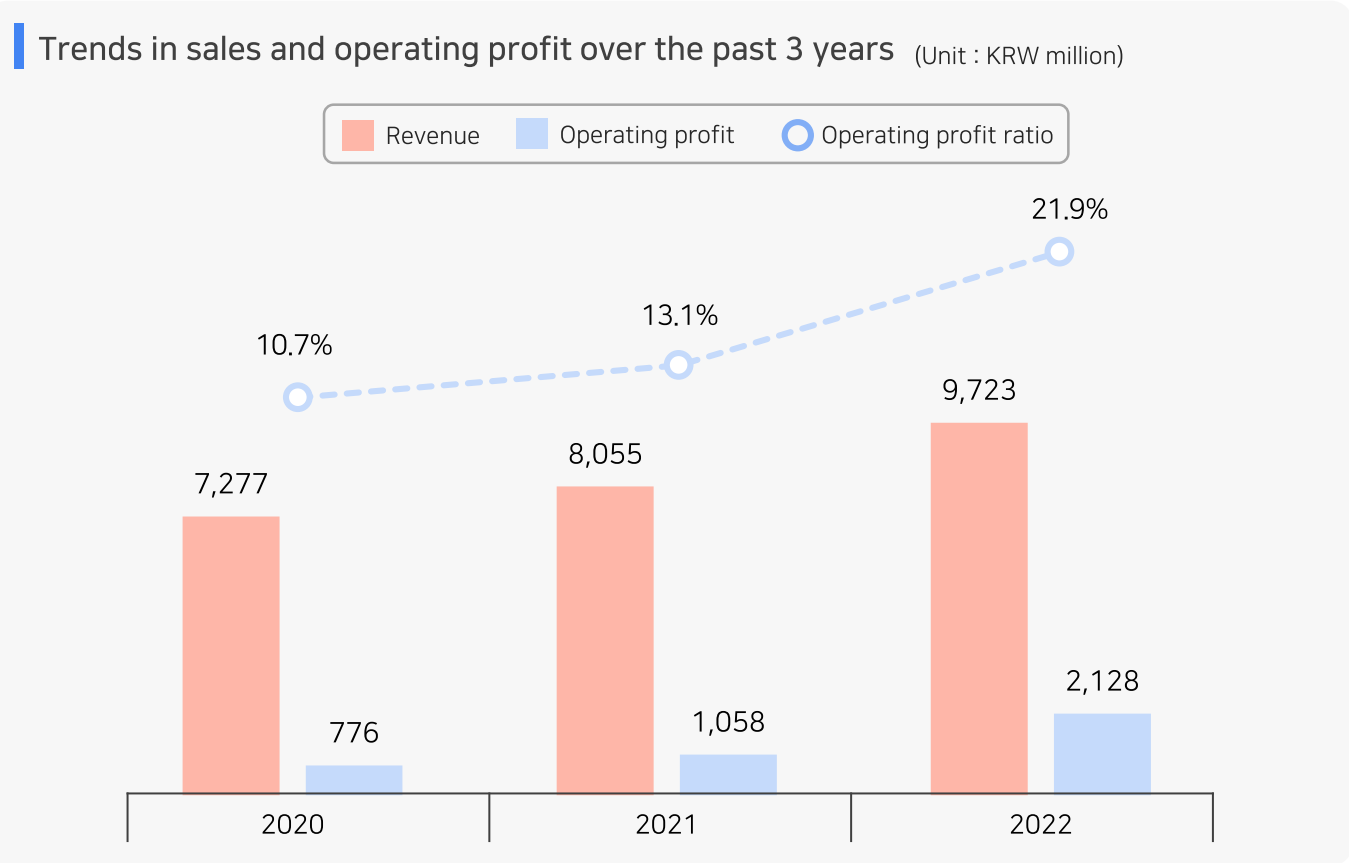


- Independent content sharing through various technical contributions
- Providing practical knowledge and various tips such as DB operation

SINSIWAY Introduction (1/3)



- Established Date : 01/2005
- EXEM Ownership Stake : 50.24%
- Sales : 9.7 Billion KRW (End of. 022)
- Workforce: 72 (calculated in Mar.2023)
- Main Business Fields : DB Access Control, DB Encryption





SINSIWAY Introduction (2/3)

Milestones

**Current~
2019**

- **Business agreement for 'Smart Manufacturing Tech Development Project' with withfuture, aipim, aodata.**
- Establishment of DB access control such as **Nice Holdings** and **Nice evaluation information**
- Establishment of DB access control for overseas financial companies such as **IBK China Subsidiary, IBK Indonesia Subsidiary, Mandiri State Bank, etc.**
- **SK Securities** DB access control and clarification approval (Petra Sign) establishment
- Signed a license agreement with **Hyundai Card, Hyundai Capital, and Hyundai Commercial**
- Petra Cipher v3.2 International CC Certification, GS Certification

**2018~
2015**

- **Securing the highest number of atypical cryptocurrencies in the financial sector (7 cases including Woori Bank, Woori Card, NH Nonghyup, IBK Industrial Bank)**
- Korea Electric Power Corporation DB security project order
- Secured 17 strategic partners
- **DB access control solution Petra4 National Intelligence Service CC (EAL4) certification, GS certification**
- Launched Petra Sign, a privilege authorization system

**2014~
2012**

- **DB encryption solution Petra Cipher: National Intelligence Service CC (EAL4) certification first in Korea, GS certification acquired**

**2011~
2009**

- **PETRA 3.1 release, GS certification**
- Establishment of next-generation NICE DB access control in 16 provincial education offices nationwide
- Establishment of Jeju R&D Center
- Acquired INNO-BIZ certification

**2008~
2005**





- Selected as a new technology IT product by KPIC(Korea Post Information Center)
- Released access control solution dGriffin v1.0, acquired GS certification
- Establishment of an affiliated research institute

SINSIWAY Introduction (3/3)

Business Fields and Main Products



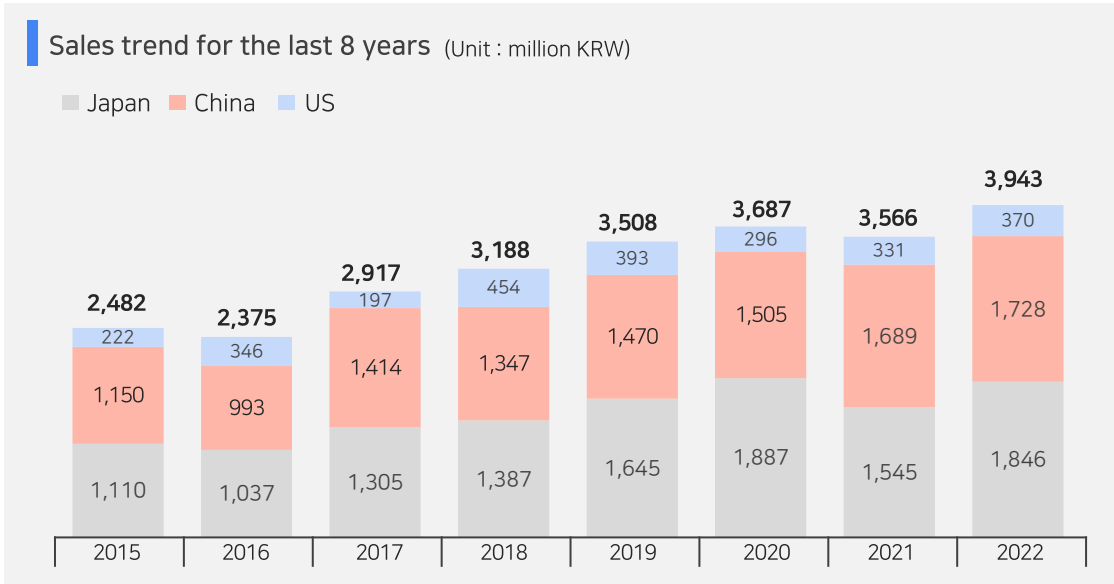
“ Database security solution for various corporate environments ”

 <p>PETRA DB Access Control Solution</p> <ul style="list-style-type: none"> Controlling illegal user DB access Self-developed high-performance memory DBMS-based architecture 9 related technology patents, verified by large financial and public institutions 	 <p>PETRA CIPHER DB Encryption Solution</p> <ul style="list-style-type: none"> Acquired CC certification for the first time as DB encryption solution Strict security function for encrypted data Perfect linkage with PETRA access control solution 	 <p>PETRA CIPHER File Encryption Solution</p> <ul style="list-style-type: none"> Strict security of unstructured files Integrated management of structured/unstructured encrypted data Holding a number of references in the financial sector 	 <p>PETRA SIGN Privilege Authorization System</p> <ul style="list-style-type: none"> Provision of internal user DB handling reasons and business justification for internal users through access right management Perfect linkage with PETRA access control solution
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Main Customers

<p>Financial Sector Around 55 clients</p>	<p>Public Sector Around 177 clients</p>	<p>Other sectors Around 363 clients</p>
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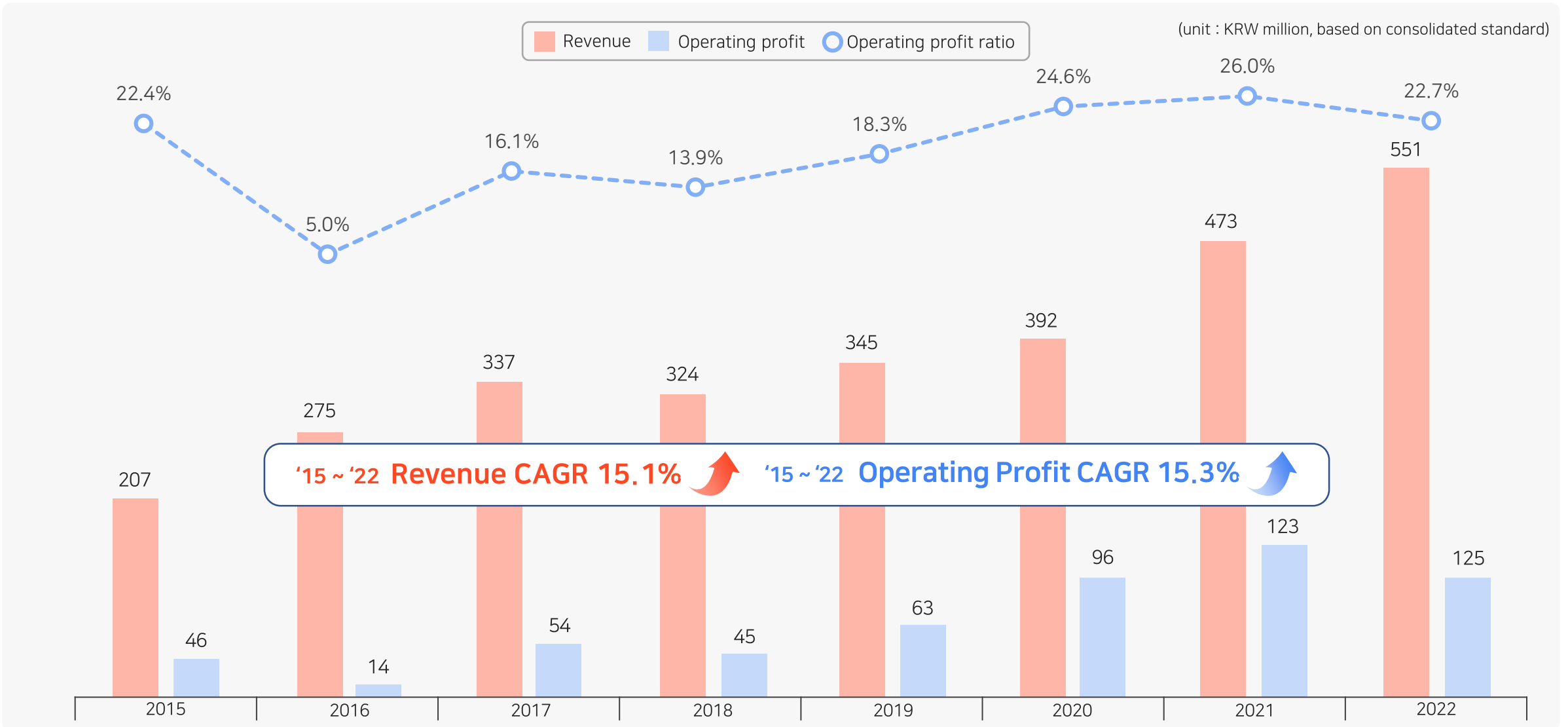
Overseas Subsidiaries Over 200 global references in 29 countries across 4 continents.



Overseas Business Expansion Strategy

- Market Appeal based on Local Market Performance**
Experience supplying performance solutions to 200+ large institutions/companies, including Chinese and Japanese financial institutions, mobile telecoms, and the LA State Government.
- Expansion of Sales Partners**
Continued expansion of Japanese partners, including companies with more than 90 sales bases across Japan, has cooperative partners in Europe, the US, China, and Singapore
- Expansion of Supply Solution Lineup**
Expand our monitoring target DB and SaaS Solution besides MaxGauge for Oracle and InterMax.
- Development and Provision of Local Specialized Services**
Supplying 'Smart DBA' service, a remote DB performance diagnosis service due to lack of engineers in Japan and increasing demand for consulting/non-face-to-face
- Opportunities to Supply Solutions for Overseas Branches of Existing Domestic Customers**
Securing continuous business opportunities when existing domestic customers establish overseas branches and factories

Financial Statements (for the last 8 years)



* In FY2016, due to new expansion of big data business, increase in labor costs due to merger (125 people in 2015 → 200 people in 2016), and an increase in the proportion of cost of goods sold, the operating profit performance was slightly lower compared with sales of that year.



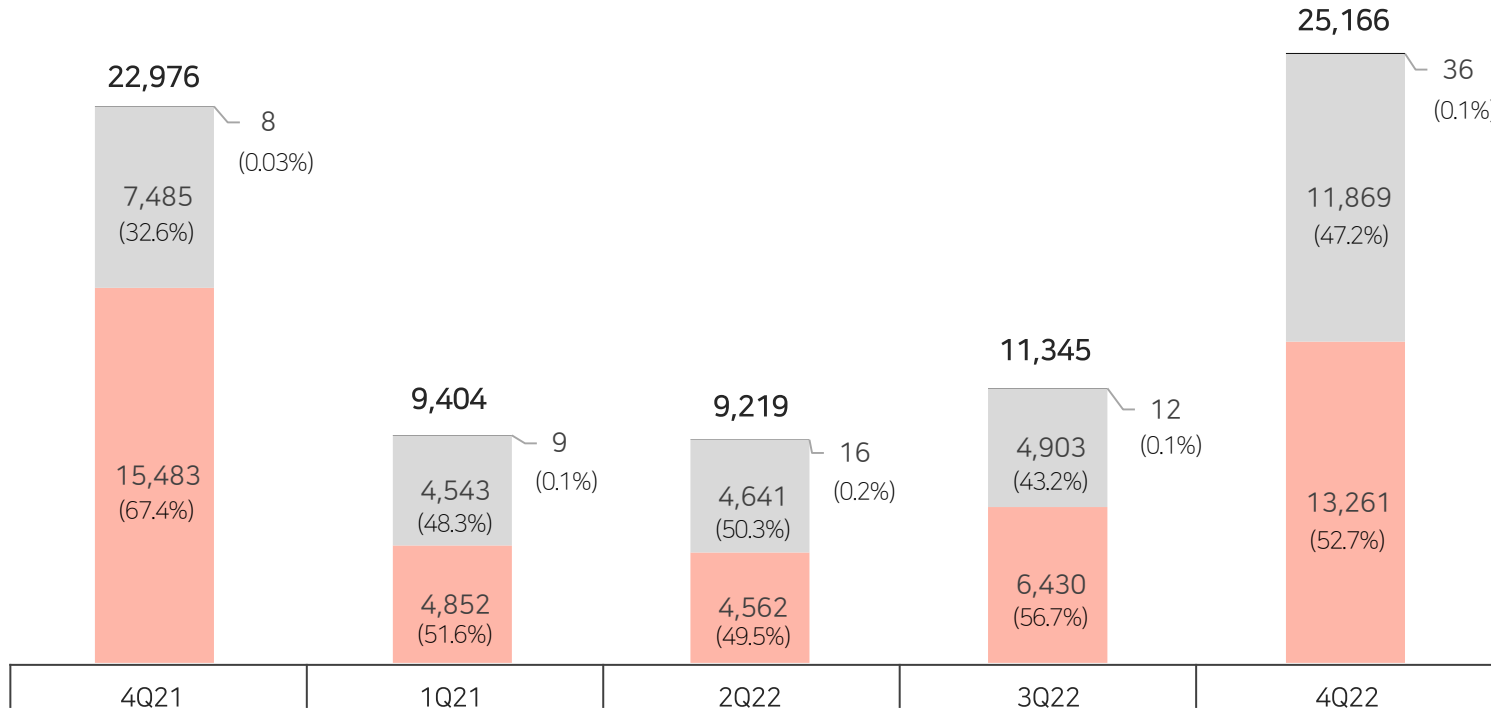
Quarterly Revenue

QoQ + 122% / YoY + 10% ▶ Accumulated 4Q YoY +16%

Revenue Portions Solutions 52.7%, Service 47.2%, Other 0.1%

■ Solutions ■ Service ■ Other

(unit : KRW million, based on consolidated standard)



Revenue Portions	
Solutions	DBPM SW (MaxGauge)
	APM SW (InterMax, InterMax mAPM)
	Big Data SW (Flamingo, KNIME)
	Intelligent IT Monitoring SW (XAIOps)
	Integrated Cloud Monitoring SW (CloudMOA)
	DB Security Management SW (Petra, Petra Cipher, Petra Sign)
Service	SW Maintenance
	Consulting (DB, APM/E2E, Cloud, etc.)
	Big Data Services (Construction/Analysis, Operation, Education)
Other	Publications, rent income, etc.



Quarterly Revenue Breakdown

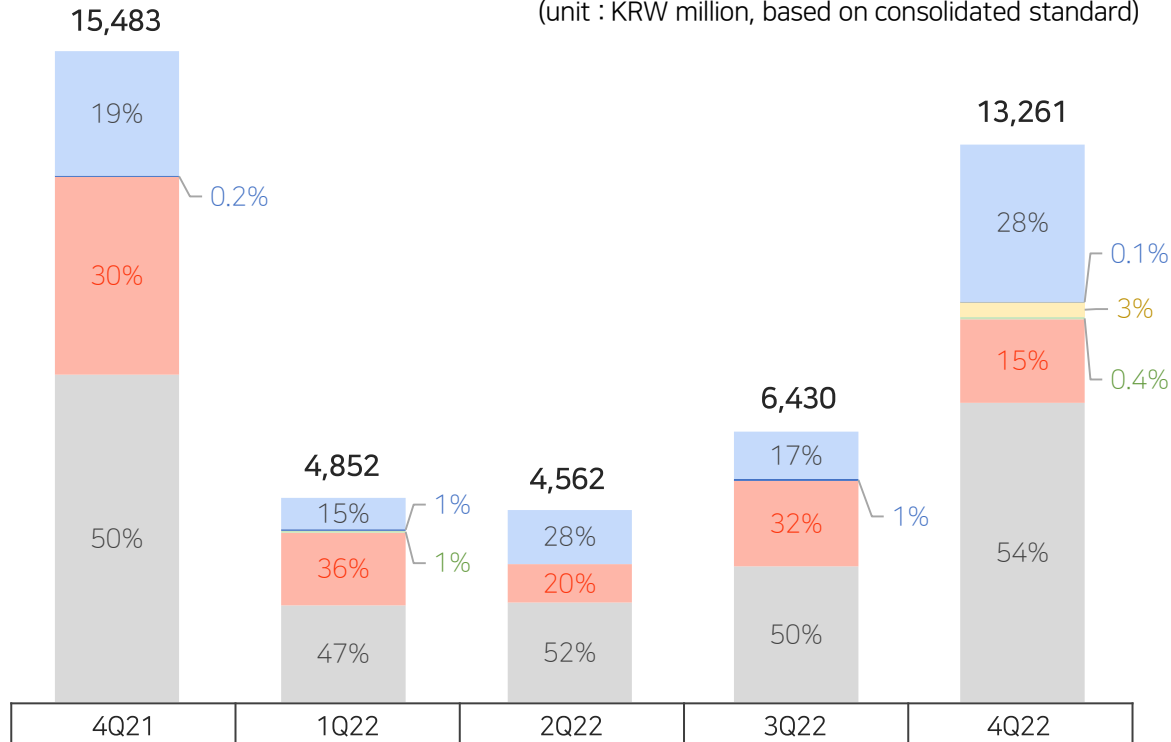
Solutions Segment QoQ +106% / YoY -14% ▶ Accumulated 4Q YoY +7%

Service Segment QoQ +142% / YoY +59% ▶ Accumulated 4Q YoY +29%

Solutions

■ DBPM ■ APM ■ Big Data ■ AIOps ■ Integrated Cloud Monitoring ■ DB Security Management

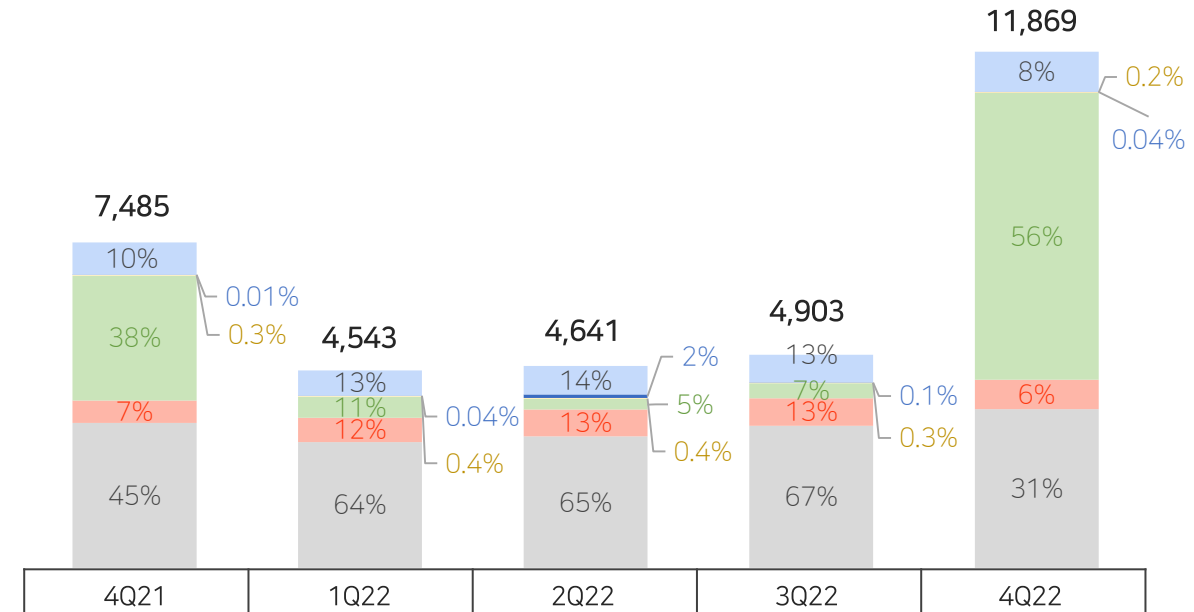
(unit : KRW million, based on consolidated standard)



Service

■ DBPM ■ APM ■ Big Data ■ AIOps ■ Integrated Cloud Monitoring ■ DB Security Management

(unit : KRW million, based on consolidated standard)



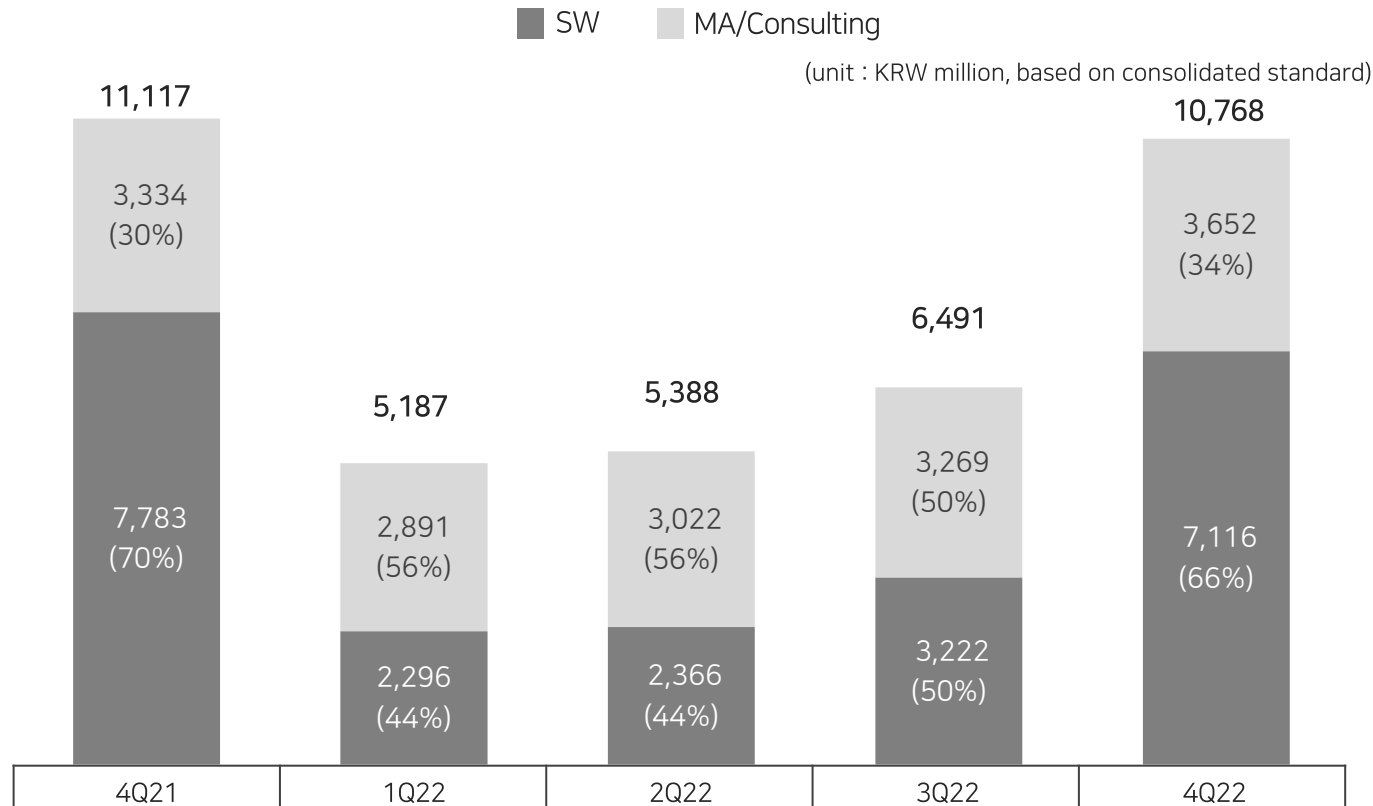
DB Performance Management (DBPM) (Quarterly Revenue)

QoQ +66% / YoY -3% ▶ **Accumulated 4Q YoY +9%**

- SW Revenue QoQ +121% / YoY -9%

- Maintenance and Consulting QoQ +12% / YoY +10%

- Growth in Customer Base: 610 Cumulative References with 40 New Customers in 2022
- Maintenance Revenue Expansion due to New Customer Acquisition Continues



Key Insight

**4Q Public Procurement Contracts:
KRW 4.9B, 72% Market Share**

**4Q Oracle DB Performance
Management Sales Proportion 74%**
* Separated sales standard

**Industry's First Maintenance
Automation and
being Expanded in 3Q**

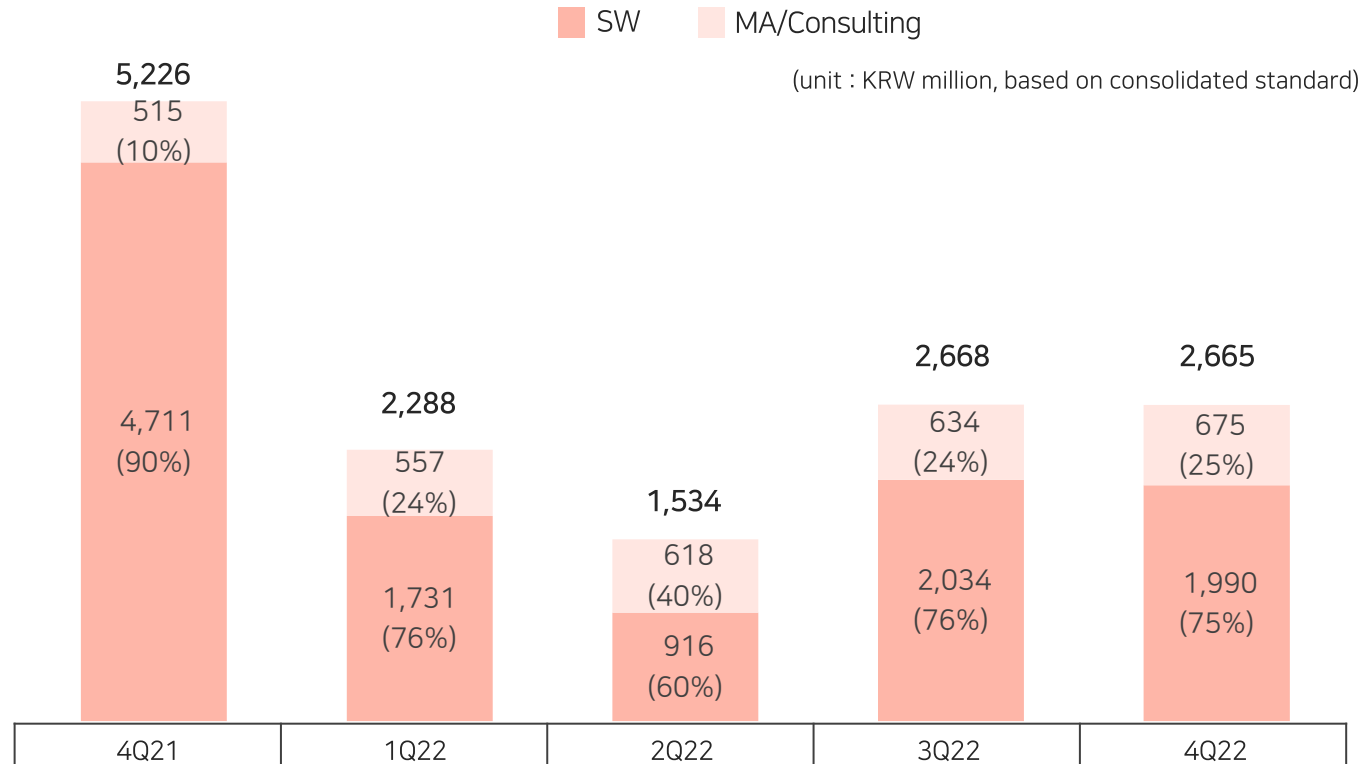
Application Performance Management(APM) (Quarterly Revenue)

QoQ -0.1% / YoY -49% ▶ **Accumulated 4Q YoY +9%**

- SW Revenue QoQ -2% / YoY -58%

- Maintenance and Consulting QoQ +6% / YoY +31%

- Growth in Customer Base: 200 Cumulative References with 20 New Customers in 2022
- Maintenance Revenue Expansion due to New Customer Acquisition Continues



Key Insight

Existing Customers in Financial Sector to Add Additional Products
 (New customer : existing customer = 12:88)
 * Separate Sales Standard

MaxGauge customer base accounted for 25% of cross-selling customers
 * based on accumulated reference of FY'22

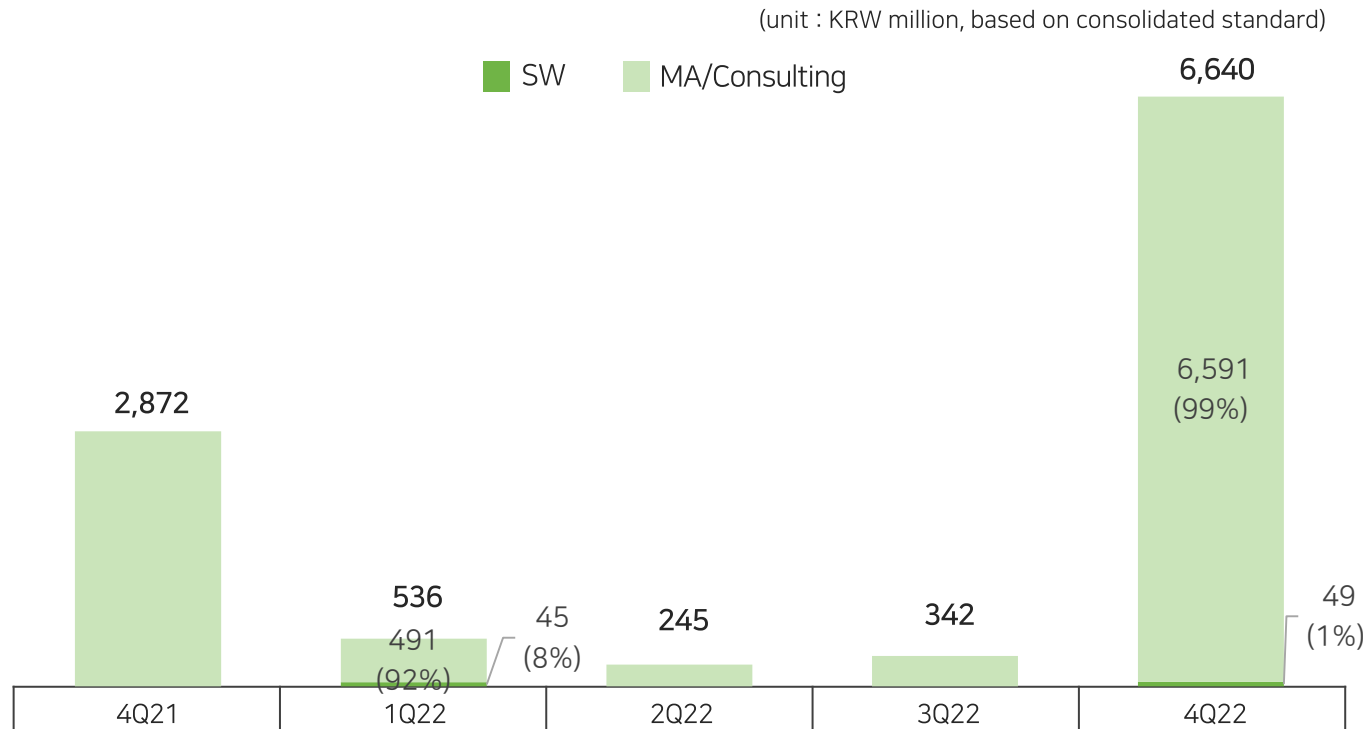
Reference Secured for Interlocking Construction of InterMax and InterMax mAPM in Internet Banking

Big Data (Quarterly Revenue)

QoQ +1,842% / YoY +131% ▶ **Accumulated 4Q YoY +83%**

- Services Sales Dominated by Project-Type Business Orders

- Seoul City (22/06~23/03), Korea Gas Corporation (22/11~23/03) Contracts and Execution
- Supplied EBIGS to Korea Institute of Energy Technology Evaluation and Planning and Gyeongbuk Provincial Government
- Conducted KEPCO MDMS project (22/03-22/11), all revenue recognized in 4th quarter



Key Insight

Expanding public big data follow-up business opportunities

Seoul Big Data Platform (Phase 2) Construction Project
Korea Gas Corporation big data platform design project, etc.

Market Increases due to Opportunities Apache Hadoop Monetization

About 400 ~500 potential customers

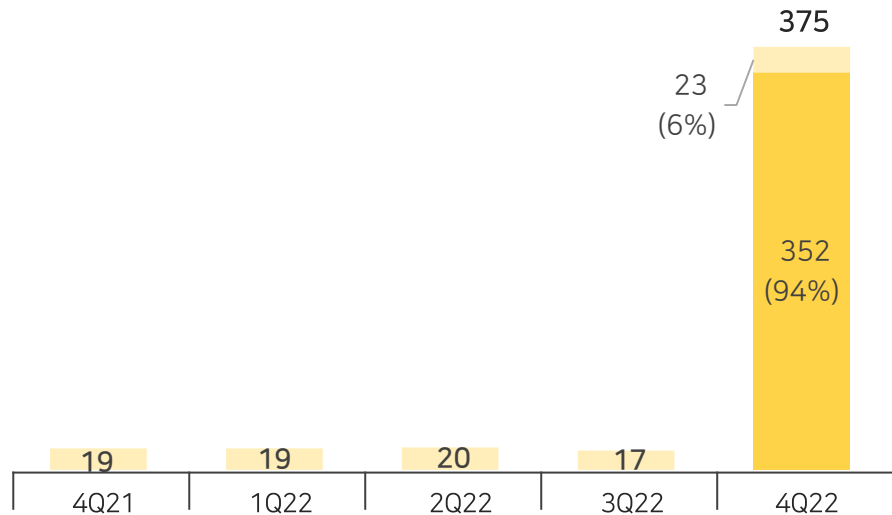
Increased business opportunities for major government ministries and metropolitan local governments in the digital platform

Based on major business experiences such as KEPCO, Seoul Metropolitan Government, and KOGAS

AI-based Intelligent Monitoring (Quarterly Revenue)

QoQ +2,106% / YoY +1,874% ▶ **Accumulated 4Q YoY -61%**
 - Maintenance and Consulting YoY +21% / QoQ +35%

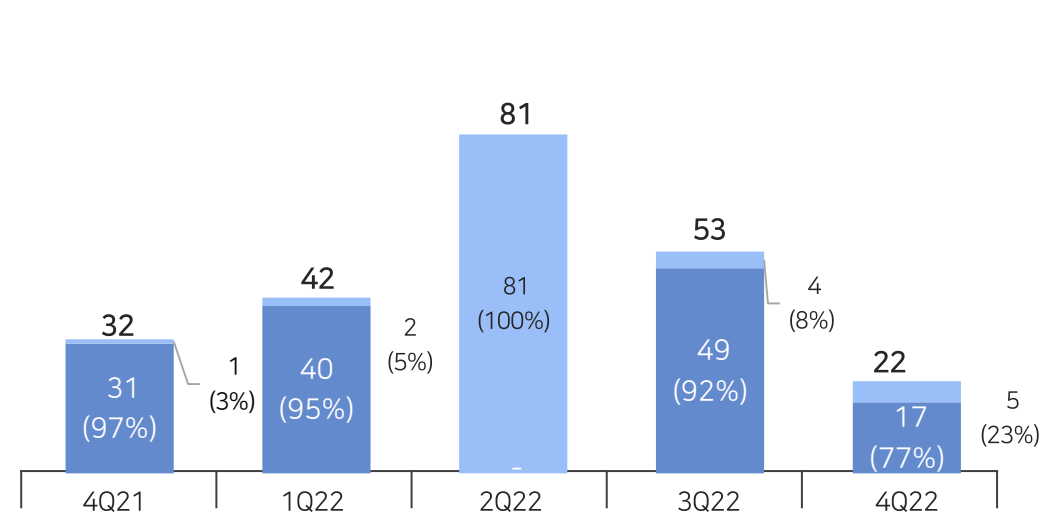
■ SW ■ MA/Consulting
 (unit : KRW million, based on consolidated standard)



Integrated Cloud Monitoring (Quarterly Revenue)

QoQ -58% / YoY -31% ▶ **Accumulated 4Q YoY +395%**
 - SW Sales QoQ -65% / YoY -45%
 - Maintenance and Consulting QoQ +25% / YoY +400%

■ SW ■ MA/Consulting
 (unit : KRW million, based on consolidated standard)



Key Insight

XAI Ops secures one new government agency reference in 2022

XAI Ops begins second project for first financial bank, an existing customer

Strengthening cloud business supply megazonechain based on cloud partnership

5 companies, including EXEM, establish joint cloud technology response system



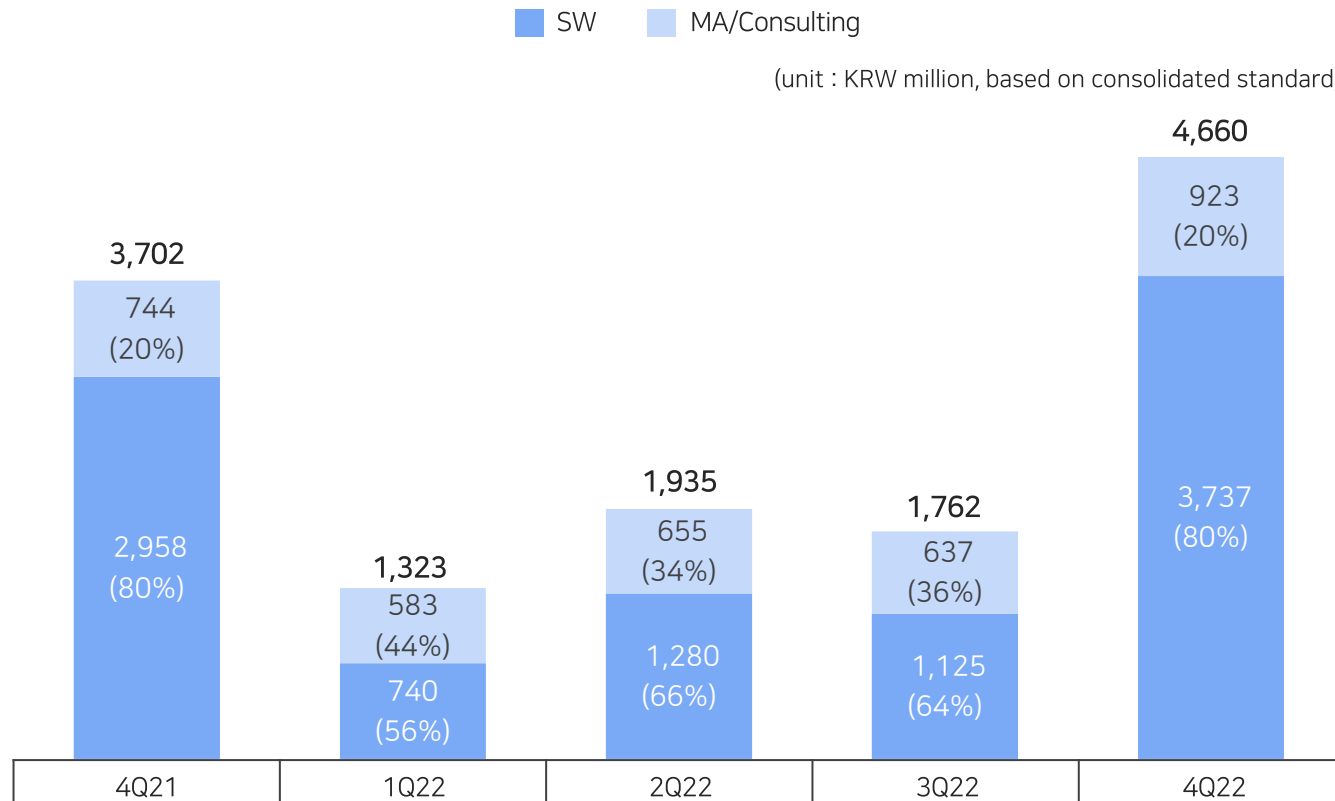
DB Security Management (Quarterly Revenue)

QoQ +164% / YoY +26% ▶ **Accumulated 4Q YoY +21%**

- SW Revenue QoQ +232% / YoY +26%

- Maintenance and Consulting QoQ +45% / YoY +24%

- The only DB access control and DB encryption solution in the domestic cloud marketplace; Cloud marketplace sales continue to rise YoY +43%
- Revenue Growth Driven by Cloud Migration and Zero Trust Adoption Increase



Key Insight

- A total of 280 customers generating sales in 2022 (YoY +4.5%)**
- Sales based on over 10 cloud marketplace channels YoY +43%**
- Development of Cloud-On-Premises Integrated DB Security Product in Progress**



Executive Summary

(unit : KRW million, based on consolidated standard)

	4Q21	3Q22	4Q22	Percentage Change	
				YoY	QoQ
Revenue	22,976	11,345	25,165	10%	122%
Solutions (SW)	15,483	6,430	13,261	-14%	106%
MaxGauge	7,783	3,222	7,116	-9%	121%
InterMax	4,711	2,034	1,990	-58%	-2%
Flamingo/KNIME	-	-	49	-	-
XAI Ops	-	-	352	-	-
CloudMOA	31	49	17	-45%	-65%
Petra	2,958	1,125	3,737	26%	232%
Service (MA/Consulting)	7,485	4,903	11,869	59%	142%
DB Performance Management	3,334	3,269	3,652	10%	12%
APM	4,771	634	675	31%	6%
Big Data*	2,872	342	6,591	129%	1,827%
Intelligent IT Monitoring	19	17	23	21%	35%
Integrated Cloud Monitoring	1	4	5	400%	25%
DB Security Management	744	637	923	24%	45%
Product, etc.	8	12	36	350%	200%
Operating Expenses	14,162	8,485	17,877	26%	111%
Operating Profit	8,814	2,860	7,288	-17%	155%
<i>Operating Margin</i>	<i>38.4%</i>	<i>25.2%</i>	<i>29.0%</i>	<i>-9.4%pt</i>	<i>+3.7%pt</i>
Consolidated Net Income	6,617	2,334	4,529	-32%	94%
Net Income at Controlling Equity	6,185	2,030	3,890	-37%	92%
Non-controlling Interests Net Income	432	304	639	48%	110%

* Big data service figures include maintenance and consulting, as well as big data construction/analysis, operation, and training along with SW supply, and are classified as product sales only when SW is supplied alone.



Operating Expenses

(unit : KRW million, based on consolidated standard)

	4Q21	3Q22	4Q22	Percentage Change	
				YoY	QoQ
Operating Expenses	14,162	8,485	17,877	26.2%	110.7%
Personnel Expenses	7,568	5,444	6,662	-12.0%	22.4%
Transportation Expenses	2	1	2	9.4%	103.4%
Advertising Expenses	13	10	66	394.4%	540.4%
Depreciation and amortization of intangible assets	286	267	711	148.2%	166.2%
Bad Debt Expenses	(20)	(33)	28	-241.1%	-184.5%
etc	6,313	2,796	10,409	64.9%	272.3%



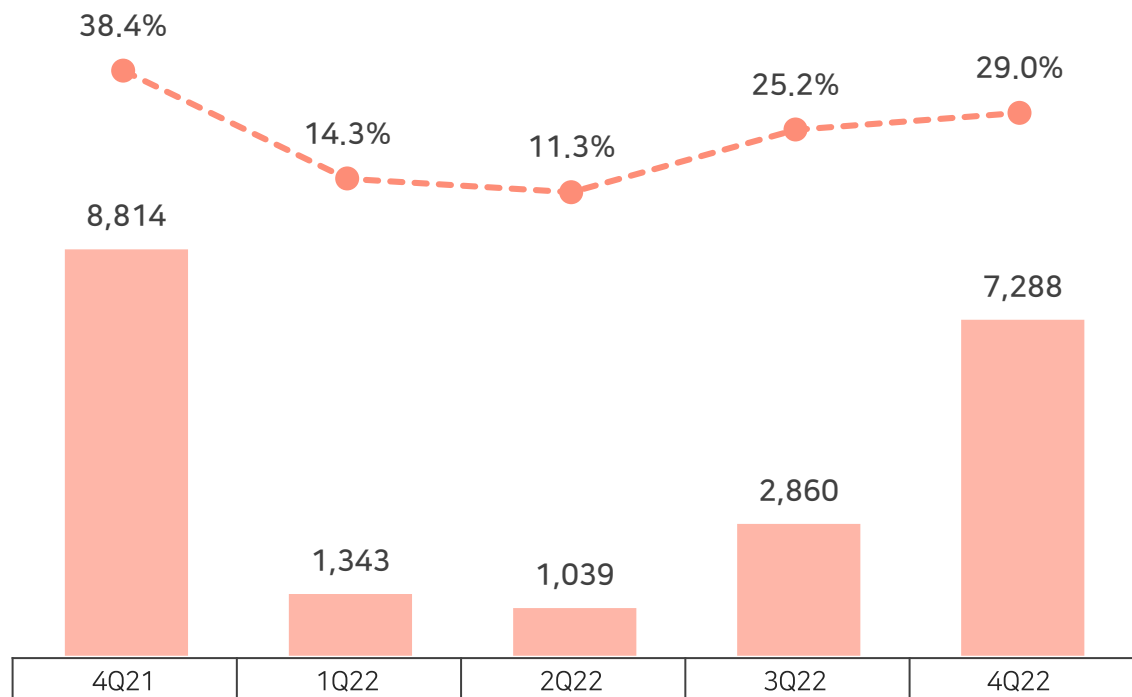
Profit

- Personnel cost increase for employee recruitment and new product development
- Purchasing products in accordance with large-scale projects

Operating Profit QoQ +155% / YoY -17%

Operating Profit(Margin)

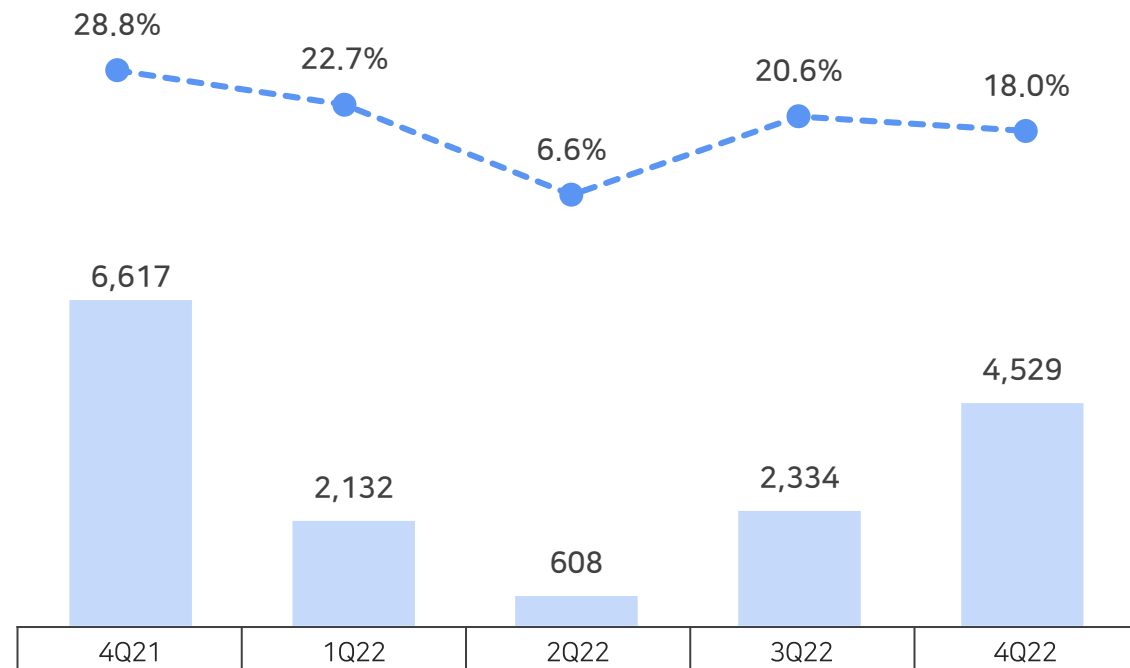
(unit : KRW million, based on consolidated standard)



Net Income QoQ +94% / YoY -32%

Net Income and Net Profit Margin

(unit : KRW million, based on consolidated standard)



CapEx / Workforce Status

CapEx QoQ -45% / YoY +119%

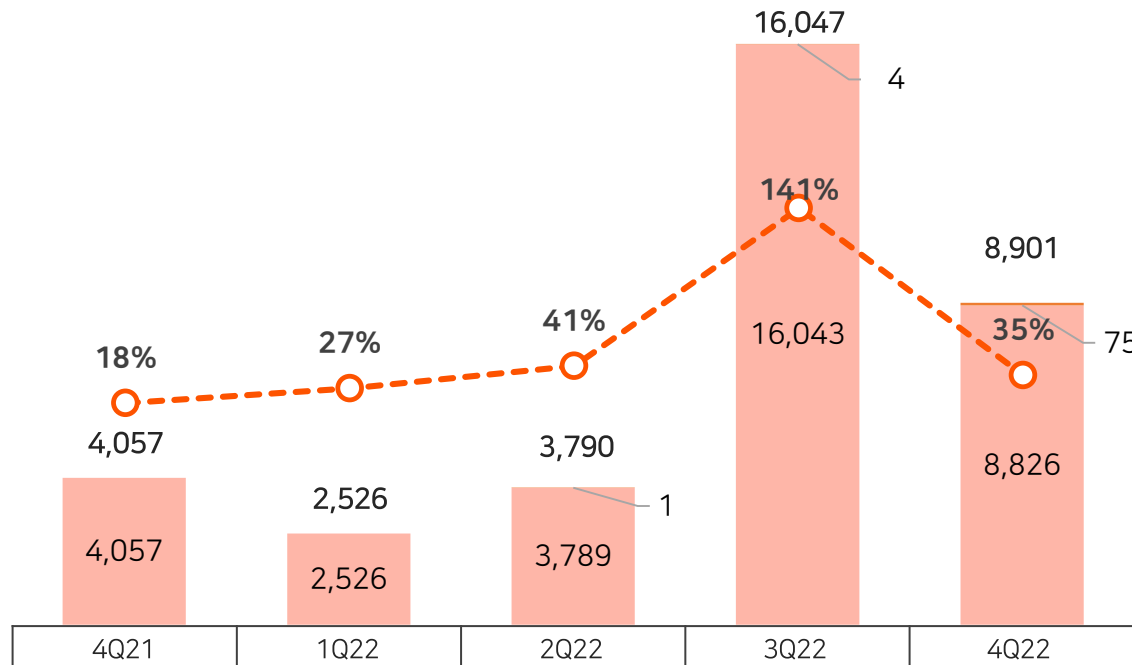
Workforce QoQ +2 / YoY +52

- Increase in tangible assets due to the construction of the new building in Magok Area
- Recruitment continues to strengthen existing business sales and secure new business R&D/sales

CapEx

■ Acquisition of Tangible Assets
 ■ Acquisition of Intangible Assets
 ○ Compared to Sales

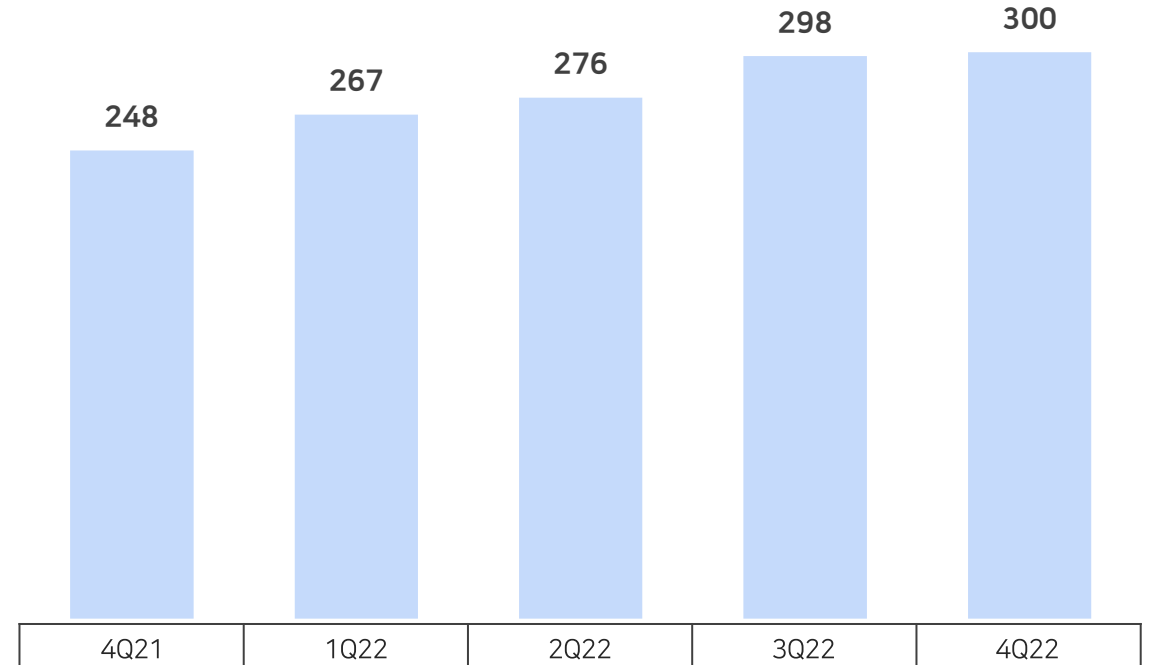
(unit : KRW million, based on consolidated standard)



* CapEx is based on cash outflow for new acquisition of tangible and intangible assets

EXEM Workforce Status

(unit : number)



* Number of employees excluding the number of employees in four subsidiaries



Financial and Income Statement for the Last 3 Years

Consolidated Financial Statement

(unit: KRW million)

	2020	2021	2022
Current assets	52,994	64,049	44,894
Non-current assets	41,388	48,260	74,127
Total assets	94,382	112,309	119,021
Current liabilities	9,000	19,215	16,075
Non-current liabilities	4,819	1,332	1,513
Total liabilities	13,819	20,547	17,588
Capital stock	3,388	3,513	3,638
Capital surplus	37,984	42,696	47,463
Other components of equity	7,026	2,027	-2,972
Accumulated other comprehensive income	-586	-396	-443
Retained earnings	26,730	37,460	46,121
Non-controlling interests	6,021	6,461	7,626
Total equity	80,563	91,762	101,433

Consolidated Income Statement

(unit: KRW million)

	2020	2021	2022
Revenue	39,178	47,330	55,133
Cost of sales	14,935	19,236	24,550
Gross profit	24,243	28,095	30,584
Operating profit	9,648	12,306	12,530
Net income	8,706	11,279	9,603
Profit attributable to owners of the parent company	8,199	10,730	8,588
Profit attributable to non-controlling interests	507	549	1,015
Other comprehensive income for the year	-42	286	29
Total comprehensive income for the year	8,664	11,564	9,632
Basic earnings per share(unit: KRW won)	248	321	245



4Q Financial and Income Statement (Consolidated)

Consolidated Financial Statement

(unit : KRW million)

	2020.12.31	2021.12.31	2022.12.31
Current assets	52,994	64,049	44,894
Cash and Cash Equivalents	34,324	37,232	24,635
Trade receivables and other current receivables	5,951	7,720	8,526
Other current financial assets	12,709	18,877	6,272
Current tax assets	11	10	16
Other current assets	172	210	974
Non-current assets	41,388	48,260	74,126
Equity method investment equity	606	283	-
Tangible assets	28,012	35,852	63,445
Investment property	775	718	706
Goodwill	1,665	1,665	1,665
Intangible assets other than goodwill	2,511	2,656	2,224
Other non-current financial assets	6,365	5,611	4,193
Other non-current assets	-	-	11
Deferred corporate tax assets	1,454	1,474	1,883
Total assets	94,382	112,309	119,021
Current liabilities	9,000	19,215	16,075
Trade payables and other current payables	266	2,958	501
Other current financial liabilities	957	5,088	5,307
Other current liabilities	6,444	8,996	8,824
Accrued corporate tax	1,334	2,173	1,443
Non-current liabilities	4,819	1,332	1,513
Other non-current financial liabilities	4,009	603	731
Other non-current liabilities	373	329	414
Deferred corporate tax liabilities	437	400	367
Total liabilities	13,819	20,547	17,588
Capital attributable to the owners of the parent company	74,542	85,300	93,807
Capital	3,388	3,513	3,638
Capital surplus	37,984	42,697	47,463
Other components of equity	7,026	2,027	-2,972
Accumulated other comprehensive income	-586	-396	-443
Retained earnings(loss)	26,730	37,460	46,121
Non-controlling interest	6,021	6,461	7,626
Total capital	80,563	91,762	101,433
Total equity and liabilities	94,382	112,309	119,021

Consolidated Income Statement

(unit : KRW million)

	4Q 21	1Q 22	2Q 22	3Q 22	4Q 22
Revenue(sales)	22,976	9,404	9,219	11,345	25,165
Cost of sales	8,714	4,024	4,183	4,052	12,291
Gross profit	14,262	5,379	5,036	7,294	12,874
Selling and administrative expenses	5,468	4,067	3,990	4,466	5,559
Bad debt expenses	-20	-31	8	-33	28
Operating profit(loss)	8,814	1,343	1,039	2,860	7,288
Other profit	55	32	23	19	30
Other losses	273	19	122	-22	563
Financial Profit	56	486	416	613	-177
Finance cost	697	375	988	440	1,598
Equity method gain(loss)	87	10	83	-47	-46
Net income before income tax(loss)	8,043	1,477	451	3,027	4,994
Corporate tax	1,426	-655	-156	692	465
Net income(loss)	6,617	2,132	608	2,334	4,529
Other comprehensive income	50	40	131	32	-174
Items not reclassified to profit or loss (other comprehensive income after tax)	4	17	105	-92	-105
Items that can be reclassified to profit or loss (other comprehensive income after tax)	46	23	25	124	-69
Total comprehensive income	6,667	2,172	738	2,367	4,354
Attribution of net income(loss)					
Net profit (loss) attributable to the owners of the parent company	6,185	2,180	488	2,030	3,890
Net income (loss) attributable to non-controlling interests	432	-48	119	304	639
Attribution of total comprehensive income					
Total comprehensive income, equity attributable to owners of parent company	6,219	2,214	576	2,102	3,722
Total comprehensive income, non-controlling interests	448	-42	162	264	633



4Q Financial and Income Statement (Separate)

Financial Statement

(Unit: KRW million)

	2020.12.31	2021.12.31	2022.12.31
Current assets	43,712	52,464	31,796
Cash and Cash Equivalents	30,873	31,793	16,535
Trade receivables and other current receivables	3,097	5,024	5,132
Other current financial assets	9,742	15,613	4,786
Other current assets	19	35	872
A group of non-current or disposal assets classified as held for sale or for distribution to owners	-	-	4,471
Non-current assets	35,096	42,552	68,705
Investments in subsidiaries, joint ventures and associates	6,011	5,736	5,451
Tangible assets	22,710	31,252	58,379
Investment property	496	-	-
Goodwill	100	100	100
Intangible assets other than goodwill	339	637	507
Other non-current financial assets	4,661	4,003	2,811
Deferred corporate tax assets	780	824	1,458
Total assets	78,808	95,016	100,501
Current liabilities	6,608	12,623	10,488
Trade payables and other current payables	103	2,602	84
Other current financial liabilities	290	1,408	3,103
Other current liabilities	4,999	6,527	6,036
Accrued corporate tax	1,216	2,086	1,265
Non-current liabilities	375	415	604
Other non-current financial liabilities	28	120	295
Other non-current liabilities	348	295	309
Total liabilities	6,983	13,038	11,091
Capital			
Capital	3,388	3,513	3,638
Capital surplus	37,779	42,653	47,522
Other components of equity	7,026	2,027	-2,972
Accumulated other comprehensive income	-556	-524	-484
Retained earnings(loss)	24,188	34,309	41,705
Total capital	71,825	81,978	89,410
Total equity and liabilities	78,808	95,016	100,501

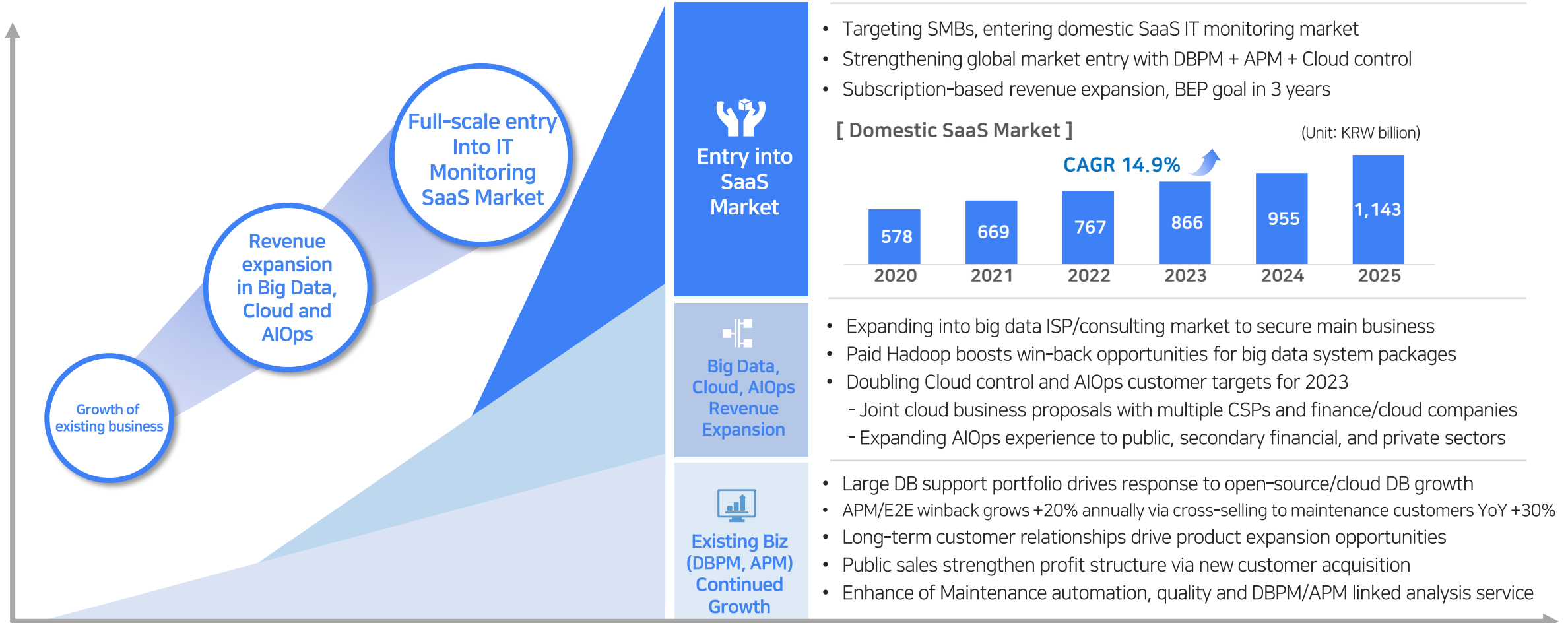
Income Statement

(Unit : KRW million)

	4Q 21	1Q 22	2Q 22	3Q 22	4Q 22
Revenue(sales)	18,189	7,451	6,532	8,974	19,470
Cost of sales	7,162	3,399	3,402	3,663	10,414
Gross profit	11,027	4,052	3,130	5,311	9,056
Selling and administrative expense	3,347	2,556	2,614	2,897	3,522
Bad debt expenses	-1	2	3		3
Operating profit(loss)	7,681	1,493	513	2,413	5,531
Other profit	1	28	22	17	9
Other losses	259	19	122	-23	566
Financial profit	39	444	394	409	8
Finance cost	665	344	925	371	1,529
Net income(loss) before corporate tax expenses	6,797	1,602	-117	2,491	3,454
Corporate tax	1,249	-658	-162	757	97
Net income(loss)	5,548	2,261	45	1,734	3,356
Other comprehensive income		24	32	55	-71
Items not reclassified to profit or loss (other comprehensive income after tax)		24	32	55	-71
Total comprehensive income	5,548	2,284	77	1,790	3,285

ROADMAP

Sales Expansion Through Strong Product Portfolio Connectivity with Existing and New Solution Customers
 Continuous Revenue Expansion Strategy: Targeting Small and Medium-sized Markets with 'DataSaker' Subscription SaaS Product





Thank you





Q&A

