

Eat Well, Live Well.



Ajinomoto Co., Inc. Business Briefing

Continuous Growth in Healthcare and ICT through "AminoScience"

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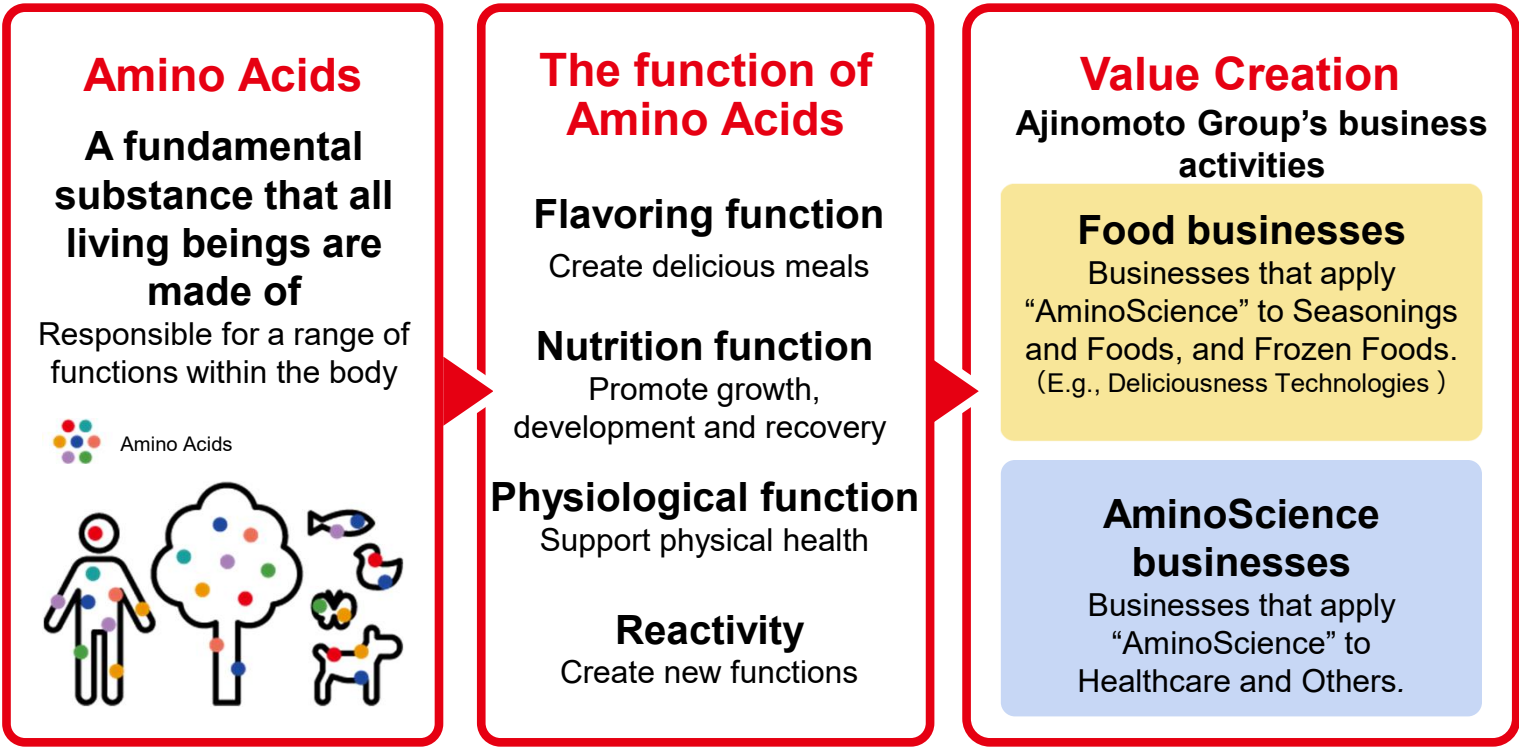
**Member of the Board, Representative Executive Officer
& Executive Vice President**

June 13, 2023



What is “AminoScience”?

A collective term for the various materials, functions, technologies, and services derived from research and implementation processes with a rigorous focus on the function of amino acids.
It also refers to the Ajinomoto Group’s unique scientific approach to connect these to resolving social issues and contributing to well-being.



The Four Functions of Amino Acids

Flavoring function: Create delicious meals

Research into amino acids leads to deliciousness. Not only taste but also aroma and texture are important for deliciousness.

Taste: Glutamic acid ⇒ umami
Combinations of amino acids ⇒ sweeteners, kokumi substances

Aroma: Aromas using amino acids

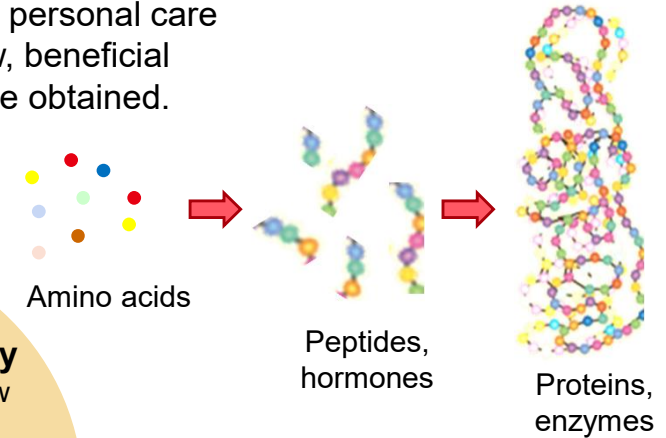
Texture: Enhancement of texture through amino acids and enzymes



Reactivity: Create new functions

Amino acids are converted to peptides, proteins, etc., and are known to have varied functions.

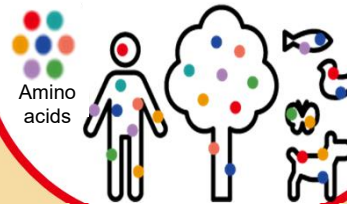
Pharmaceutical and personal care ingredients with new, beneficial functions can also be obtained.



The function of Amino Acids

Amino Acids

A fundamental substance that all living beings are made of



Flavoring function
Create delicious meals

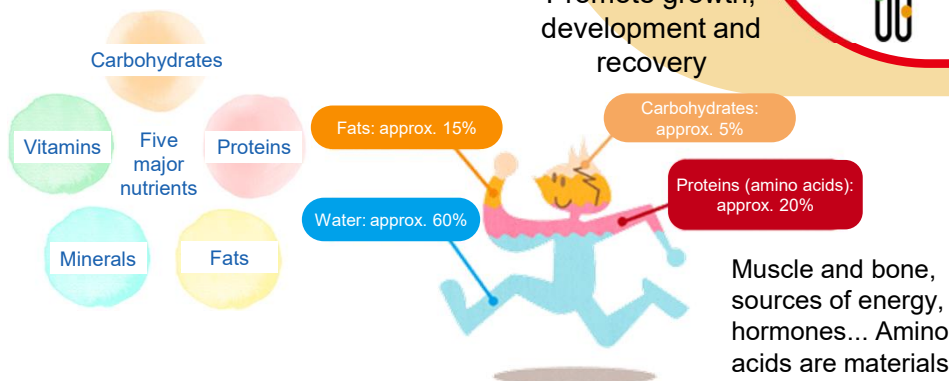
Reactivity
Create new functions

Nutrition function
Promote growth, development and recovery

Physiological function
Support physical health

Some amino acids and substances made from amino acids support the maintenance and recovery of physical and mental health.

Amino acids are a component of protein, one of the five major nutrients.



Physiological function: Regulate physical condition

Nutrition function: Promote growth, development and recovery

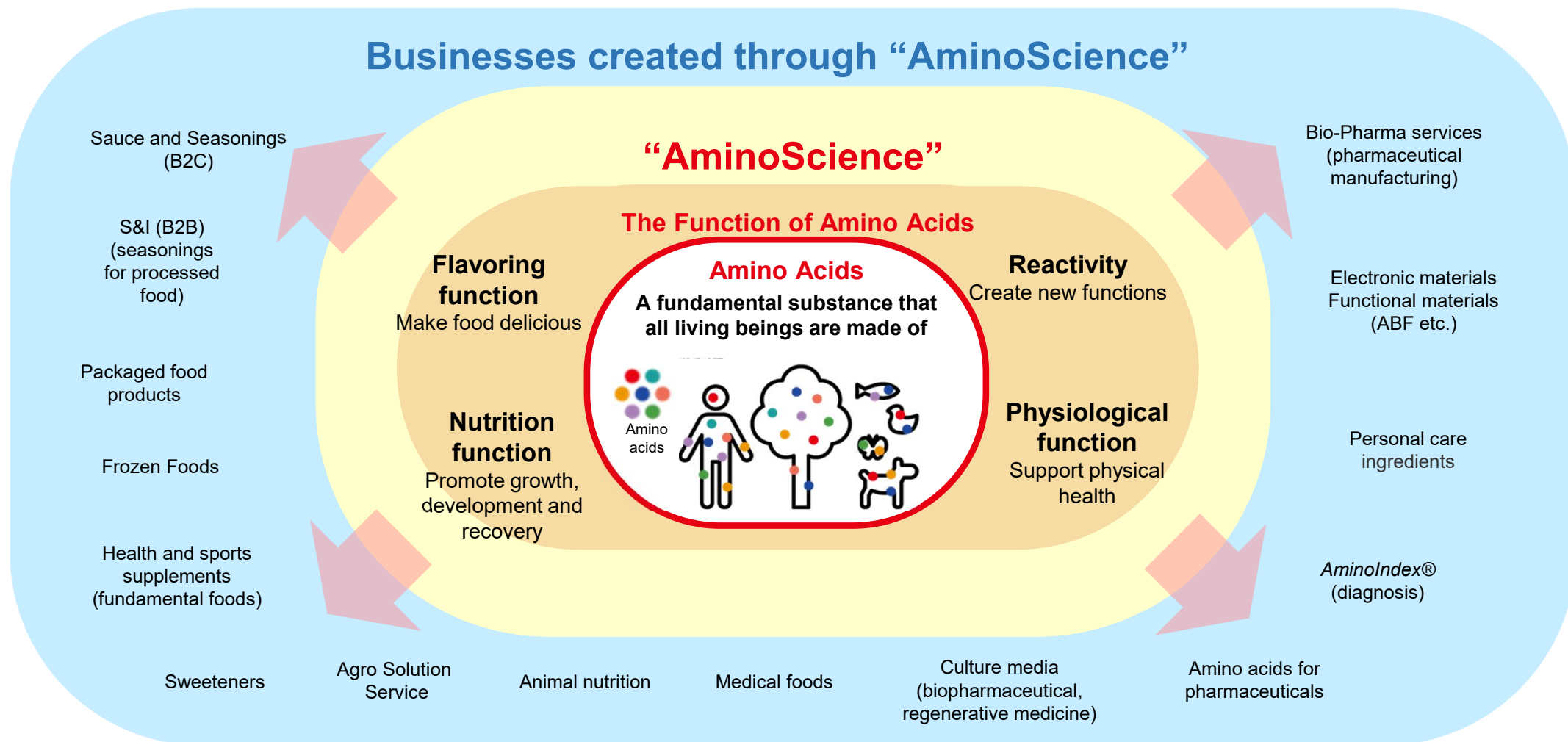
All of the above functions are not only functions possessed by amino acids themselves, but also the functions enabled by materials derived from amino acids.

Businesses Created through “AminoScience”

“AminoScience” is the source of the Ajinomoto Group’s uniquely competitive value creation.

For over a century, we have developed our business into one that connects to solving varied social issues.

Businesses created through “AminoScience”



Value Creation through “AminoScience” in Four Areas

Healthcare



Contribute to extending healthy life expectancy and advancing treatment and prevention through a profound understanding of the human body

Food & Wellness



Contribute to people’s well-being and self-actualization through a profound understanding of food

ICT



Contribute to the achievement of faster and more efficient semiconductors and to a smart society

Green



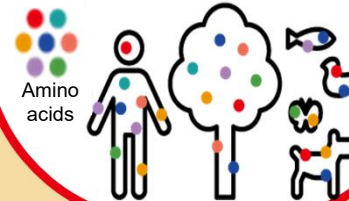
Create new standards for foods on behalf of co-existence with the Earth, reduction of environmental impacts, and future generations

“AminoScience”

The Function of Amino Acids

Amino Acids

A fundamental substance that all living beings are made of



Value Creation through “AminoScience” in Four Areas

Healthcare



Food & Wellness



Contributing to the well-being of all human beings,
our society and our planet with “AminoScience”

ICT



Green

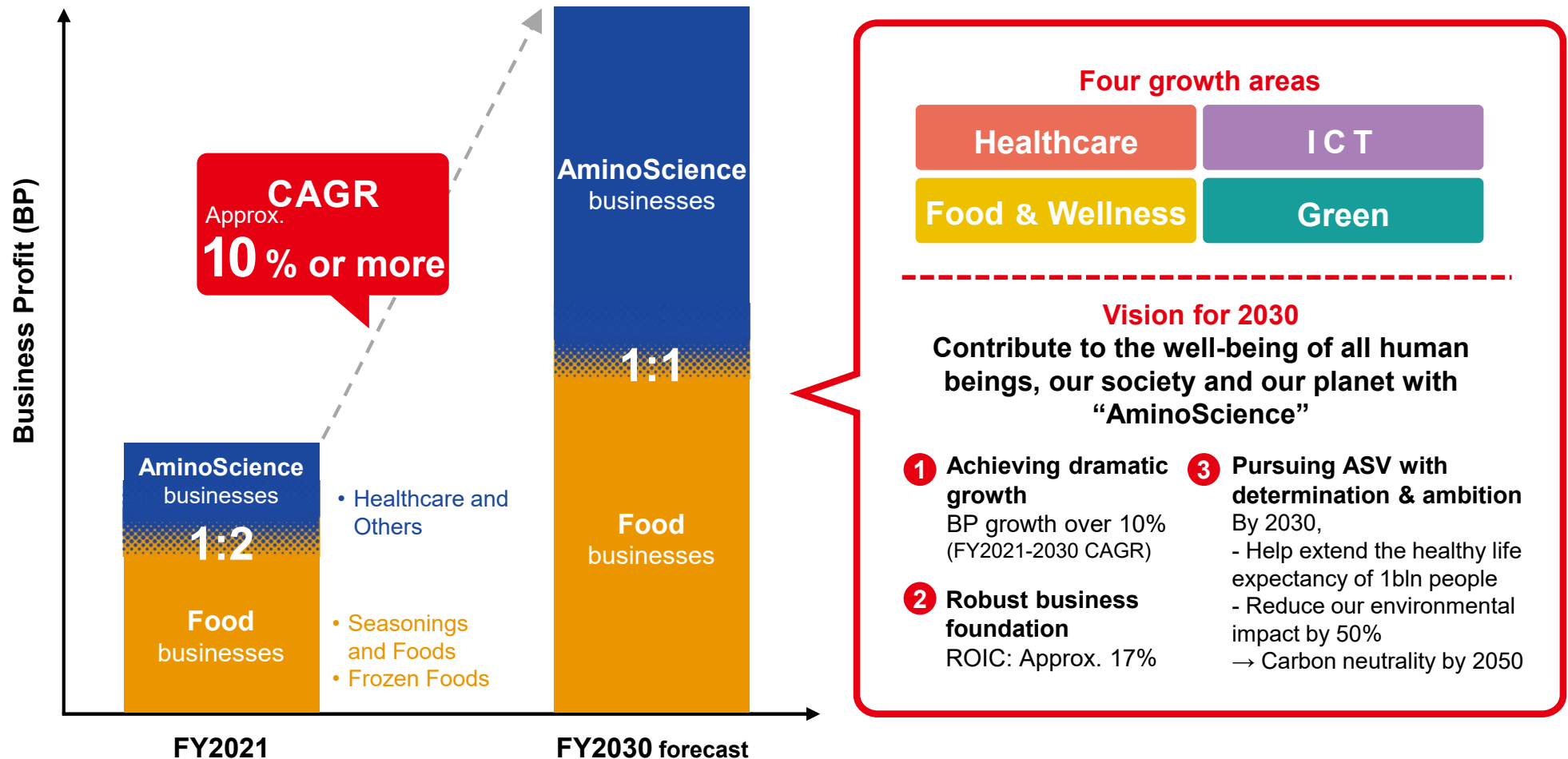


Working for a Future of Well-being (video)

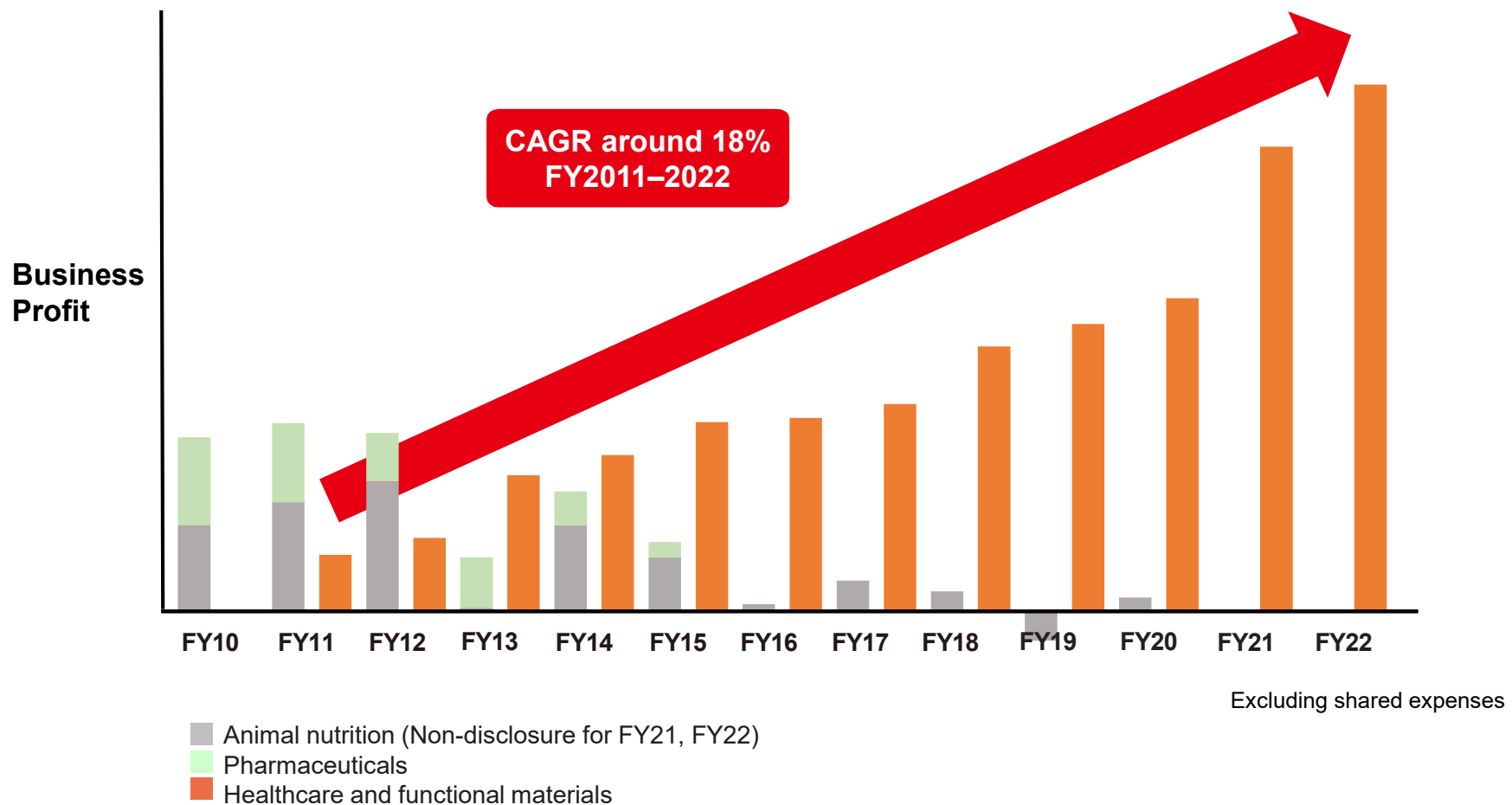


Shift from Structural Reform to Growth

We aim to achieve a highly profitable, unique, and robust structure by shifting to growth in the four outcome-driven growth areas through the evolution of core businesses and growth-driving business model transformation (BMX).

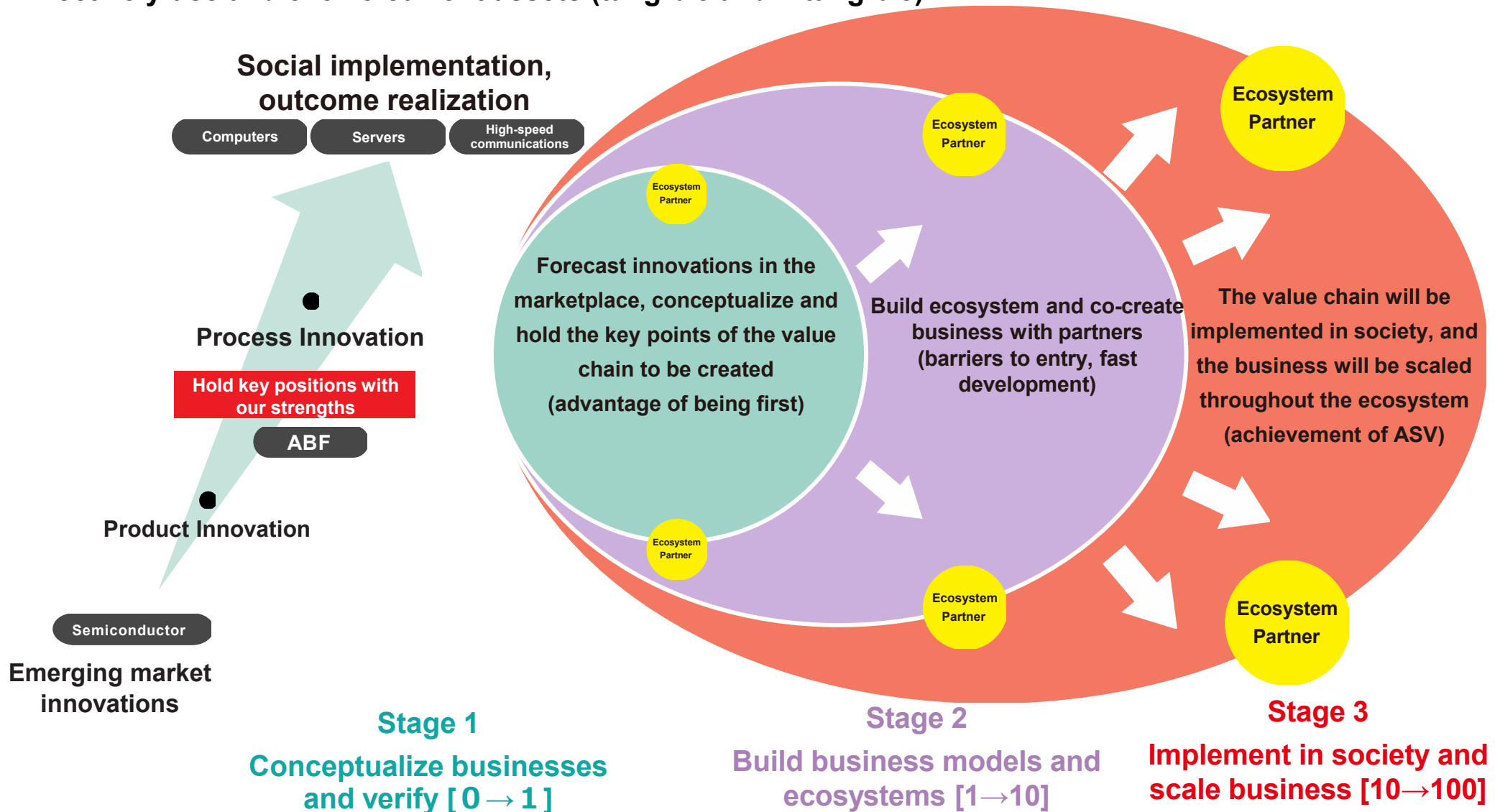


AminoScience Business Growth through Business Model Transformation



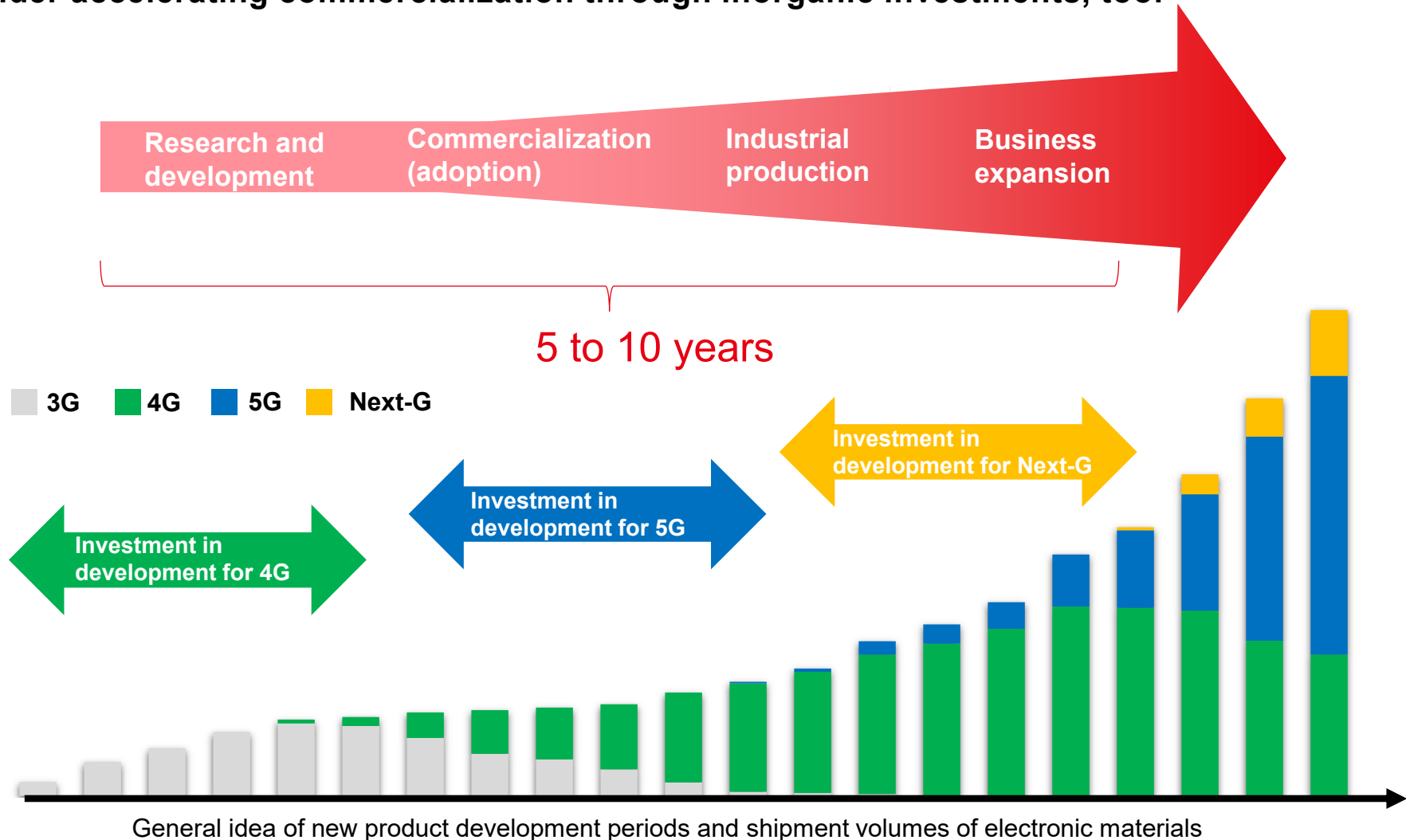
The Model for BMX in the AminoScience Businesses

- ✓ Anticipate innovation and quickly create key, unique value (evolution of “AminoScience”)
- ✓ Social implementation through co-creation with ecosystem partners
- ✓ Effectively use and evolve current assets (tangible and intangible)



Features of Business Development in ICT and Healthcare

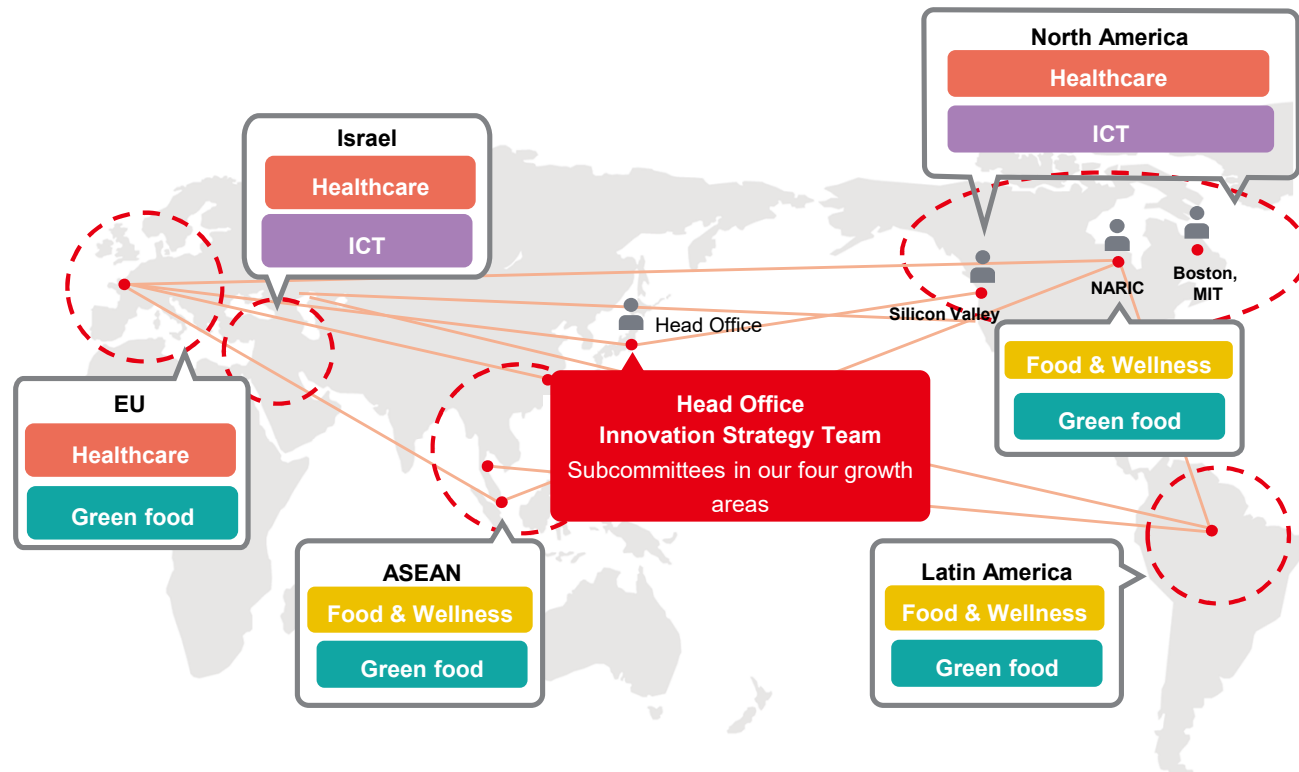
- ✓ Investment in development 5-10 years ahead of full-scale commercialization in anticipation of market modalities and innovation.
- ✓ Consider accelerating commercialization through inorganic investments, too.



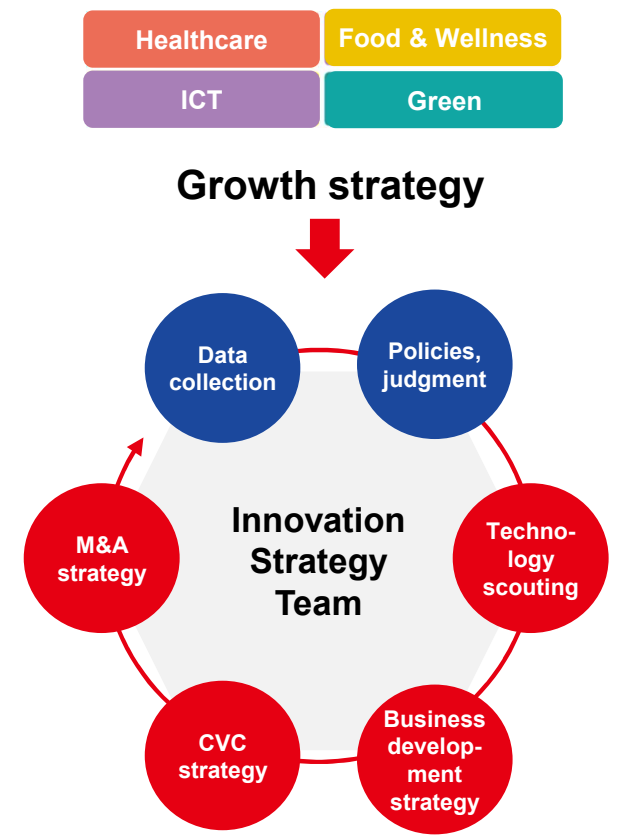
Strengthening the Inorganic Strategy through the Innovation Strategy Team

We formed an Innovation Strategy Team to directly access global markets, customers, and innovation, swiftly study and make decisions on inorganic investments and partnerships, and achieve the growth strategy

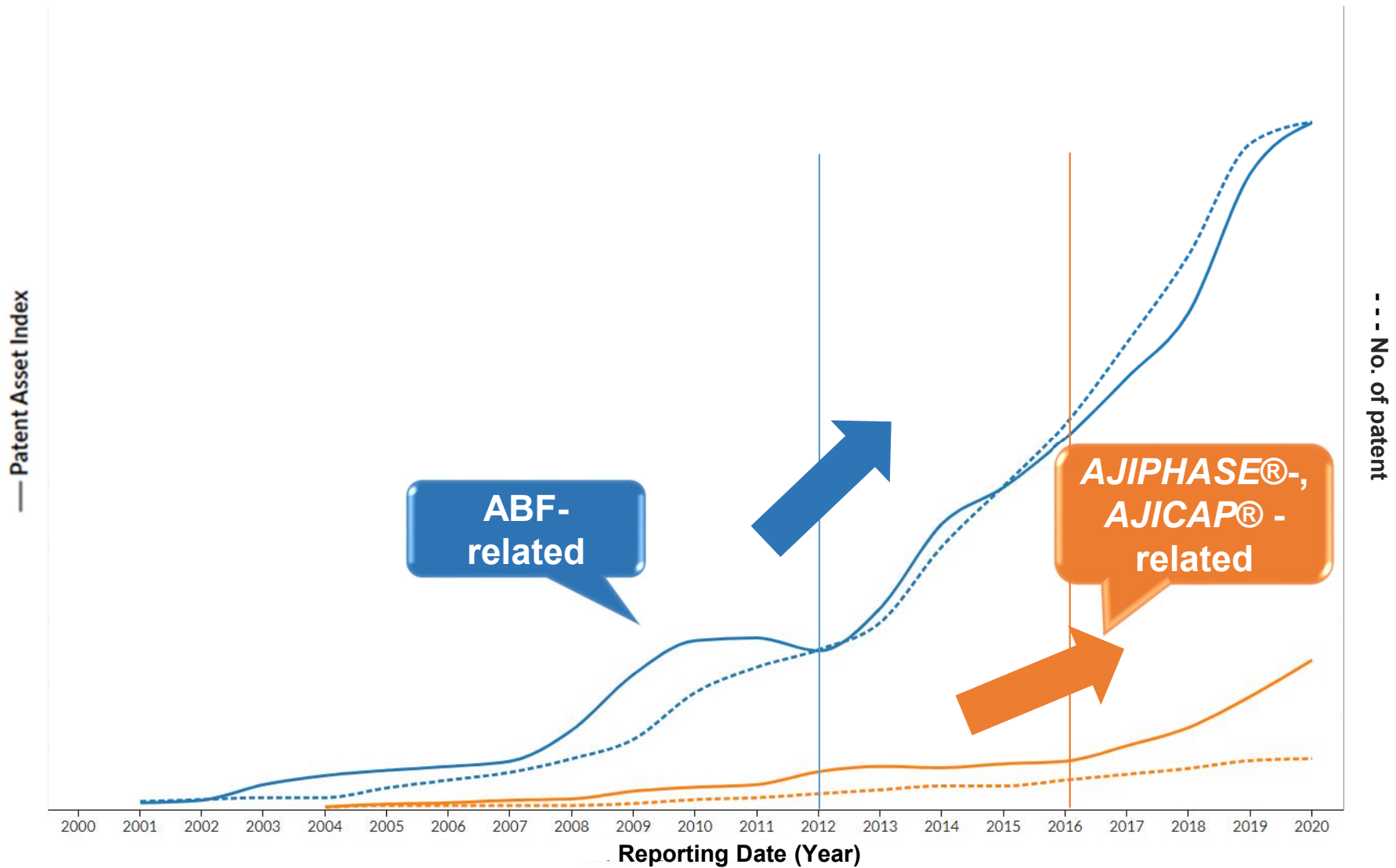
Global concept



Innovation Strategy Team roles



Building Barriers to Entry by Competitors with Patents in ICT and Healthcare



There are many more patents for formulations of ABF than patents for concepts of AJIPHASE®, AJICAP®

Overall Image of the Ajinomoto Group's Growth Strategy

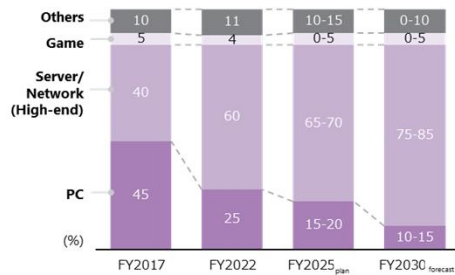
Leveraging the tangible and intangible assets of the Ajinomoto Group, we will evolve our unique "AminoScience" to grow our existing businesses and accelerate and expand growth through BMX.

Today's topics

ICT

Strengthening ABF Growth Foundations

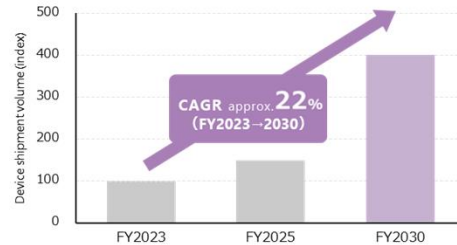
(Volume by ABF application over time)



Investment in increased production; BCP measures

Evolving/Expanding ABF, Tackling New Areas/Materials

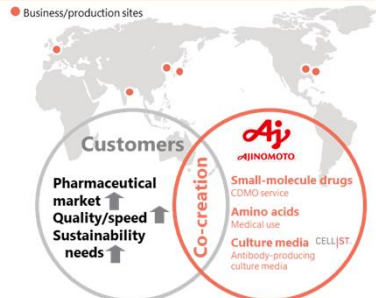
(Growth in the HPC (Device) market)



Evolution and expansion; new areas and new materials

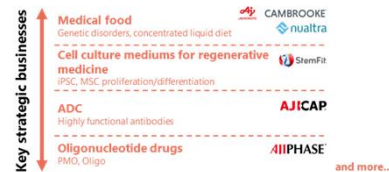
Healthcare

Steady Growth of Core Businesses



Existing facilities, customer channels

Accelerating Growth through Strategic Businesses



Intangible assets developed in core businesses: Human x Technology x Customer x Organization assets

Evolving modality, Aging, Personalization

New technologies, new services

Food & Wellness

Strengthening Area Strategies as a Growth Strategy



Global B2B, B2C
Evolution of marketing channels

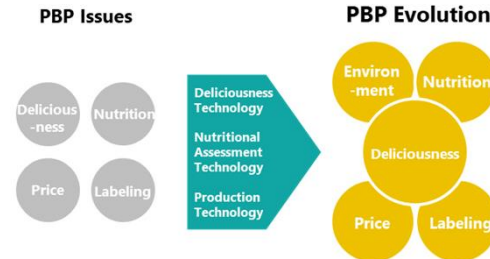
Providing Health and Nutritional Value Satisfying Individual Preferences



Digitalization
Customization, personalization

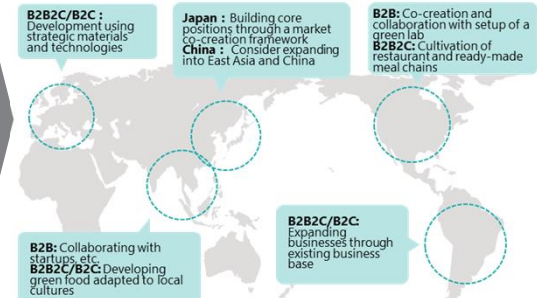
Green

Strengthening Solutions for PBP*



Resolution of plant-based protein issues

Building New Food Systems and Developing B2C Business

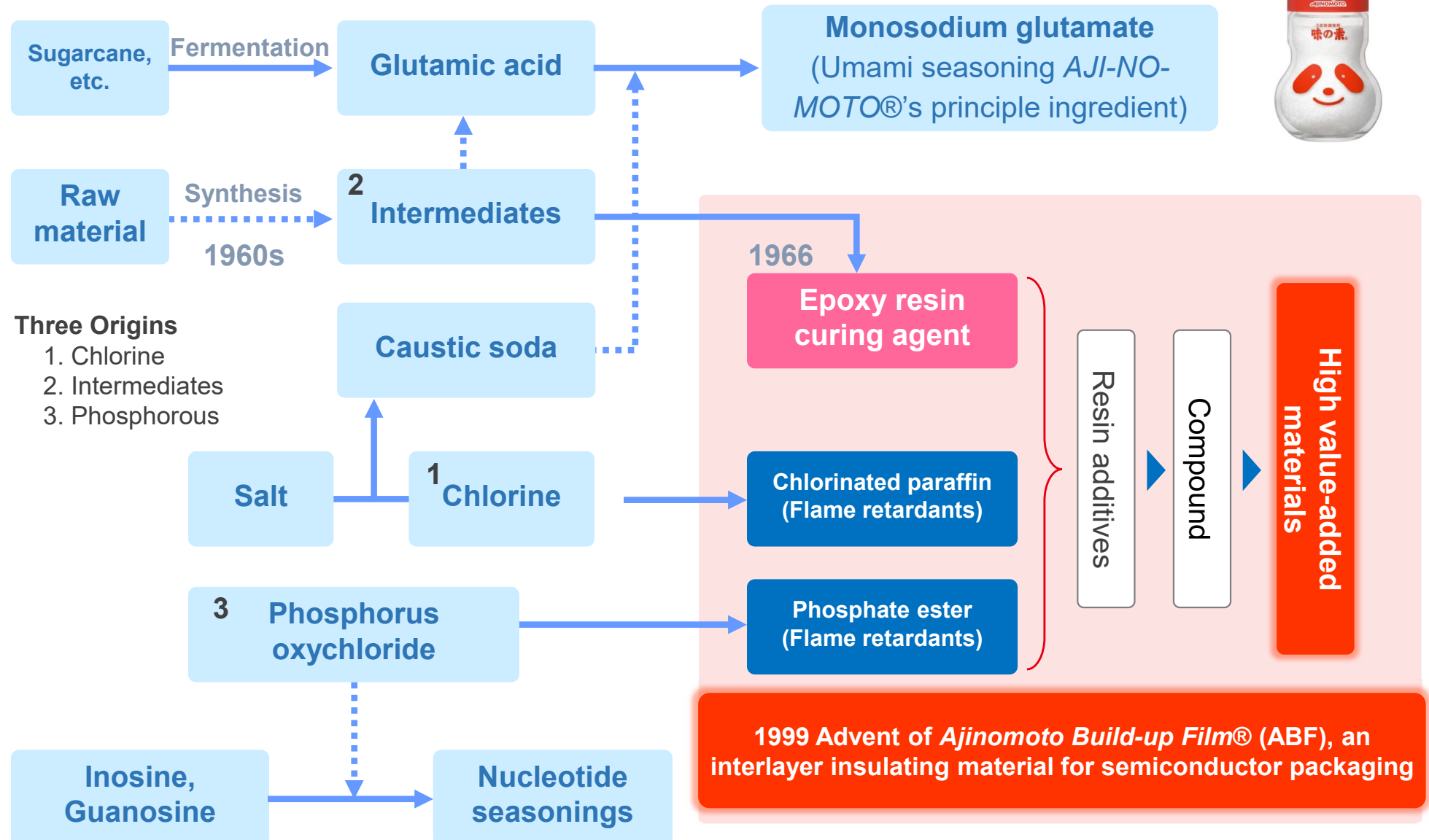


Cultured meat, new materials, development of B2C
Agricultural solutions

Origins of the Electronic Materials Business (“AminoScience”)



Effective use of by-products, intermediates, and technologies



Evolution of ABF and Growth in ICT alongside the Evolution of Semiconductors

- ✓ ABF is essential in semiconductor package substrates
- ✓ The volume of ABF usage will expand through the shift to HPC* applications
- ✓ ABF will also contribute to the evolution of AI semiconductors, driving growth
- ✓ We will contribute to future photonics-electronics convergence, too, through ABF evolution technologies

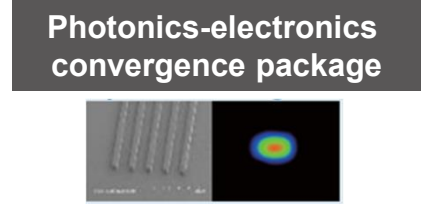
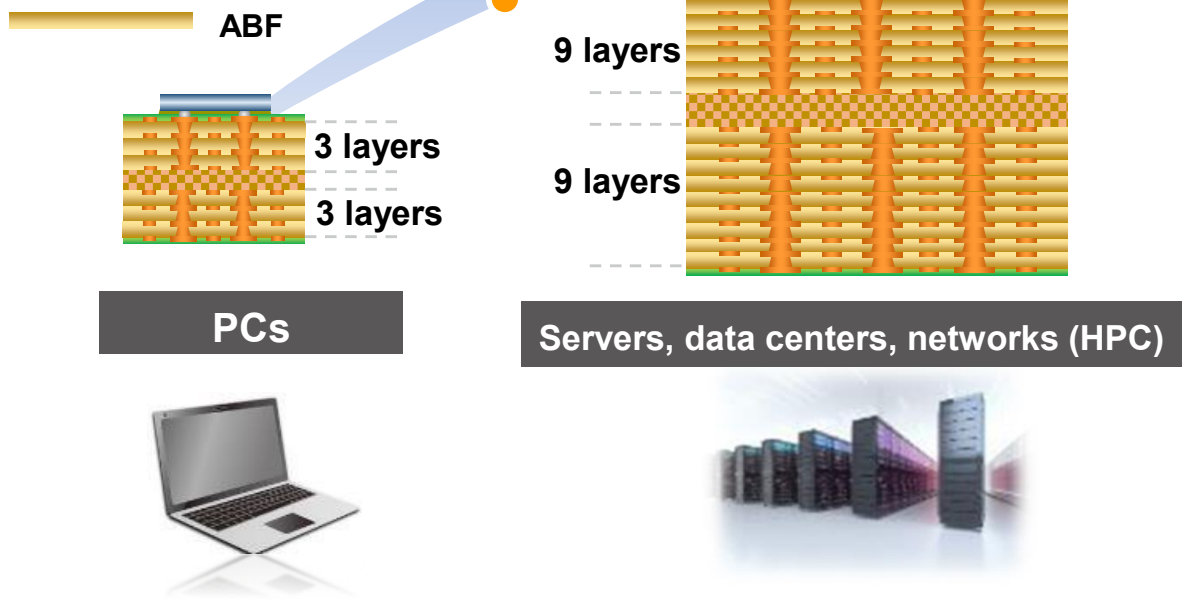
Toward ultra-high speed and greater power efficiency (2030 onward)

*High performance computing

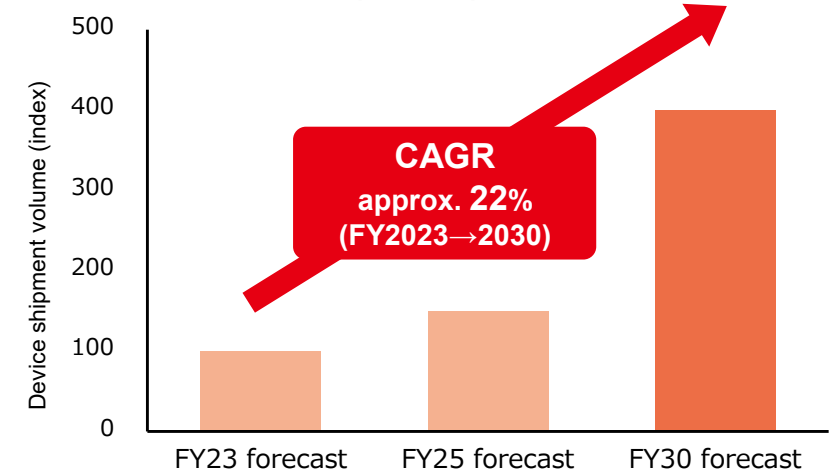
Increased speed and AI advancements (through 2030)

High layer counts, size increase, die shrinkage (current)

Illustration of substrate cross-section



Growth in the HPC* (device) market

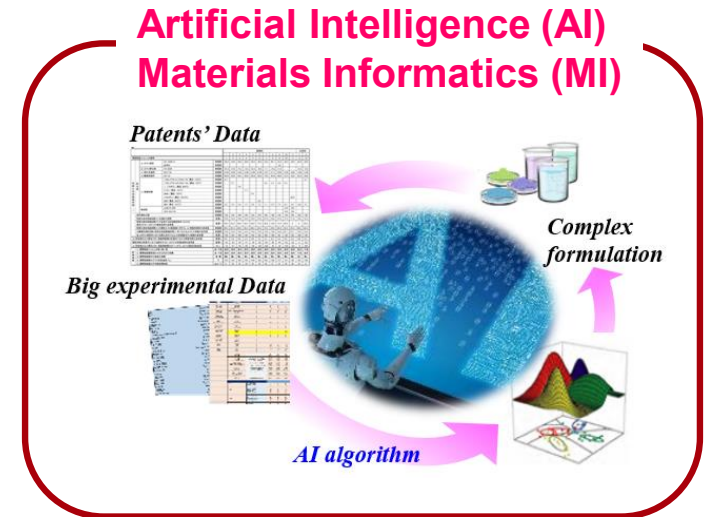
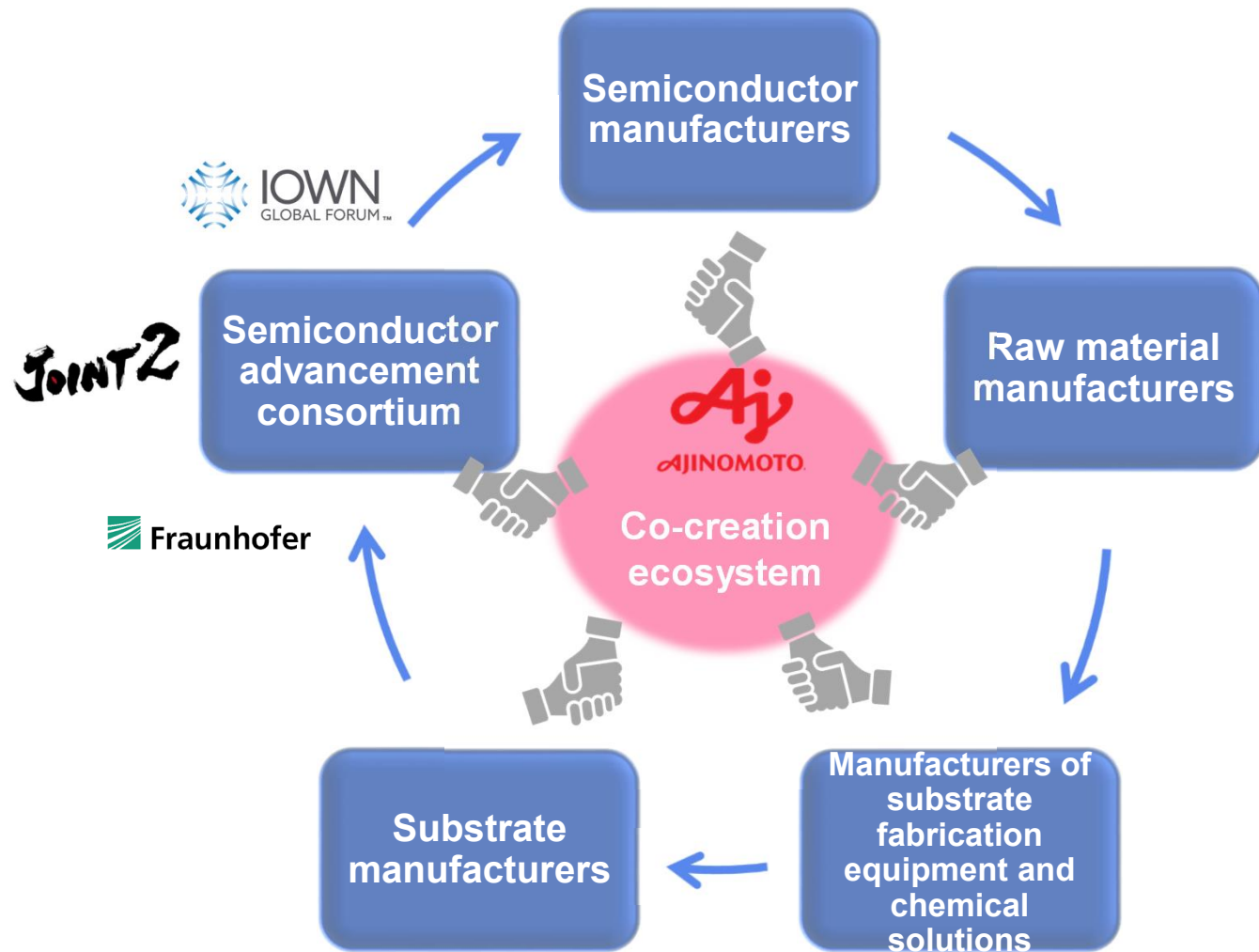


Estimate by Ajinomoto Co. based on "In-depth analysis of semiconductor package and module substrate-related markets" (2022), Fuji Chimera Research Institute

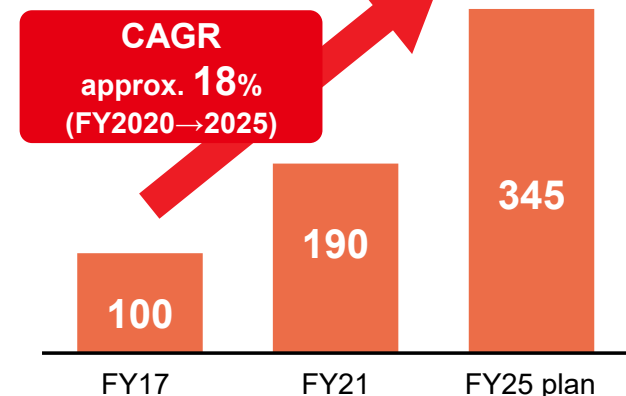
Sustainable growth in ICT through co-creation ecosystem

Players in the semiconductor development value chain will collectively evolve semiconductors. Leveraging the strength of ABF as a de facto standard, we will aim for a continuous growth in ICT.

Semiconductor development value chain



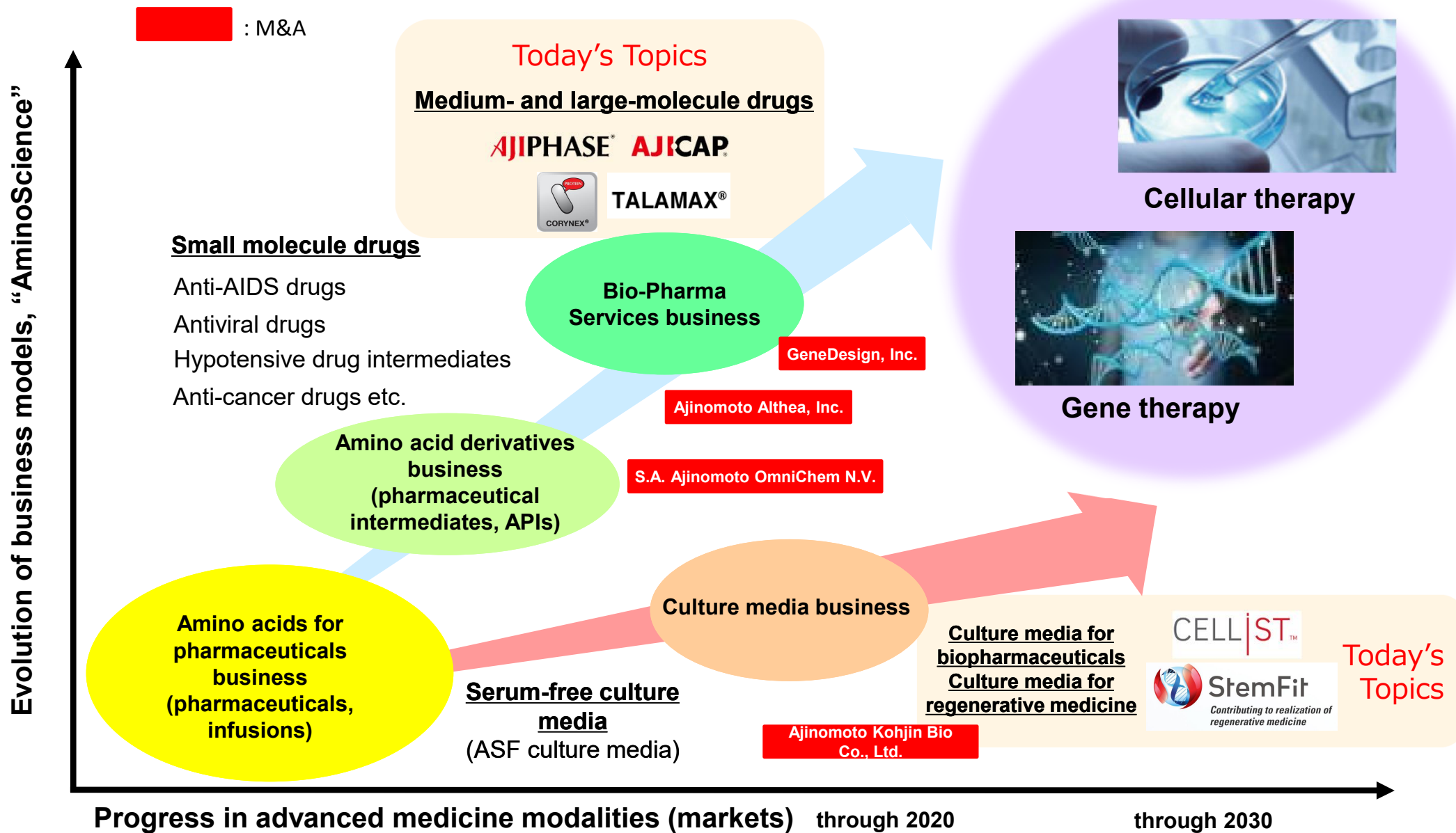
Ajinomoto Build-up Film® (ABF) shipment volume



CAGR
approx. 18%
(FY2020→2025)

Estimate with FY2017 shipment volume set to 100

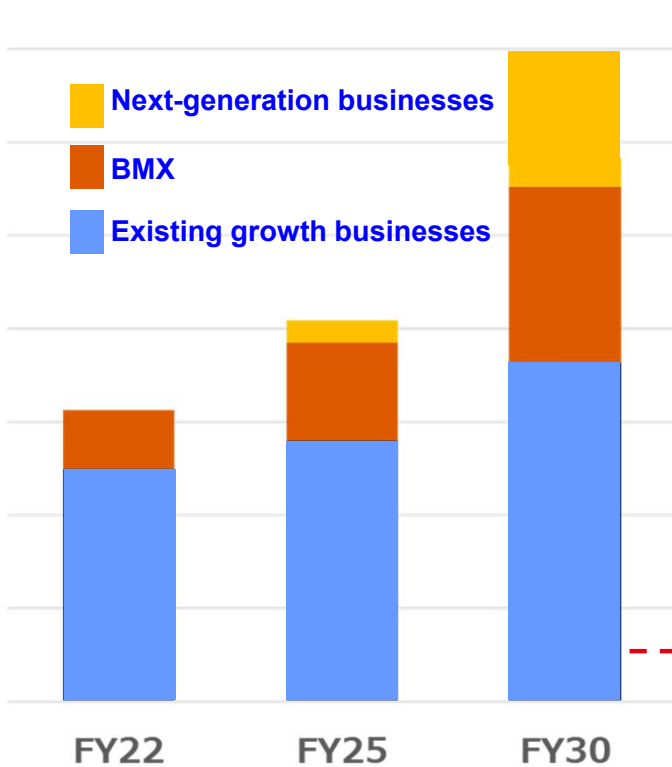
The Evolution of BMX and Progress Toward Next-Generation Business in Healthcare



Growth Strategy in Healthcare

- ✓ Existing businesses, such as amino acids and small molecule drugs, will continue to grow
- ✓ BMX (nucleic acid-based drugs, culture media, and medical foods) will grow significantly
- ✓ We are laying the groundwork for growth toward advanced modalities in next-generation businesses (gene therapy, cellular therapy)

Vision for growth

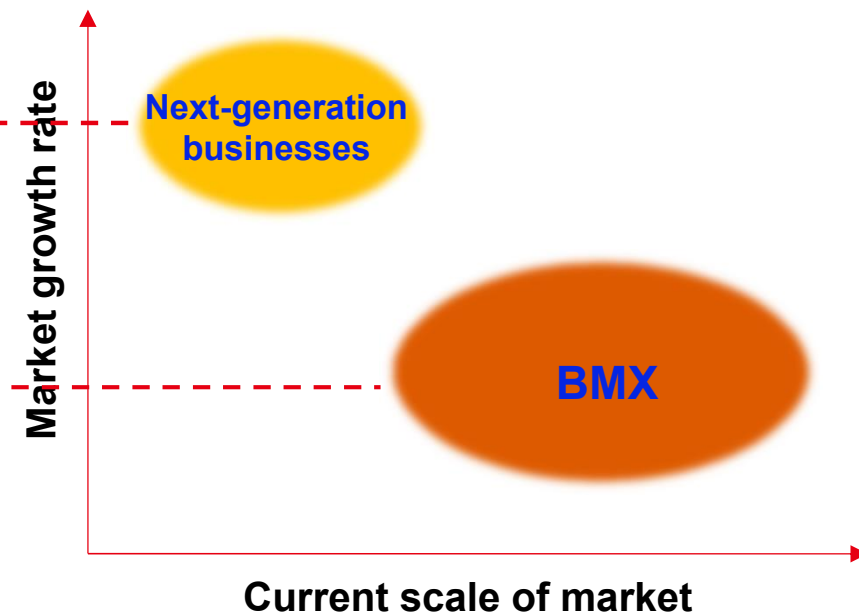


Next-generation businesses
Gene therapy, cellular therapy, etc.

BMX
Medium/large molecule drugs, culture media, culture medium materials (biopharmaceuticals, regenerative medicine), medical foods, etc.

Existing growth businesses
Amino acids, small molecule drugs, personal care products, etc.

Target markets (growth rate x scale)



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- **Forward-looking statements, such as business performance forecasts, made in these materials are based on management's estimates, assumptions and projections at the time of publication. A number of factors could cause actual results to differ materially from expectations.**
- **This material includes summary figures that have not been audited so the numbers may change.**
- **Amounts presented in these materials are rounded down.**
- **“AminoScience” is a trademark of Ajinomoto Co., Inc. registered in Japan.**