



**aecm**  
EUROPEAN ASSOCIATION OF GUARANTEE INSTITUTIONS

# Intellectual Property Financing for innovative SMEs

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**KOTEC**

「Innovation Growth platform for tech  
companies from Startup to Scale up」



I

# Overview



# Who we are



## Mission (KOTEC Role)

To Contribute to the **National Economy**

- ☑ By boosting **technology finance**
- ☑ By providing access to finance for **tech-based Innovative SMEs**



## Organization(2024)

- ☑ **8** Regional Headquarters, **82** Branches (includes Singapore branch)
- ☑ **1,514** Employees (1,087 experts includes **312 PH.Ds**)



## History

**1989** Establishment

- ☑ Non-profit Organization (No Shareholders)
- ☑ Contributions from Government & Financial Institutions

**2005** Developed the **KTRS**

- ☑ Specialized tool evaluating tech-based innovative SMEs

**2022** Launched the **Carbon Valuation Model**

- ☑ To support green-tech SMEs

**2008** Launched the **Tech Valuation Model**

- ☑ To support IP innovative SMEs

**2017** Started the KPAS I・II

- ☑ IP automatic appraisal Sys.





# Our goals



## Key Clients

- Tech—based startups
- Cutting edge manufacturer  
*Energy, Digital, Service, Bio, Telecommunication, Smart factory,*
- High 5+  
*Semiconductor, Secondary battery, Bio, Future mobility, Hydrogen*
- IP innovative company  
*AI-Robot, DNA Analysis Kit, Quantum Computing, Digital twin*



## Support

- Financial  
*Guarantee, Direct Investment*
- Non—financial  
*R&D, IP Commercialization, Certification*



## Goal

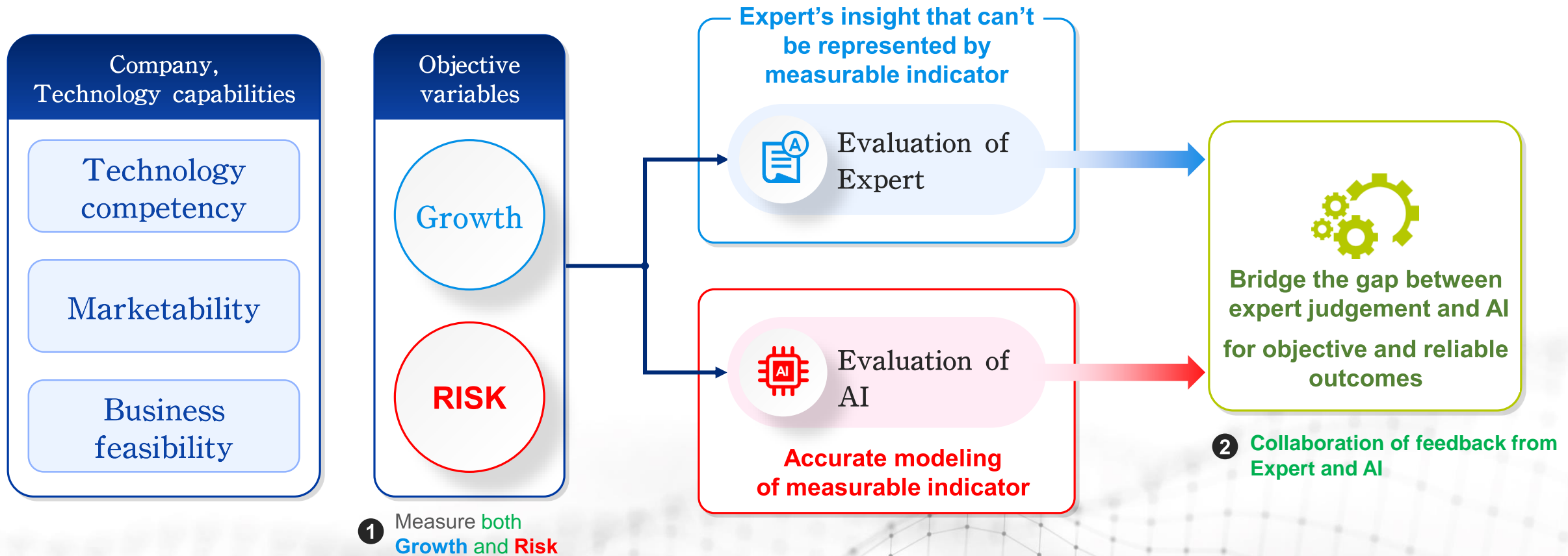
- Supporting founding  
*Tech-based startups, IP innovative ventures*
- Scale up  
*IPO, M&A, Unicorn*
- Supporting tech innovation  
*R&D, Carbon neutral oriented*
- Global expansion  
*CES innovation awards*

*Generate National Growth Engine!*

# Technology Rating System(KTRS): Structure and Purpose



Build an AI-powered collaborative evaluation system where algorithms continuously learn from expert insights to ensure consistent and objective assessments



# Insights: How Technology Rating differs from Credit Ratings

## Credit Rating System

- 🕒 Predicts the credit risk of an enterprise
- 🕒 Emphasizes an enterprise's past performance  
*Assessment base - Past*
- 🕒 Valuations on tangible assets  
*Factory sites, buildings, machines, etc.*
- 🕒 Conduct financial due diligence
- 🕒 Banks' credit rating models

When you assess *innovative startups* or *venture businesses*

No business history in the past



Past-oriented

## Technology Rating System

- 🕒 Assesses the **commercialization potential** of a **company's technology**
- 🕒 **Highlights** an **enterprise's potential** for **future growth**  
*Assessment base – future*
- 🕒 Emphasizes **technological value** over **intangible assets**  
*Business rights, patents, R&D expenses, etc.*
- 🕒 The primary analysis is **non-financial**
- 🕒 **KTRS (AIRATE)**

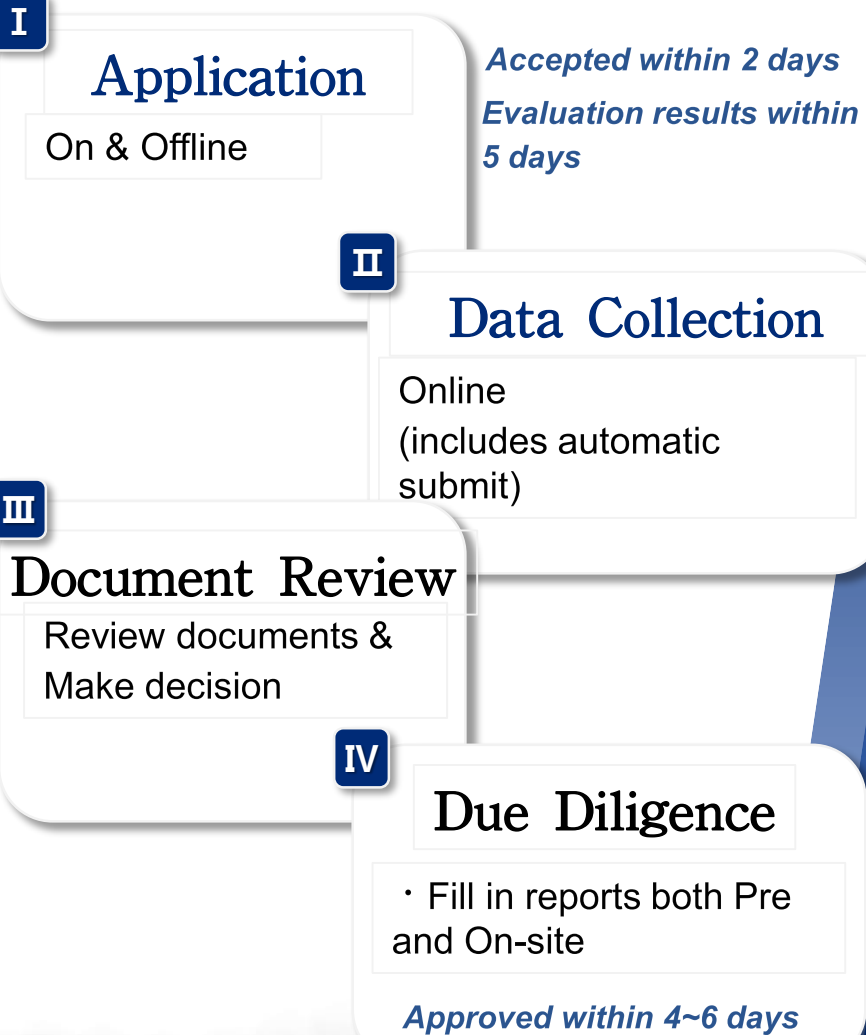
When you assess *innovative startups* or *venture businesses*

Future growth potential



Future-oriented

# Progress Overview



V

## KTRS

### KOTEC Technology Rating System

*Data – based decision making tool by*

Score

Grade

*Accumulated 864,467 cases*

*Completed 39,412 cases  
average over the last 5 years*

### Technology Guarantee

*Balance of 28.3T KRW Bank loan*

### Investment

*Balance of 306.2B KRW  
Guarantee linked*

### Technology Transaction

*8,576 Cases Patent Transfer*

### Certification

*Venture, Inno-Biz  
(Tax benefits for innovative SMEs)*

### Company Screening

*R&D Grant*

*Data – driven, Expert's insight – based and Labour – efficient systems*



# IP Assessment & Guarantee





# IP Assessment Program

## Purpose

To support SMEs' IP commercialization and scale-up

## IP criteria



The IPs listed below have a technology Readiness Levels 7,8,9:

**IPs** (patents, utility models, designs, trademarks)

**New IPs** (programs, software, semiconductor designs)

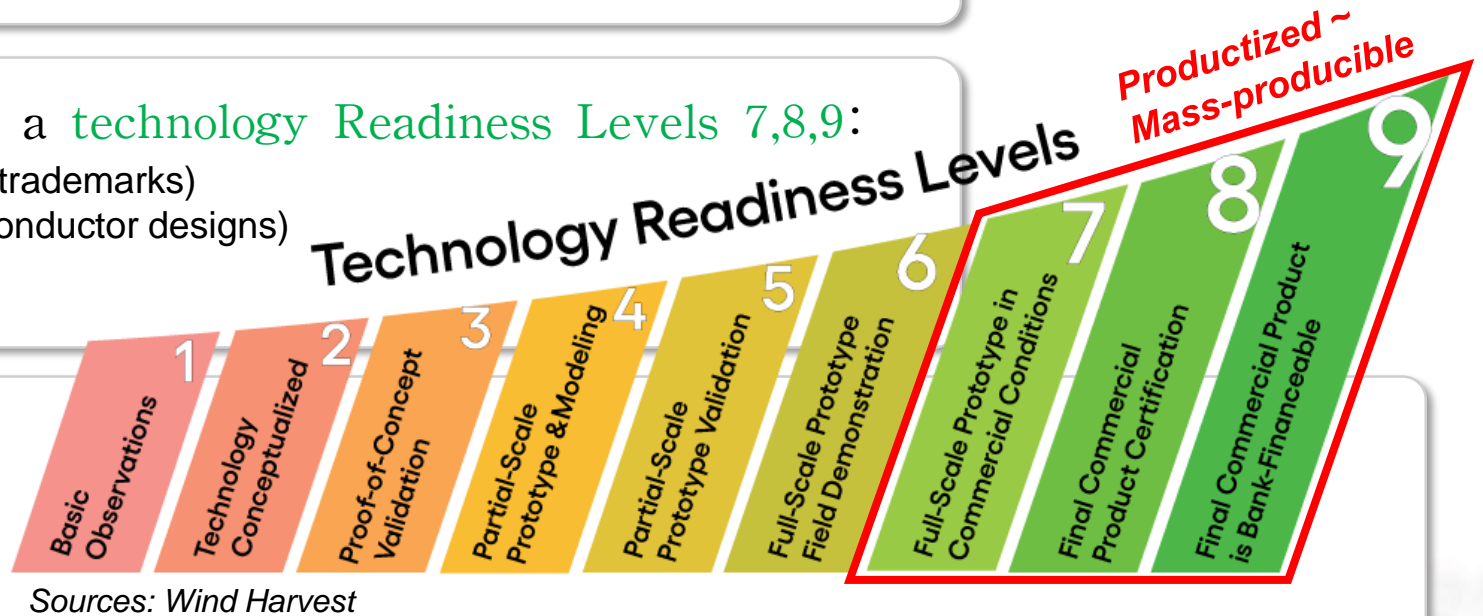
**Protected IP** (technical know-how)

**Copyrights**

## Eligible SMEs



SMEs who want commercialize IP with  
**Min TR B**



## Use of Proceeds

General corporate purpose (hiring, marketing, product development etc.) to **commercializing IP**

## Guarantee Ratio

Based on the TR (**90~95%**)

## Pledge

Prevent change of rights (**120%** of guarantee)

## Guarantee Fee Reduction

Based on the TR (**0.3~0.5%**)

# IP Assessment Program by Experts

## Process of Technology Guarantee



## Basis for guarantee amount

### General Guarantee

Based on the **TR** and **guarantee review**

### IP Guarantee

Based on **IP rating** and **valuation**



## IP Valuation Methods

Select **income**, **market**, **cost** or **mixed approach** depending on the features of technology

### Key variables in Income Approach



$$V_T = \sum \frac{CF_t}{(1+r)^t} \times \text{Tech Contribution Rate}$$

# Platform for IP assessment: KPAS I & II

## KIBO Patent Appraisal System (KPAS)



KPAS

AI—based IP **automatic** appraisal System  
*Combining big data analytics & deep learning algorithm*



*Cost saving*



*Simplified*

### KPAS — I

#### Patent **rating** system

Automatic rating of IP using a 9 level grading system (AAA to C)

- Grading IP level by AI trained on **patent data** and **reports valued by experts**

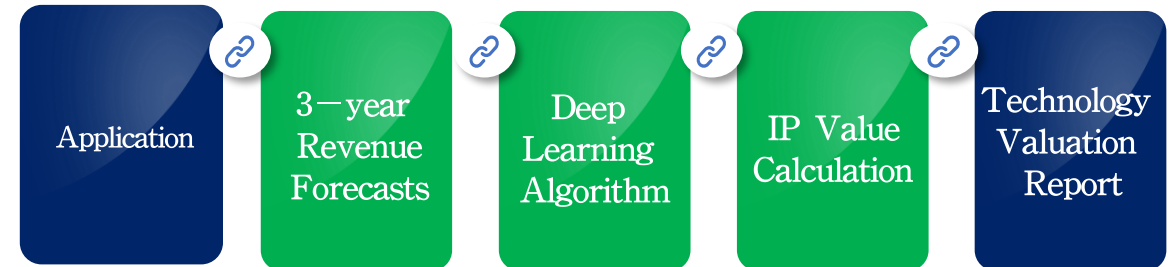


등급	AAA	AA	A	BBB	BB	B	CCC	CC	C
백분율 (%)	4%	7%	12%	17%	20%	17%	12%	7%	4%
누적비율 (%)	4%	11%	23%	40%	60%	77%	89%	96%	100%

### KPAS — II

#### Patent **valuation** system

Automatic valuation of IP based on an AI—driven **revenue approach**



Free open to the public

Opening the platform in real time so that anyone can assess the excellence of their patents

URL: <https://kpas.kibo.or.kr>

# IP assessment variation: Experts & KPAS I · II

## KIBO Patent Appraisal Programs by Experts and KPAS I & II

### Utilized Field

#### Finance

Quick and cost-effective  
IP financing assistance

#### Government- funded program

IP evaluation scores as a  
policy program support

#### Patent Scouting

Support for commercialization  
of high-value patents

#### Patent Management

IP maintenance and  
renewal tracking

### Supporting Performance

#### By Experts

	Cases for guarantee	Amount (100 million KRW)
2020	419	1,016
2021	863	2,279
2022	898	2,494
2023	983	2,952
2024	1,024	3,042

#### KPAS — I

	Cases for guarantee	Amount (100 million KRW)	External usage
2020	498	1,623	50,731
2021	454	1,763	20,609
2022	425	1,856	21,117
2023	476	2,535	24,656
2024	475	2,292	20,156

#### KPAS — II

	Cases for guarantee	Amount (100 million KRW)
2020	465	846
2021	436	724
2022	298	496
2023	300	537
2024	359	651



# IP assessment variation: Experts & KPAS I · II

## IP Financing program comparison

	IP Valuation	IP Fast-track	IP Rating
Eligible IPs	Eligible IPs & TR Minimum B		
	All	Within 5 years of registration	IP grade in minimum B
Valuation tool	By Experts	KPAS — II	KPAS — I
Pledge Contract	Required or not required	Not required	Not required
Guarantee amount	Within valuation amount	Within valuation amount (400M KRW Max)	—
Evaluation fee	2 ~ 10M KRW	1M KRW	0.2M KRW
Collaboration with other institutions	Banks, KIPO(General), KIPO(ESG), NIPA(Software)	Banks, NIPA(Software)	—



# Best Practice



# Support for Early-Stage Tech Startups

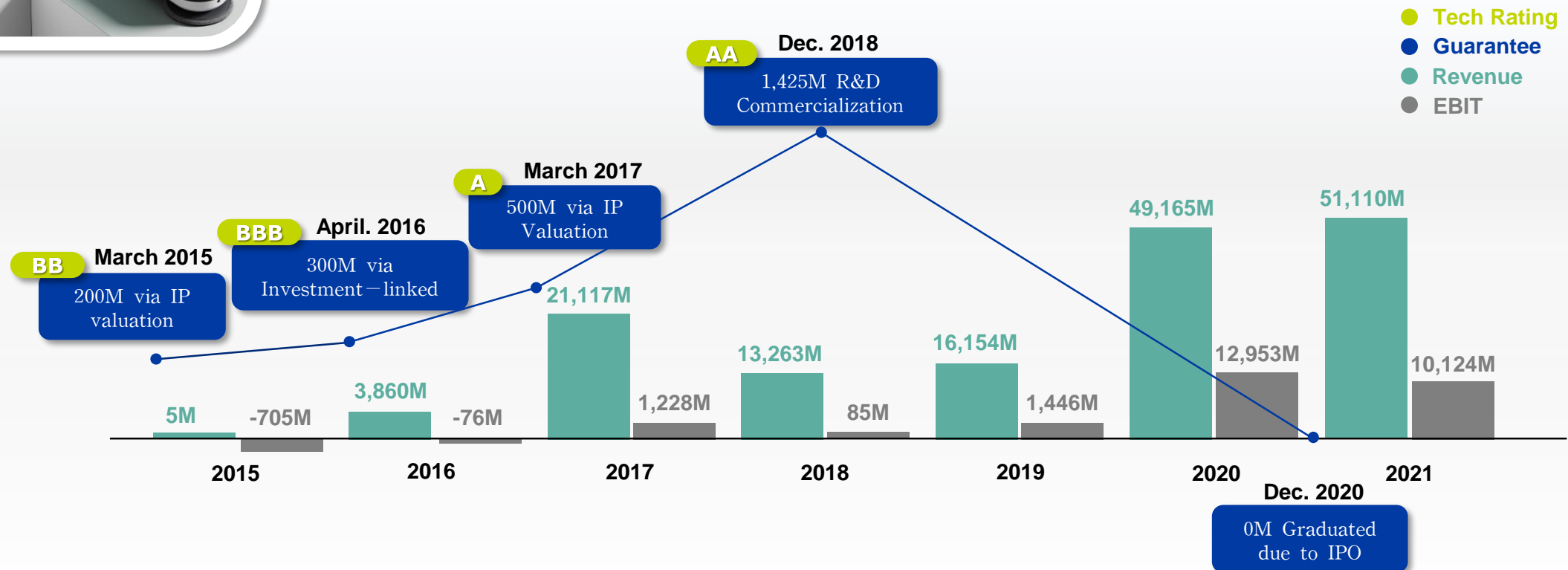


**everybot.** The robot vacuum cleaner manufacturer  
*Established in Jan. 2015, IPO in July 2021*

**132** Intellectual  
property rights  
(Feb. 2022)

**45%** R&D man power /  
Total Employees  
(Feb. 2022)

**20** Export countries  
(Feb. 2022)



Sources: everybot, internal data

# Hidden champion with high-value IP



CUREVERSE

Established in Oct. 2021

New drug candidate  
for curing Alzheimer's disease

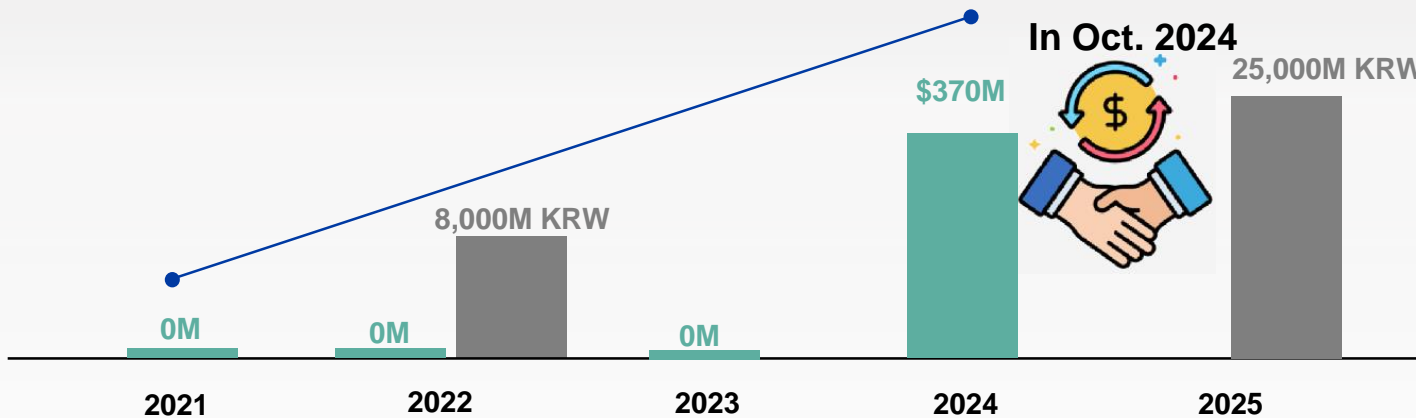
2 Intellectual  
property rights  
(May. 2024)

BBB+

In July 2024

1,000M via IP Valuation

- Tech Rating
- Guarantee
- Earnings
- Investment



Sources: cureverse, internal data

## License-out

- On Oct. 16, 2024
- *CuReVerse* signed a drug licensing agreement worth \$370 million with *Angelini Pharma*. (Italian global big pharma)
- Developed as an oral medication that can be easily taken at home. (unlike other treatments)





# Policy for Hidden Champion with high-value IP

Launched	2023.6 ~ Present
Valuation target	Patent, software, database and etc
Operating branch	Central Technology Appraisal Institute
Guarantee amount	Over 1,000 million KRW (within valuation amount)
Participants	About 6 experts (include accountant, patent attorney, and etc)
Time required	About 6 ~ 8 weeks
Certification	IP-Value Hidden Champion
Cases	9 companies based on innovative IPs
Tech Field	Bio, quantum computing and etc

No :



## IP-VALUE HIDDEN CHAMPION CERTIFICATION

Company :

President :

Your company is selected as a hidden champion because of having excellent IP technology and future growth potential.



Korea Technology Finance  
Corporation

Chairman



A man in a grey suit and tie stands with his arms raised in a celebratory gesture, set against a backdrop of a city skyline at sunset. The sun is low on the horizon, casting a warm glow over the buildings. In the background, a large, white, dome-shaped structure with a grid-like pattern is visible. The sky is a mix of blue and orange hues.

# Thank you for your attention!

# 감사합니다



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**Sungmin Bae**\_ Deputy Director