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)
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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.
IP activities under the previous MTP

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

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

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

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**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
IP activities under the previous MTP

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.

Technical expertise of each employee is defined using patent classifications attached to their patent applications.

Evaluate similarity

Who is familiar with technology XX?

User

System

Inventors (employees)
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

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**

\( \text{(JPB1989293)} \)

**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.

- **Reasons for selection:**
  - Continuous transformation of operation including IPL
  - New business model creation
  - Fostering digital professions

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

“DX Vision 2030”
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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

- Speed
- Asset light
- High value-added

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

Fields for Provision of Value
- **Environment & Energy**
  - Hydrogen-related
  - CO₂ Chemistry
  - Energy Storage
- **Mobility**
  - Car Interior Material
- **Life Material**
  - Digital Solutions
- **Home & Living**
  - North America and Australia Homes
  - Environmental Homes and Construction Materials
- **Health Care**
  - Critical Care
  - Global Specialty Pharma
  - Bioprocess

Business to lead next growth 10 Growth Gears (GG10)

Operating income of GG10*

<table>
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<tr>
<th>Years</th>
<th>FY 2021</th>
<th>FY 2024 target</th>
<th>Around FY 2030</th>
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<td></td>
<td>202.6</td>
<td>270.0</td>
<td>400.0</td>
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* 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.

**Strategies of IP Department**
- Timely alignment with corporate/business strategies
- Maximizing the value of Diverse IP
- Visualization of intangible assets using IPL

**Strategic planning and execution for 10 Growth Gears through utilization of IP and intangible assets**
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

IP activities aligned with business management

Promoted initiatives for growth in fields for provision of value

Accelerated new technology/business development

Efforts from the viewpoint of Green/Digital/People (GDP)

3 Key Points of the MTP

Platform for new business creation

Accelerating IP Landscaping activities

IP activities for achieving the new MTP

Organizational structure

CEO

Executive Officer for Corporate Strategy

Corporate IP

IP Intelligence Dept.

3 Key Points of the MTP

Promoted initiatives for growth in fields for provision of value

Accelerated new technology/business development

Efforts from the viewpoint of Green/Digital/People (GDP)

CEO

Executive Officer for Corporate Strategy

Corporate IP

IP Intelligence Dept.

Collaboration

Policy for utilization of intellectual property and other intangible assets

Platform for new business creation

Accelerating IP Landscaping activities
**IP strategies**  
Policy for utilization of intellectual property and other intangible assets

**Cycle of IP Activities**
- Business environment analysis
- Patent filing
- Prosecution to obtain value-added patents
- Monetization through utilization of patents
- Maintenance and pruning

**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.
- Number of active patents:
  - 2012: 8,000
  - 2016: 9,000
  - 2020: 10,000

**Non-financial KPIs**
- Effective patents related to GG10
  - Approx. 30% (FY2021)
  - Over 50% (Around FY2030)

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

- Patent application: Within 3 yrs.
- Initiation of Examination: Average of 15 months
- Grant of Patent: 20 yrs. from the filing of the application

Expiration of patent: 20 yrs. from the filing of the application
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.

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

Asahi Kasei supports the Sustainable Development Goals (SDGs)

Patent Value (Patent Asset Index)

Trends in SDGs-related IP Value (PAI)

Asahi Kasei

Other Japanese Companies

Calculated with PatentSight® provided by LexisNexis
Examples of visualization of IP and intangible assets

- **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
        - Positioning map based on the value and number of patents
          - Position in the industry
            - Number of Patents
  - IP valuation
    - Relationship between indicators of business management and Intellectual Property
      - Intellectual Capital Score
      - Human Capital Score
      - Profit
        - Identifying intangible assets contributing to enterprise value
**IP strategies** [Policy for utilization of intellectual property and other intangible assets]

**STEP01 Business environment analysis**
Analysis of industry trends from an overview of the supply chain

- **STEP1 Autonomous Driving**
  - Key Players: Automotive manufacturers

- **STEP2 Vehicle Seats**
  - Tier-1 companies

- **STEP3 Interior Materials**
  - Tier-2 (or Tier-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

Outsourcing
Outsourcing mature technologies to reduce capital investment

Asahi KASEI

Partners

Recycle

Production
Asahi KASEI

Blockchain (in-licensing or acquisition)

Exclusivity

Use

Reuse

Recovery

Joint R&D
Introduction of cutting-edge technologies from academia and startups

Asahi KASEI

Academia

Startups

Realizing both market creation and profitability by leading market design

Production and sales
Realizing profitability through building/maintaining exclusivity of Asahi Kasei's business

Asahi KASEI

Customers

Obtaining Standard Essential Patents (SEP)

Standardization (out-licensing)
Licensing-out business with a narrow profit margin through standardization

Asahi KASEI

Patent pool (SEP)

Partners

Academia

Startups

Customers

Academia

Startups

Patent pool (SEP)
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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.
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.
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.
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.
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.

**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

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<tr>
<th>Target</th>
<th>Entire Group</th>
<th>Business field specific</th>
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<tbody>
<tr>
<td></td>
<td>In-person</td>
<td>E-learning</td>
</tr>
<tr>
<td>Managers</td>
<td>Strategic Course</td>
<td>DX Inventions</td>
</tr>
<tr>
<td>Staff</td>
<td>Basic for clerical</td>
<td>Basic for technical</td>
</tr>
<tr>
<td>New Employees</td>
<td>New employee training</td>
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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.

Correlation observed between EBITDA and Patent Asset Index

$R^2 = 0.53$
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.”