

# Intellectual Property Strategy Briefing

July 7, 2022

Asahi Kasei Corporation

- 01** Review of IP Activities in Previous Medium-Term Management Plan (MTP)
- 02** Strategies for Utilizing IP and Other Intangible Assets in the New MTP
- 03** Examples of Strategic Utilization of IP for Accelerating 10 Growth Gears (GG10)

# 01 Review of IP Activities in Previous Medium-Term Management Plan (MTP)

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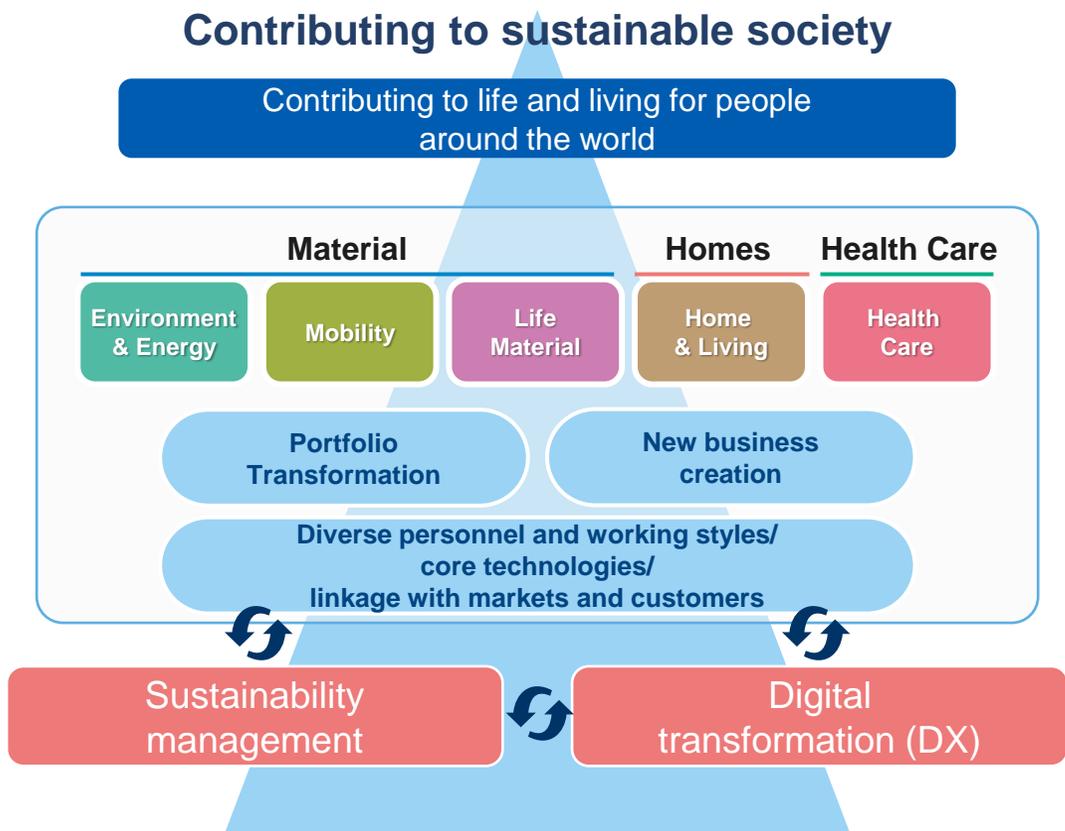
02 Strategies for Utilizing IP and Other Intangible Assets in the New MTP

03 Examples of Strategic Utilization of IP for Accelerating 10 Growth Gears (GG10)

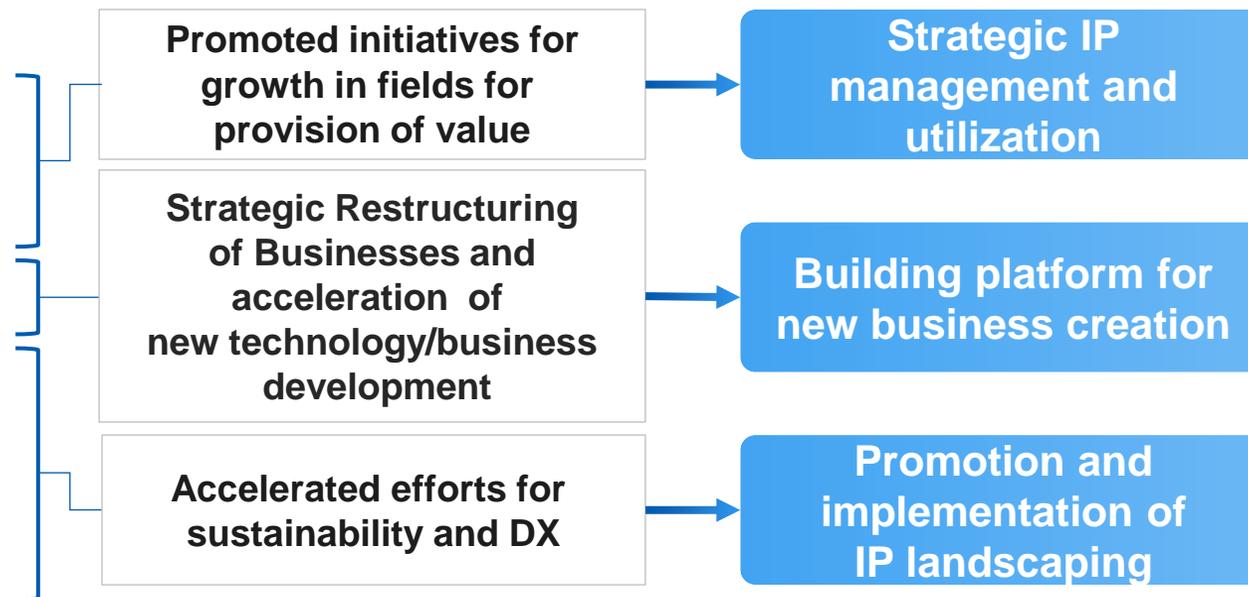
# IP activities under the previous MTP

Until fiscal 2021, IP activities corresponded to the three key points of the previous MTP were carried out.

## Approach to Value Provision of the previous MTP



## Three Key Points



# IP activities under the previous MTP

## IP activities for achieving the MTP

### Strategic IP management and utilization

#### Lithium-ion battery separator patent infringement lawsuit

**Plaintiff** Asahi Kasei Corporation **Defendant** Company X

**Summary** Filed a patent infringement lawsuit with Shenzhen Intermediate People's Court, seeking an injunction of sales and compensation for damages (a total of 1 million yuan)

**Outcome** **Our claims were fully accepted by the court**



Hipore™

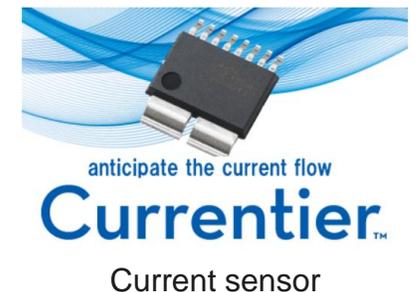
### Building platform for new business creation

### Promotion and implementation of IP landscaping

#### Developing Customers Using IP Landscaping

**Overview** Identifying industry fields by analyzing the patent information, where the features of highspeed response and low heat generation are in need; Identifying companies with technological capabilities as promising customers

**Outcome** **Successful development of a new market**



Current sensor

# IP activities under the previous MTP

## IP activities for achieving the MTP

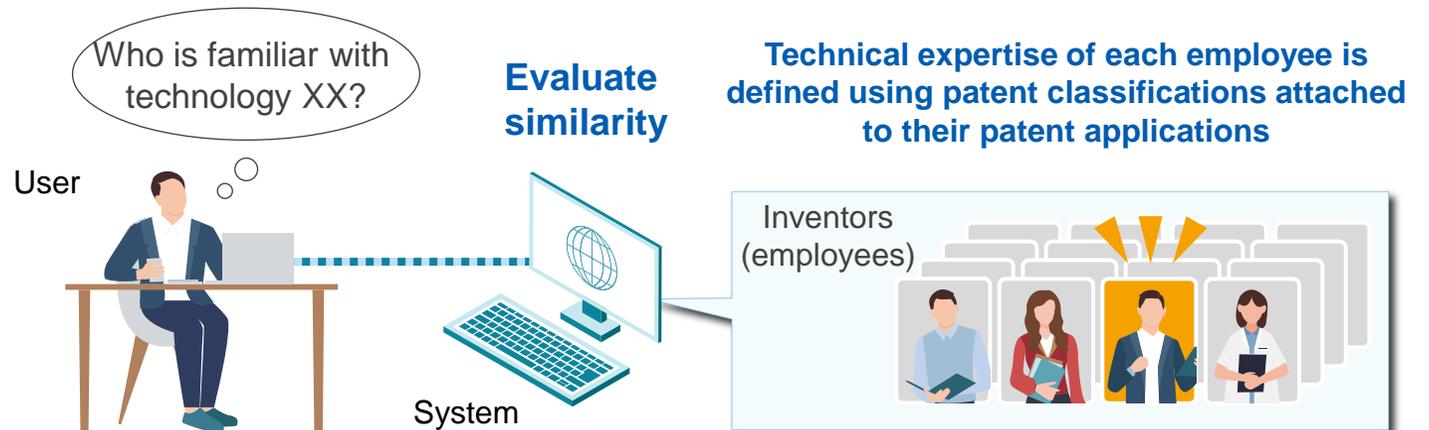
Strategic IP management  
and utilization

**Building platform for  
new business creation**

Promotion and  
implementation of  
IP landscaping

## Employee (expert) Recommendation System

For the purpose of maximizing the value of diversity of Asahi Kasei, a platform for connecting employees (experts) has been developed.



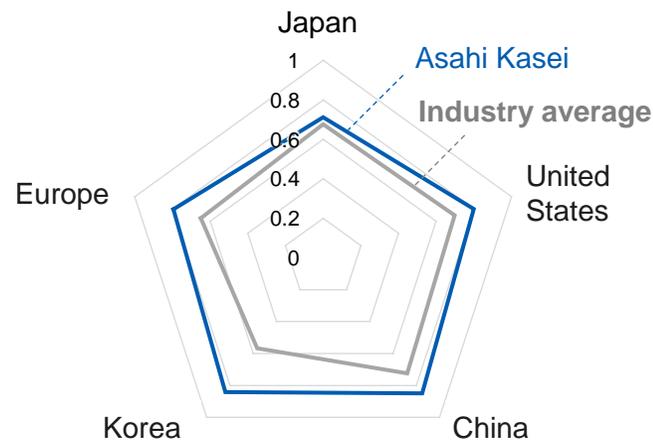
Building a platform to foster connections  
among employees with different technical expertise

# Strengths of IP Department (Core Competencies)

With a strong mindset of contributing to business goals, expertise on global IP practice (procedural skills) and skills of strategic utilization of IP information have been cultivated

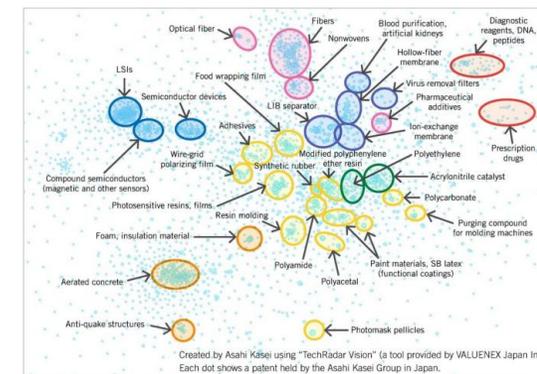
- IP portfolio aligned with globally expanding businesses
- Higher rates of grant and maintenance at overseas prosecutions than the industry average

Patent Grant Rate in each country/region



Mission of IP Department:  
**“Sustainable IP Goals (SIPGs)”**  
 Protecting profits and maximizing the value of businesses through providing supports corresponding to evolving business environment with IP expertise

- Strategic database (SDB) with proprietary intellectual property information used in all business sectors
- Providing insights to top management using intellectual property analysis (IP Landscaping)
- Implementation of IPL at more than 40 departments since 2018



# Achievements of IP activities (awards)

Asahi Kasei Corporation received “Minister of Economy, Trade and Industry Award” of “Intellectual Property Achievement Awards” for the recognition of our IP activities in fiscal 2021. In fiscal 2022, Asahi Kasei was selected as “Digital Transformation Stock” for the recognition of digital technology utilization including IP activities (for the second year in a row)

## FY2021 Award for Excellent Corporation Utilizing the Intellectual Property Rights System (Minister of Economy, Trade and Industry Awards)

### Intellectual Property Achievement Award

Awarded to individuals and corporations to honor their contributions to the development and dissemination of the intellectual property rights system in Japan as well as to awareness-raising activities therefor by The Ministry of Economy, Trade and Industry (METI) and the Japan Patent Office (JPO)

### Reasons for award:

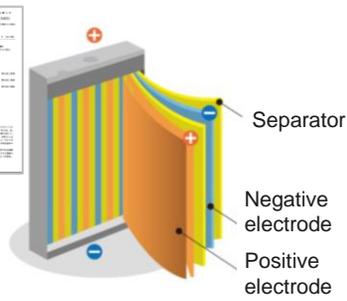
- Sustainable IP mission
- IP Landscaping activities
- IP awareness of researchers



Recognition ceremony



Honorary Fellow Dr. Yoshino



Basic patent for lithium-ion batteries (JPB1989293)

## Selected as DX Stock for second consecutive year



### DX Stock selection

Companies with good practices to promote and implement digital transformation (DX) leading to enhanced enterprise value are selected by Ministry of Economy, Trade and Industry and Tokyo Stock Exchange; 33 companies selected in FY2022



“DX Vision 2030”



Digital twin of the world's largest scale alkaline water electrolysis system

### Reasons for selection:

- Continuous transformation of operation including IPL
- New business model creation
- Fostering digital professions

IP activities involved in DX initiatives

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**02 Strategies for Utilizing IP and Other Intangible Assets in the New MTP**

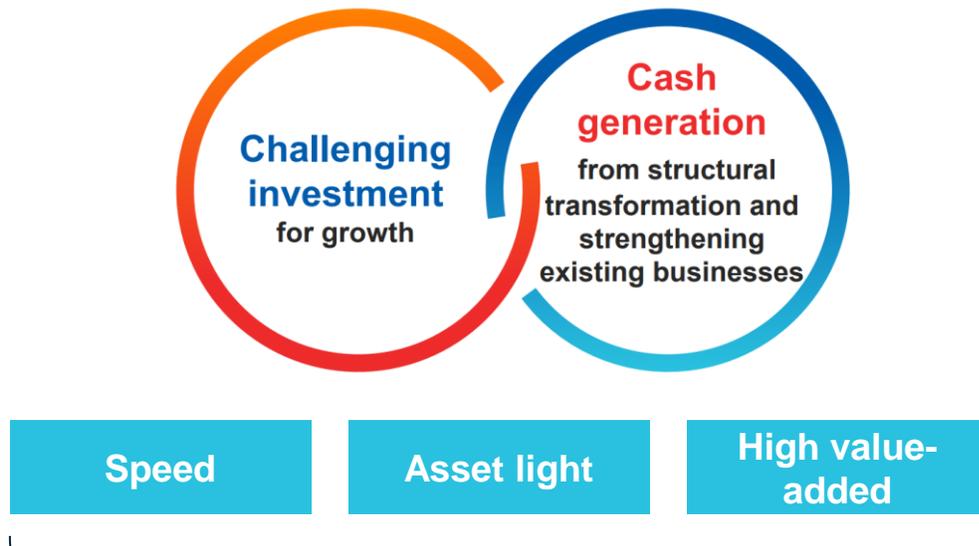
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03 Examples of Strategic Utilization of IP for Accelerating 10 Growth Gears (GG10)

# New MTP 2024 -Be a Trailblazer- Basic Guideline and Business Platform

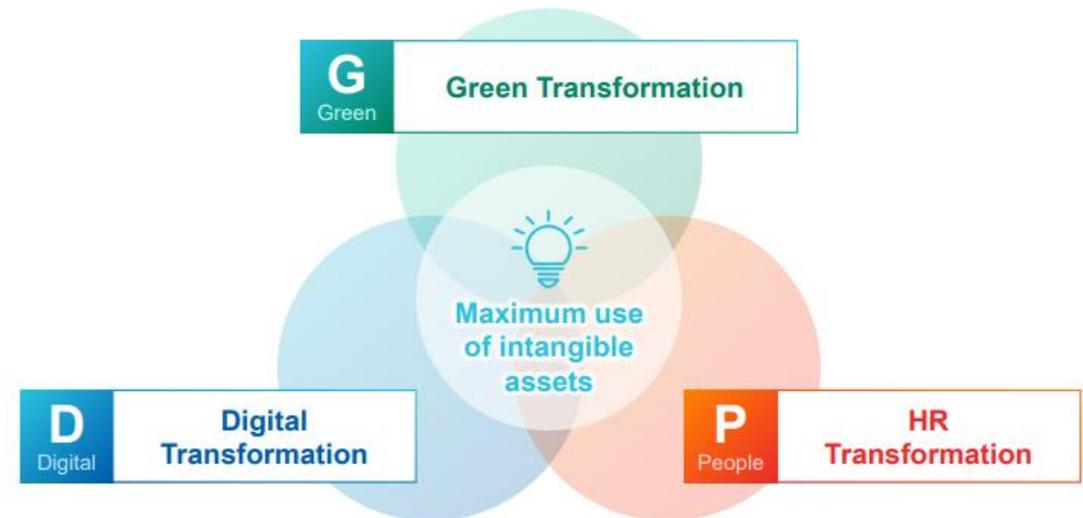
To achieve both challenging investment for growth and cash generation from structural transformation under the basic guideline for business portfolio evolution, “maximum use of intangible assets” is one of key areas in strengthening business platform

## Basic Guidelines for Business Portfolio Evolution



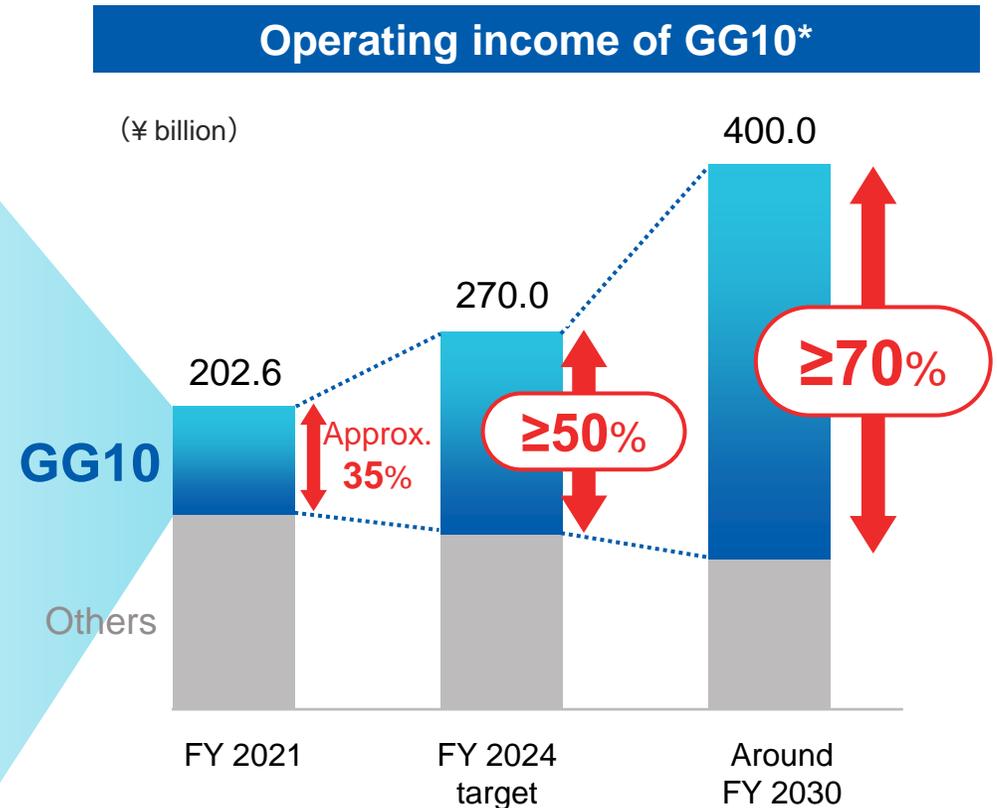
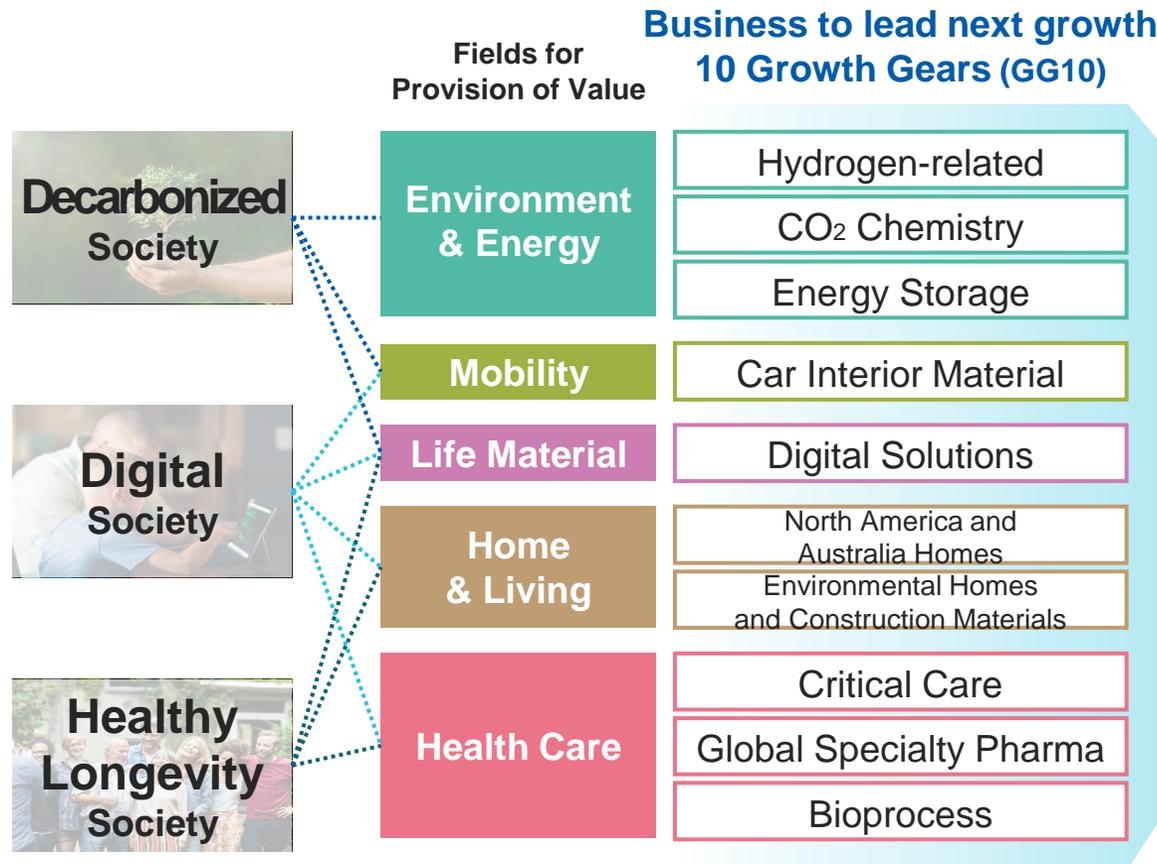
Increasing importance of strategic utilization of IP and other intangible assets to realize “Speed”, “Asset light” and “High value-added”

## 4 key areas for transformation



# Growth strategy

Focusing resources on 10 Growth Gears (GG10) that will drive future growth and aiming to have them provide more than 70% of operating income around 2030

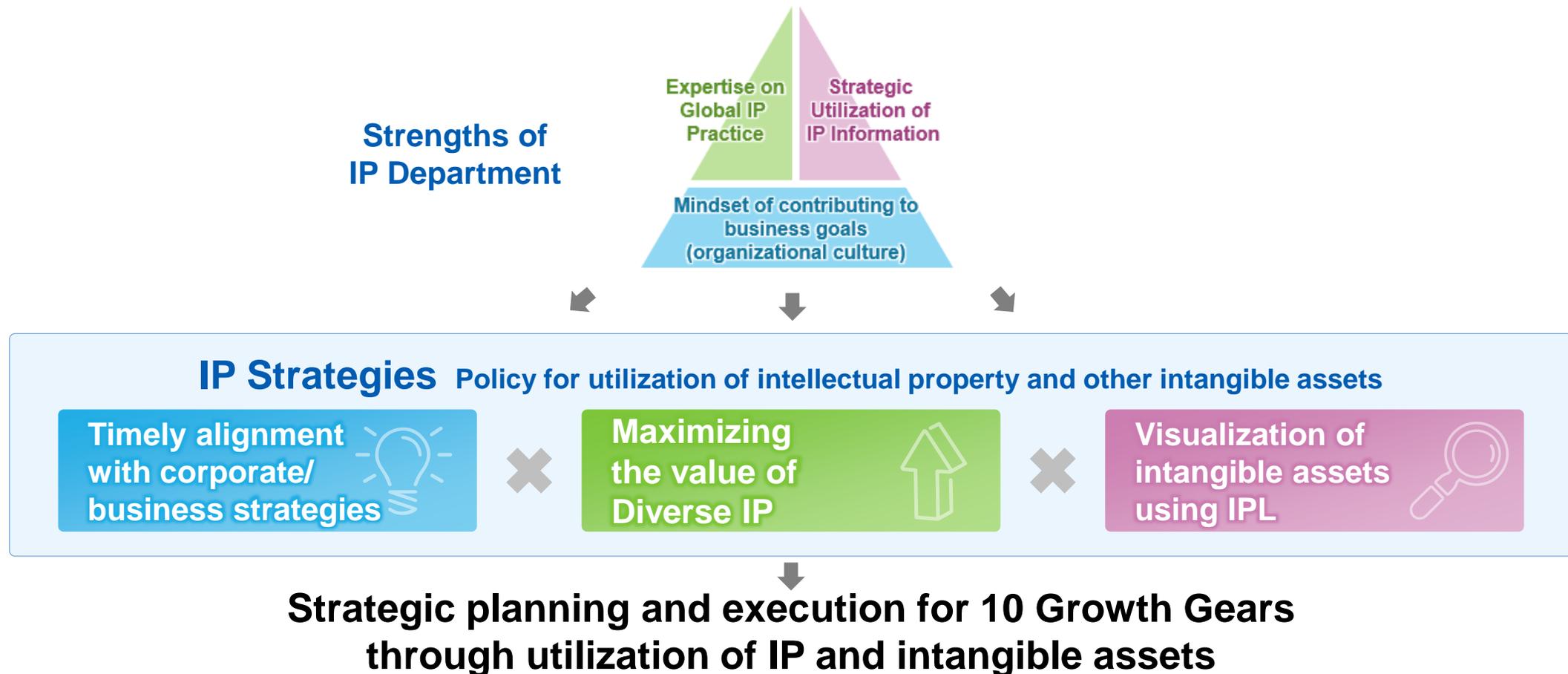


\* Proportions of GG10 profit calculated based on group profit before corporate expenses are deducted

# IP strategies

## Policy for utilization of intellectual property and other intangible assets

Aiming to contribute to strategic planning/execution and new business creation through maximizing the value of diverse IP, Intellectual Property Intelligence Department has been established in April 2022 to accelerate the utilization of intangible assets throughout the Asahi Kasei Group



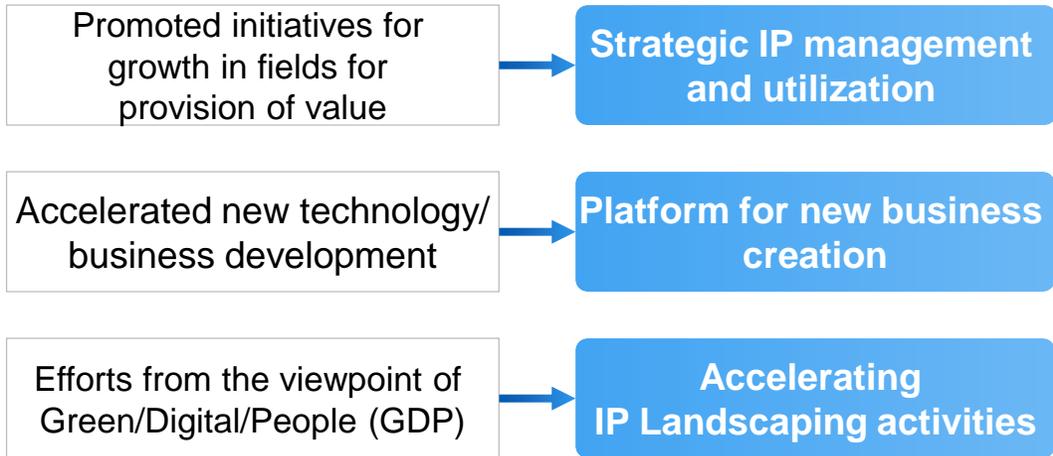
# IP strategies

## Policy for utilization of intellectual property and other intangible assets

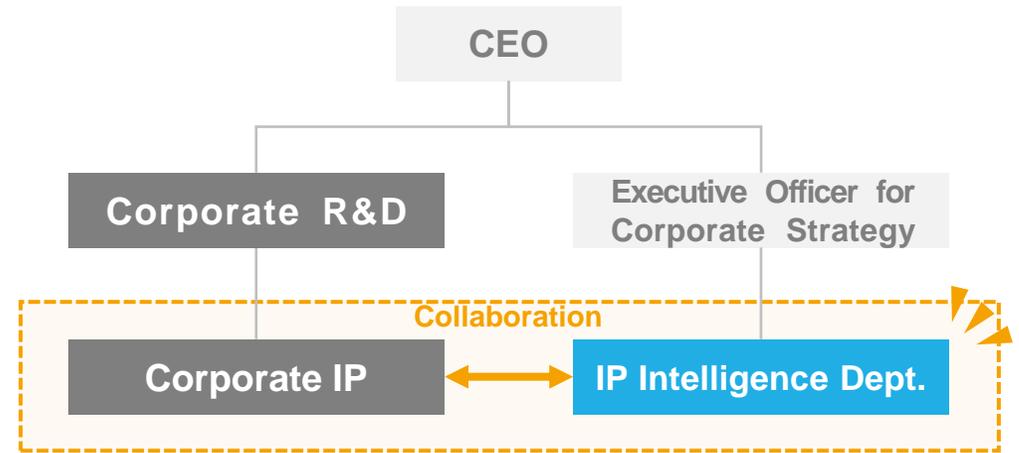


### IP activities aligned with business management

#### 3 Key Points of the MTP



### Organizational structure



**IP Intelligence Dept.** newly established to support business strategies and execution

# IP strategies

## Policy for utilization of intellectual property and other intangible assets

Timely alignment with corporate/business strategies



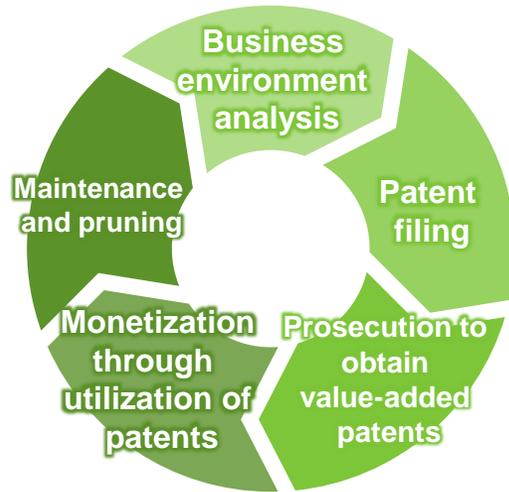
Maximizing the value of Diverse IP



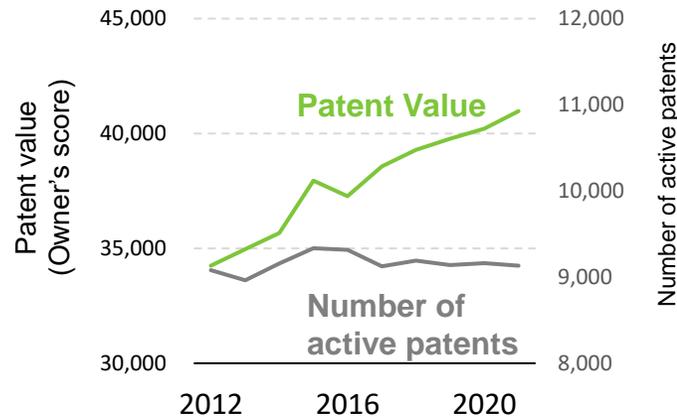
Visualization of intangible assets using IPL



### Cycle of IP Activities

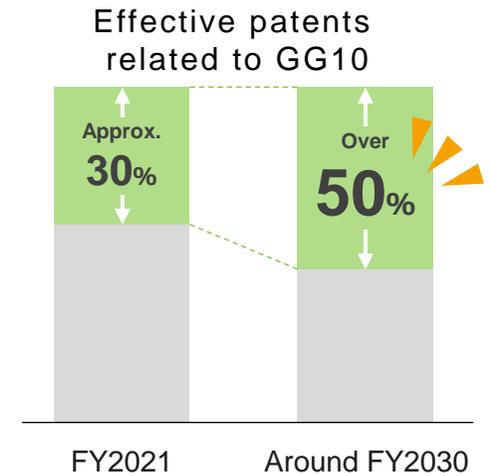


### Improvement of Patent Value (owner's score)

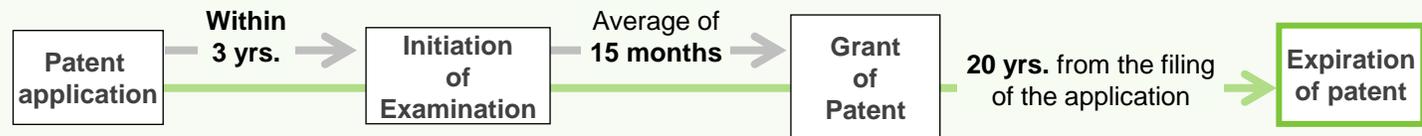


Patent value (owner's score) is an indicator based on the degree of importance of patents calculated with Biz Cruncher® provided by Patent Result Co., Ltd.

### Non-financial KPIs



**Reference** Procedure and terms from filing of patent application to the expiration thereof (in the case of Japan)

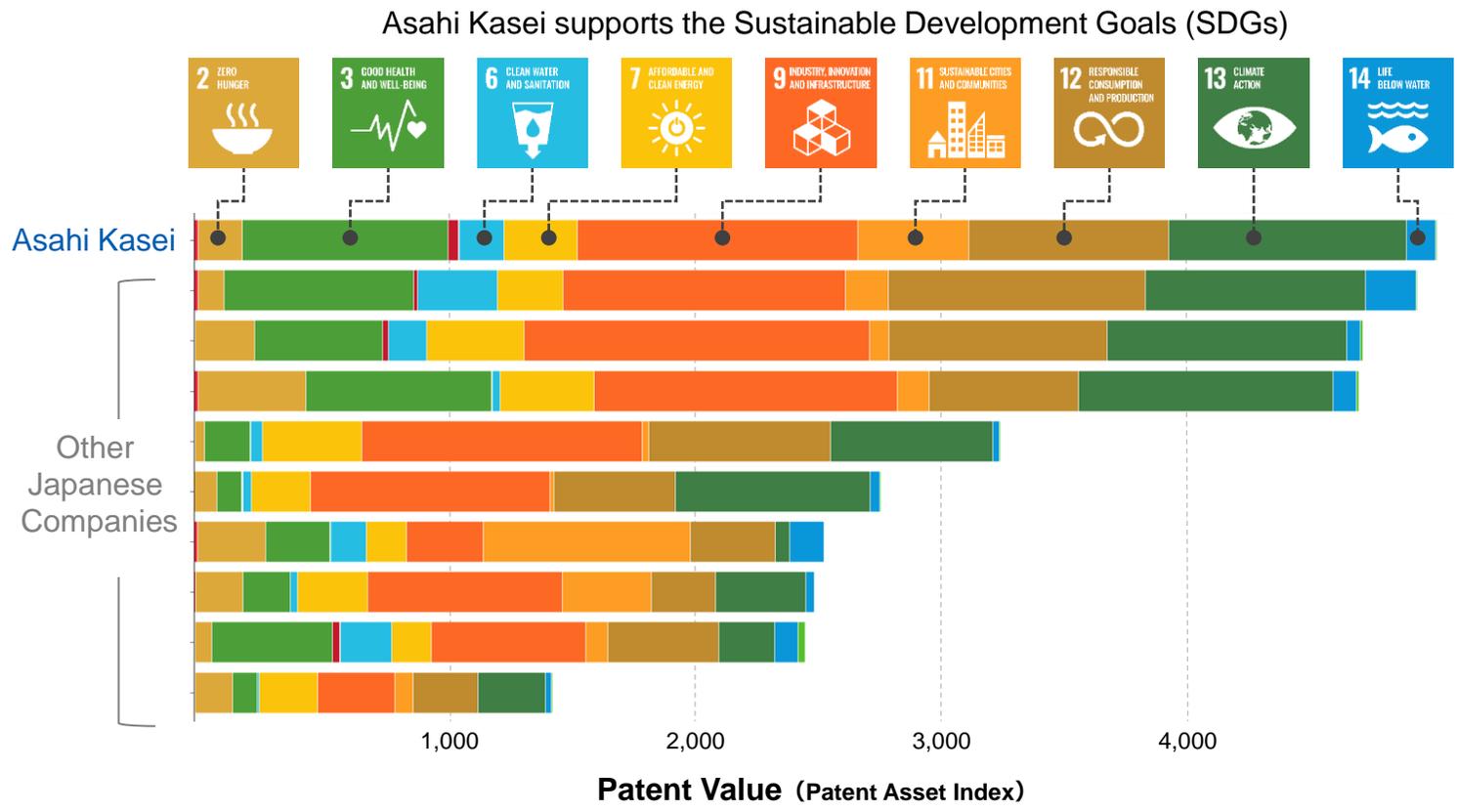


# Advantage of our IP from an SDGs perspective

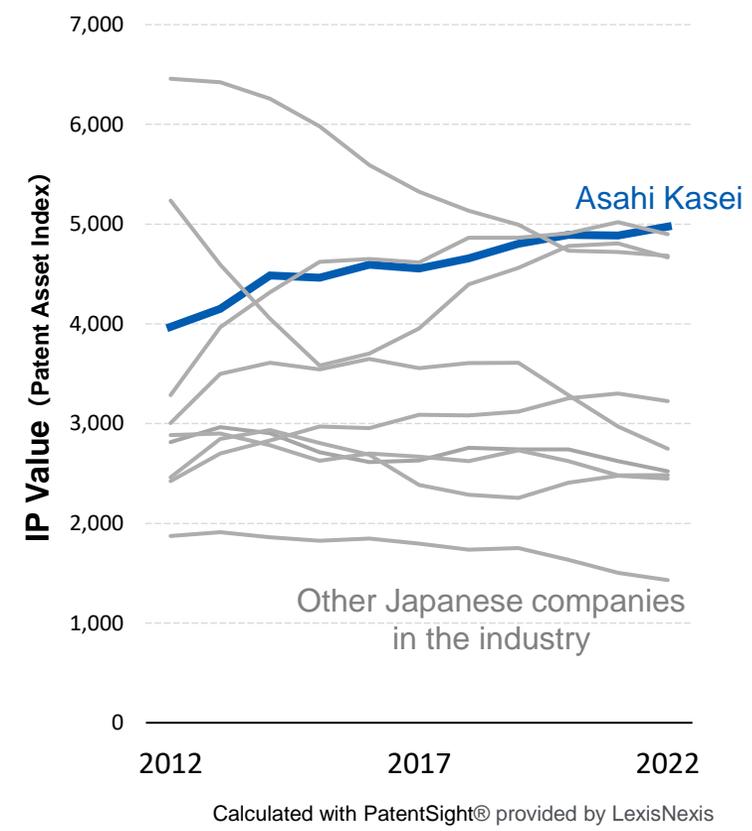
Our strengths are that we have many core technologies with potential to address SDGs issues, and that their IP values are higher than those of other companies

Timely alignment with corporate/business strategies × Maximizing the value of Diverse IP × Visualization of intangible assets using IPL

## SDGs-related IP value of companies in the industry (Patent Asset Index: PAIs)



## Trends in SDGs-related IP Value (PAI)

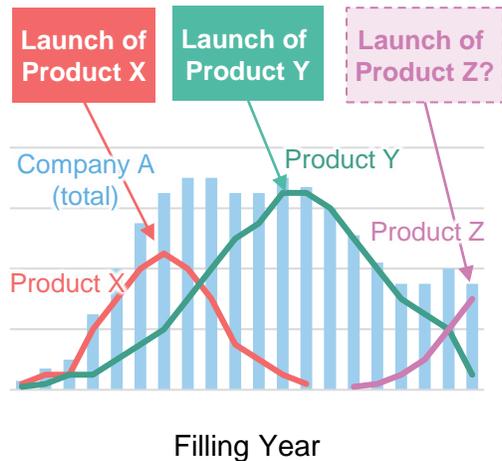


# Examples of visualization of IP and intangible assets

Timely alignment with corporate/business strategies × Maximizing the value of Diverse IP × Visualization of intangible assets using IPL

## IP statistical information (conventional patent maps)

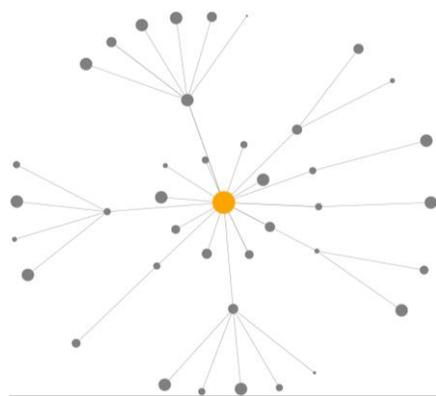
### Trend of Patent filings



**Prediction of product life cycle stages(\*)**  
 (\*introduction/growth/maturity)

## Network information

### Inventor Network

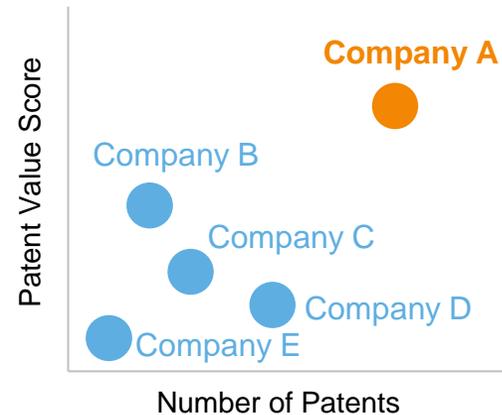


Circle size : number of filings  
 Lines : Joint invention relations

**Innovator (key persons) Discovery**

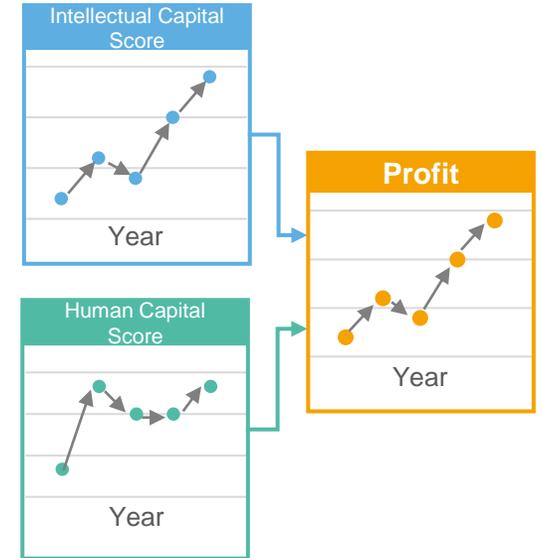
## IP valuation

### Positioning map based on the value and number of patents



**Position in the industry**

## Relationship between indicators of business management and Intellectual Property



**Identifying intangible assets contributing to enterprise value**

# IP strategies [ Policy for utilization of intellectual property and other intangible assets ]

Timely alignment with corporate/business strategies 



Maximizing the value of Diverse IP 



Visualization of intangible assets using IPL 

## STEP01 Business environment analysis

Analysis of industry trends from an overview of the supply chain

Technology Trends Key Players

STEP1 Autonomous Driving 

Automotive manufacturers

STEP2 Vehicle Seats 

Tier-1 companies

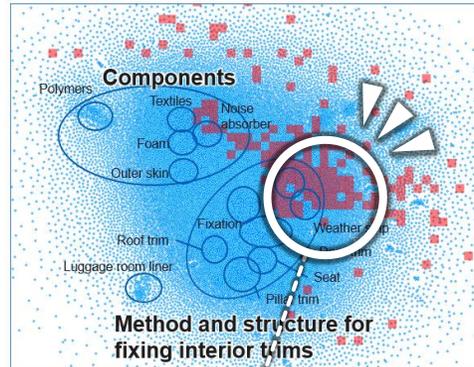
STEP3 Interior Materials 

Tier-2 (or Teir-1) companies

## STEP02 Identifying emerging technologies

Forecast based on trend analysis

Overview of technologies related to car interior



Analyze areas where applications are growing rapidly to extract promising technologies

## STEP03 Synergy analysis

Joint R&D by Asahi Kasei and Sage

R&D subject and partnering



Joint R&D by Sage and Asahi Kasei started

# Actualization of strategic IP activities

Timely alignment with corporate/business strategies 



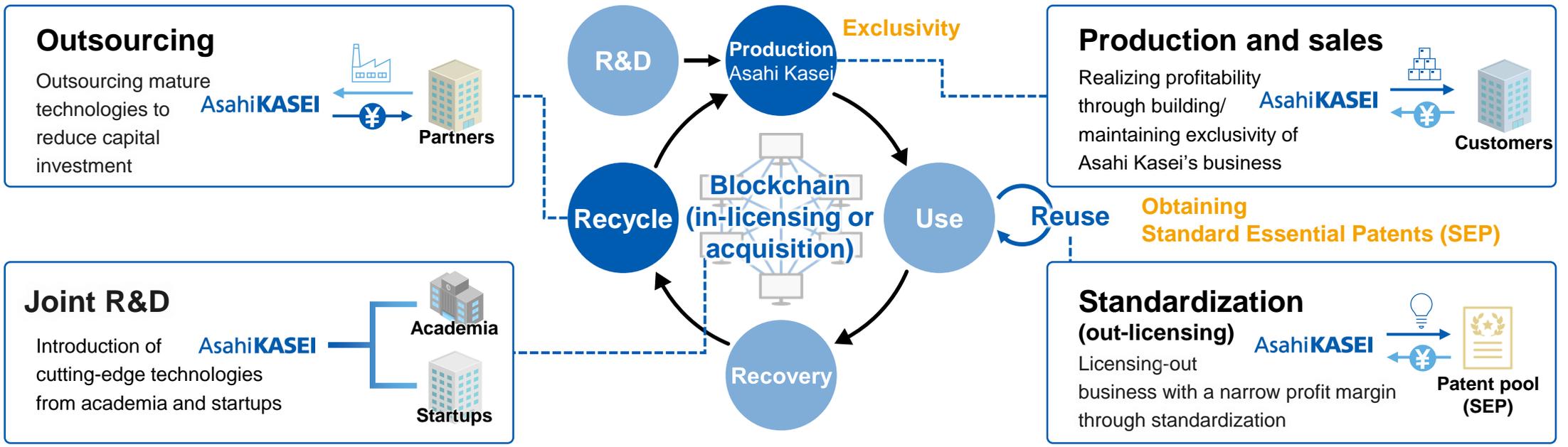
Maximizing the value of Diverse IP 



Visualization of intangible assets using IPL 

## Value maximization strategy for intangible assets in Circular Economy

Realizing both market creation and profitability by leading market design



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**03 Examples of Strategic Utilization of IP for Accelerating 10 Growth Gears (GG10)**

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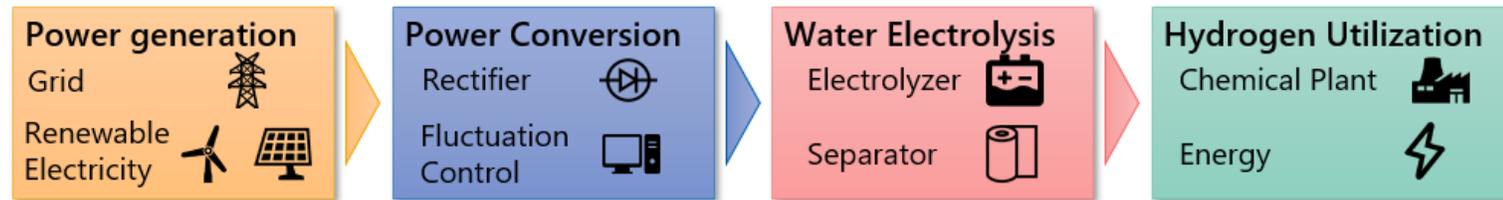
# Contribution to hydrogen-related business

Aiming to enter hydrogen-related business using water electrolysis technology as core competence, **strategies driven by intangible assets** have been proposed based on **thorough analysis of the value chain** and **benchmarking using IPL**.

10 Growth Gears (GG10) businesses to lead next growth

- Hydrogen-related** >>>
- CO<sub>2</sub> Chemistry
- Energy Storage
- Car Interior Material
- Digital Solutions
- North America and Australia Homes
- Environmental Homes and Construction Materials
- Critical Care
- Global Specialty Pharma
- Bioprocess

## Value chain of alkaline water electrolysis (example)



## Hydrogen business strategy proposal

**STEP 1 : Industry Trend Analysis**

【Overview of industry trend】

Technology trend of water electrolysis industry and leading players

**STEP 2 : benchmarking**

【Capabilities of competitors】

	Tech 1	Tech 2	Tech 3	Tech 4	Tech 5
AK	○	—	○	—	—
A	○	—	—	○	—
B	○	○	—	○	—
C	—	○	—	—	○
...	—	—	—	—	○

**STEP 3 : Business strategy proposal**

【Strategy to focus on strength】

■ Patent overview of tech 3 (verification of competitive advantage)

Asahi KASEI O X O Y

【Strategy for co-creation】

■ Co-creation with partner with tech 4 (a missing part)

Tech 1  
Tech 5  
Tech 4

# Contribution to mobility-related business

As a new approach to introducing our products to OEMs, we stimulated business communication by visualizing the relationship between our technologies and OEM's technologies using IPL.

10 Growth Gears (GG10) businesses to lead next growth

- Hydrogen-related
- CO<sub>2</sub> Chemistry
- Energy Storage
- Car Interior Material**
- Digital Solutions**
- North America and Australia Homes
- Environmental Homes and Construction Materials
- Critical Care
- Global Specialty Pharma
- Bioprocess

### Business strategy by sector | Material

3 Medium-term management plan 2024 — Be a Trailblazer  
**Business strategy by sector | Material (Mobility)** AsahiKASEI

Aiming for growth through the development of products related to automotive interior materials and for EVs

**5 fields to provide solutions**

<b>Body</b> Light weighting	<b>Interior &amp; Comfort</b> Higher comfort	<b>Safety</b> Enhanced performance	<b>E-Drivetrain</b> Higher efficiency	<b>ICE</b> Cost optimization
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**Dinamica** Artificial suede

Aiming to be the No. 1 brand of artificial suede by advanced Environmental performance through technological innovation

- Products with a high ratio of recycled raw materials  
Dinamica AutoPure: 73%
- No organic solvent used  
For headliners, seats, door panels, etc.

Further advancement of leading environmentally friendly features

**SAGE** Car interior material

Further strengthening position as a leading Tier-2 supplier of automotive interior materials

Expanding market penetration with fabric business from Adient (acquired in FY20)

Sales of SAGE: ¥80 bn (FY21 forecast) → ¥100 bn (FY24 target)

**Providing value as a development partner for OEMs by proposing concepts for EV platforms combining diverse technologies and expertise**

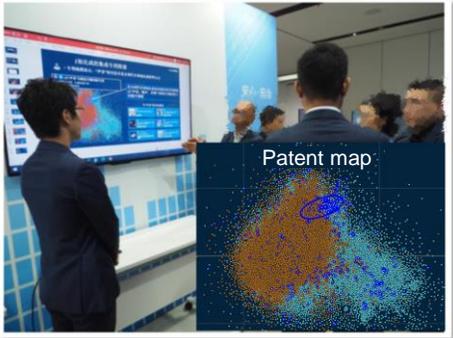
Lightweight and safe products for automotive lithium-ion batteries

Module case	Cover
Busbar cover	Internal electronics holder
End plate	Connectors

Xyron: Modified PPE resin that reduces weight with flame retardancy and low specific gravity  
 SunForce: Modified PPE foam beads with flame retardancy and dimensional accuracy superior to conventional foams  
 Leona: Polyamide resin used in place of metal due to its high strength, rigidity, etc.

### Technology Promotion to Chinese OEM

- Technological synergies between Asahi Kasei and a Chinese OEM was demonstrated using IPL at an exhibition of Asahi Kasei China



- Contributed to enhancing communication with the OEM through effectively conveying value brought by our products

# Contribution to environmental homes business

With the aim of expanding zero-energy residential building business, a comprehensive patent portfolio conducive to protection and expansion of the business has been built based on the analysis of positions of Asahi Kasei and competitors in the field of electricity management and transactions.

## 10 Growth Gears (GG10) businesses to lead next growth

- Hydrogen-related
- CO<sub>2</sub> Chemistry
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- Car Interior Material
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- North America and Australia Homes
- Environmental Homes and Construction Materials**
- Critical Care
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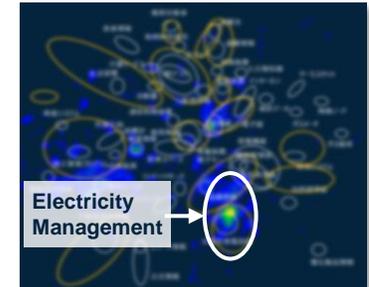
Business strategy  
**Expansion of net zero-energy residential buildings**

Local production and consumption of electricity  
 ↓  
**Carbon neutrality**



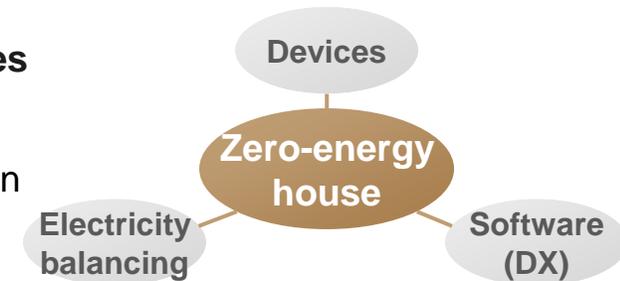
Business environment analysis  
**Overview of related technologies**

Analyzing positions of Asahi Kasei and competitors



Strategic patent applications  
**Technology components of net zero-energy houses**

Building comprehensive patent portfolio in combination of **core technologies** and their applications

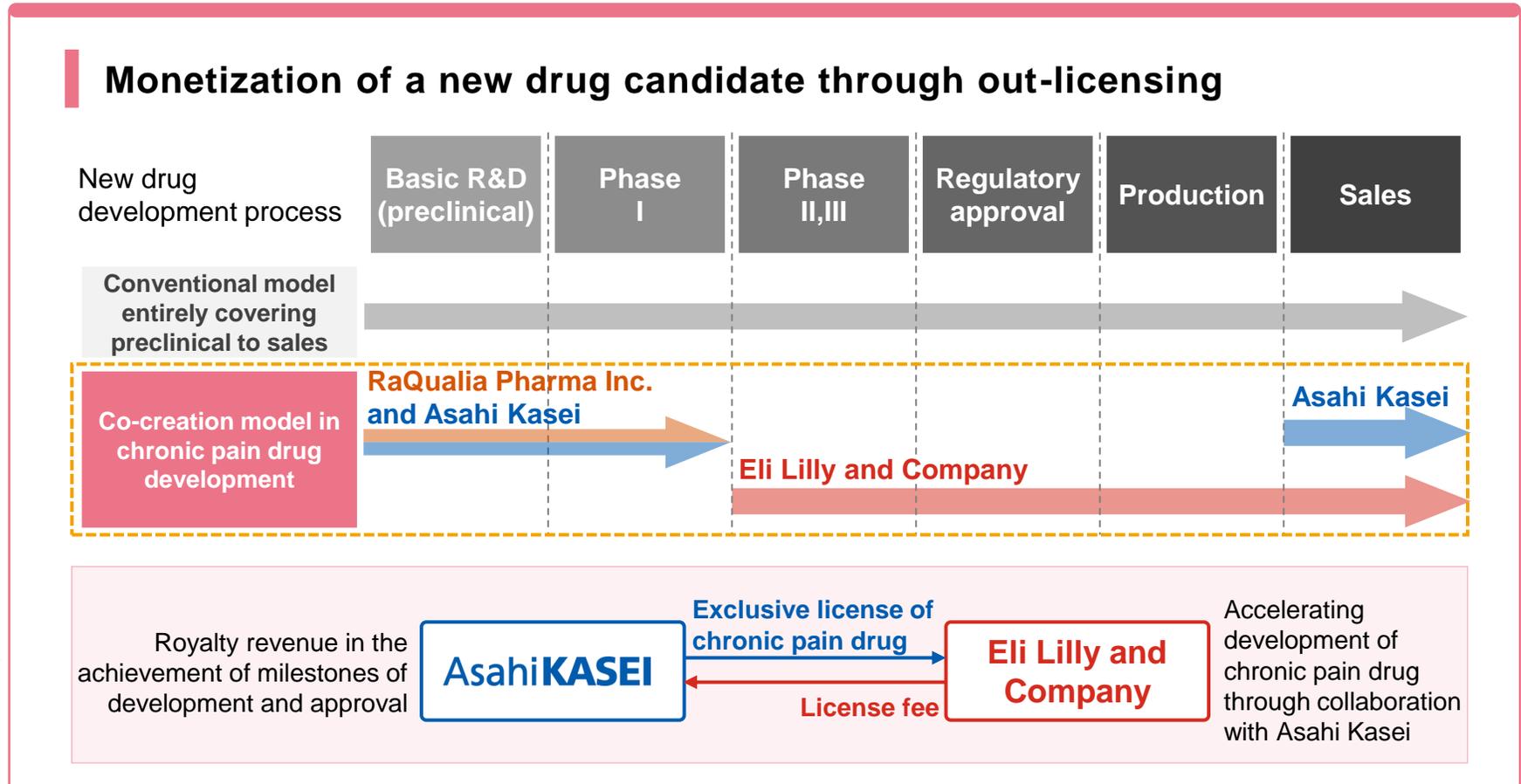


# Contribution to global specialty pharma business

Asahi Kasei Pharma granted an exclusive license of a chronic pain drug candidate to Eli Lilly and Company. Asahi Kasei Pharma will receive royalty if Eli Lilly succeeds in commercialization of the candidate, while securing sales rights in Japan.

10 Growth Gears (GG10)  
businesses to lead next growth

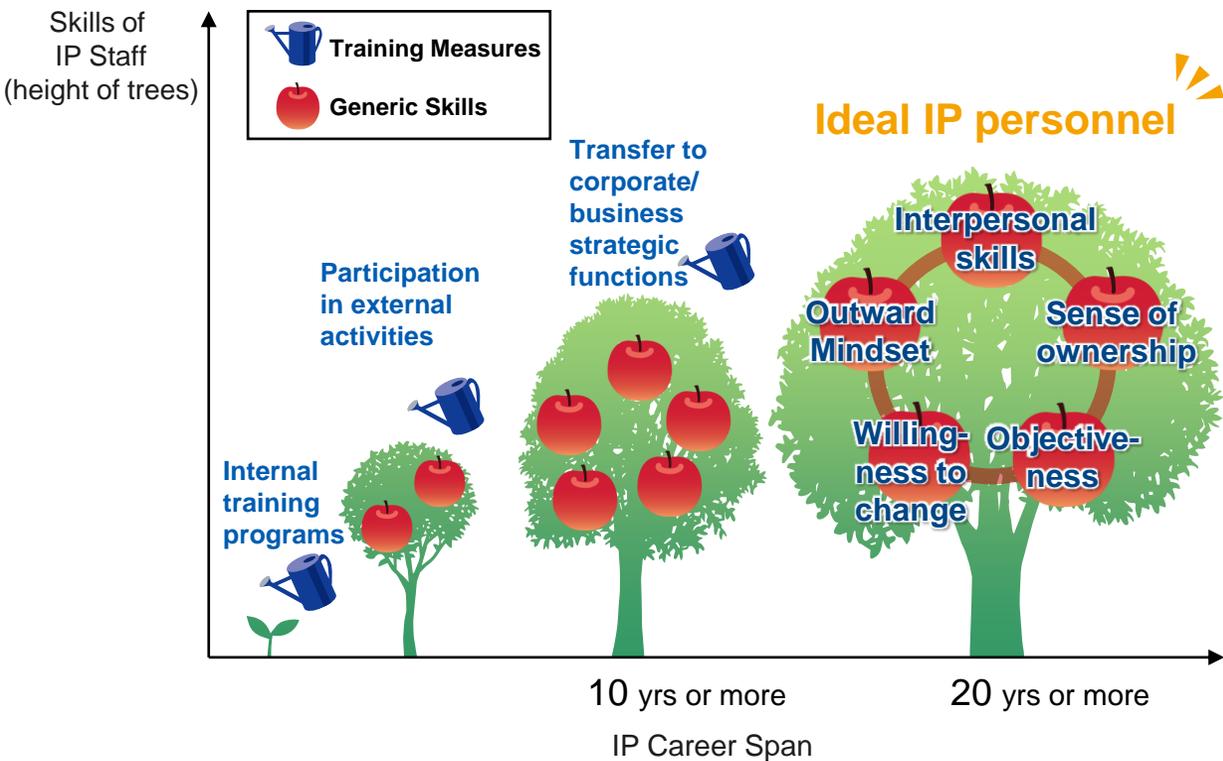
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# Lifelong growth path of IP staff

With the goal of nurturing IP personnel having both **IP procedural skills** and **generic skills/mindset**, various training measures/programs are implemented; this has also resulted in increasing the number of **specialists with IP expertise**.

## Lifelong Growth Path of IP Staff (conceptual)



## Internal IP Training Programs

- Programs provided to all employees of the Asahi Kasei Group, customized for the level of responsibility and business fields
- Contents renewed and updated regularly, with the DX invention patent practice course recently introduced to accelerate DX of businesses

Target	Entire Group		Business field specific		
	In-person	E-learning	In-person		
Managers	Strategic Course	Basic Knowledge	Patent Drafting	Customized for each business field	
Staff	Clerical				Basic for clerical
	Technical				Basic for technical
New Employees	New employee training				

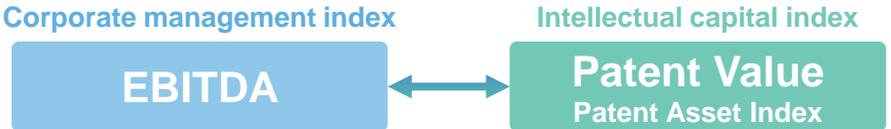
Reference

# Visualization of IP contribution to management

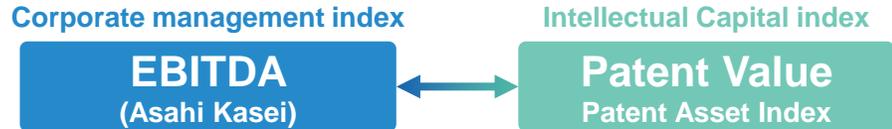


We have begun trial analysis of correlation between indices of IP/intangible assets and management KPIs; correlation was observed between EBITDA of companies and Patent Asset Index.

## EBITDA vs. Patent Asset Index (companies in the industry)

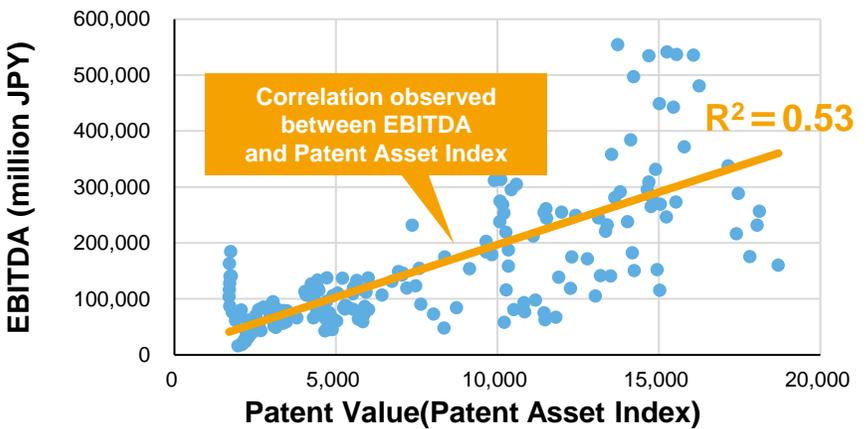


## Analysis of Asahi Kasei

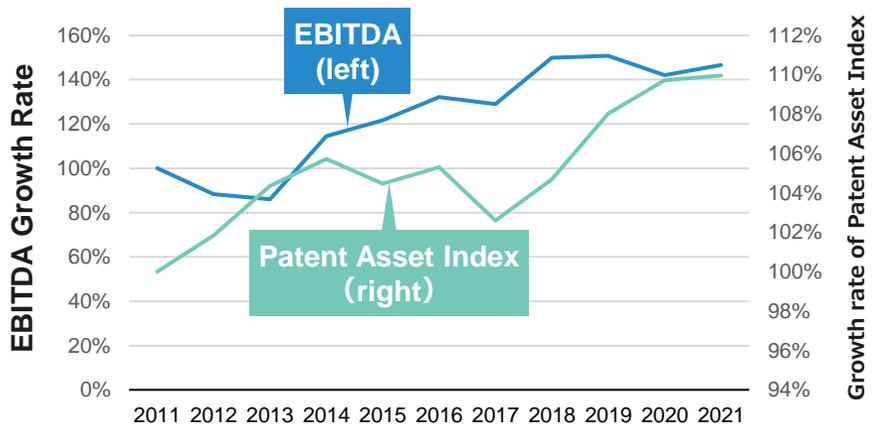


### EBITDA vs. Patent Asset Index (companies in the industry)

Analysis of data of 20 companies over the last ten years



### Change of EBITDA and Patent Asset Index of Asahi Kasei



Source of PAI: PatentSight® provided by LexisNexis®

# AsahiKASEI

## *Creating for Tomorrow*

### THE COMMITMENT OF THE ASAHI KASEI GROUP:

To do all that we can in every era to help the people of the world make the most of life and attain fulfillment in living.

Since our founding, we have always been deeply committed to contributing to the development of society, boldly anticipating the emergence of new needs.

This is what we mean by “Creating for Tomorrow.”

