

**Macro environment surrounding the Ajinomoto Group**

**Growing world population\*1**

2019 **7.7 billion** ▶ 2050 **9.7 billion**

Food production needed by 2050 compared to 2012 **+50%\***

- Rising demand for food, water, and energy

**Global population aging**

Population over 65\*3

2020 **0.73 billion** ▶ 2050 **1.5 billion**

- Rising needs for extending healthy life expectancy
- Rising demand for healthcare

**Climate change**

Global average temperature by 2100\*4 **+4.8°C**

- Accelerated decarbonization
- Physical damage from natural disasters
- Unstable materials sourcing
- Breakdown in supply chain

**Transition to the new normal in the wake of the COVID-19 pandemic**

- Changes in consumer behavior (in-home consumption, reluctance to go out, increased delivery, etc.)
- Increased awareness of hygiene and health management
- Increased awareness of stable supply of goods (trend toward local production for local consumption, etc.)
- Social fragmentation (polarization of rich and poor, increase in the number of the poor and unemployed, etc.)
- Increase in occasion of eating alone
- Promotion of the green recovery

**Accelerated use of digital technology**

- Emergence of new business opportunities and competition
- Changes in the way information, products, and services are provided (e.g., e-commerce)
- Increasing opportunities for direct communication with consumers
- Increase in the influence of Generation Z

**Ajinomoto Group corporate message Eat Well, Live Well.**

Materiality items	Specific examples	Related opportunities and risks (○ Opportunity ● Risk)	Key initiatives by the Ajinomoto Group	Related SDGs
<b>Contribution to solve food and health issues</b>	<ul style="list-style-type: none"> <li>· Undernutrition and overnutrition (customer welfare)</li> <li>· Nutrition for infants, young women, and seniors</li> <li>· Well-being</li> <li>· Regenerative medicine</li> <li>· Preventive medicine</li> </ul>	<ul style="list-style-type: none"> <li>○ Revised lifestyle habits, including diet and exercise, due to increasing seriousness and diversity of health issues</li> <li>○ Brand trust</li> <li>○ Stronger laws and rules related to health and nutrition (sugar tax, nutrition labeling)</li> <li>○ Involvement of food and nutrition in predictive prevention</li> <li>○ Development of regenerative medicine technology, antibody drugs, and oligonucleotide therapeutics</li> <li>● Rising competition in the health and nutrition field</li> </ul>	<ul style="list-style-type: none"> <li>· Offering tasty food and amino acid products as well as menus that nourish health and well-being</li> <li>· “Delicious salt reduction” (umami)</li> <li>· Promoting protein intake</li> <li>· “Delicious sugar and fat reduction”</li> <li>· Workforce nutrition improvement</li> <li>· Use of nutrient profiling systems for product development</li> <li>· Customized proposals of products and services that are useful for improving nutrition (personalized nutrition)</li> <li>· Contributing to preventive medicine through “AminoIndex technology”</li> <li>· Cell culture medium for regenerative medicine</li> <li>· Contract development and manufacturing of biopharmaceuticals</li> </ul>	
<b>Rapid response to consumer lifestyle changes</b>	<ul style="list-style-type: none"> <li>· Fair marketing and advertising</li> <li>· Product access and affordability</li> <li>· Response to diversification of values (smart cooking, joy of eating)</li> <li>· Eating alone, eating personalized meals</li> </ul>	<ul style="list-style-type: none"> <li>○ Enhancing corporate reputation by offering the joy of eating together</li> <li>○ New value creation using digital technology</li> <li>● Loss of growth opportunities due to delayed response to consumer lifestyle changes or diversifying values</li> </ul>	<ul style="list-style-type: none"> <li>· Creating strong communities and social bonds through food</li> <li>· Advanced marketing efforts by leveraging big data and consumer data</li> <li>· Building strategies to deal with smaller markets</li> <li>· Properly delivering products, services, and information to customers</li> <li>· Expanding products and services to meet the need for convenience, such as smart cooking</li> </ul>	
<b>Assurance of product safety</b>	<ul style="list-style-type: none"> <li>· Product quality and safety</li> <li>· Fair disclosure and labeling</li> <li>· New technology application</li> <li>· Religious standards</li> </ul>	<ul style="list-style-type: none"> <li>○ Brand trust gained by increasing customer satisfaction</li> <li>○ Trust gained through fair disclosure to stakeholders</li> <li>● Impact on business of growing negative rumors regarding umami and MSG</li> <li>● Lower customer confidence due to product quality complaints or incidents</li> </ul>	<ul style="list-style-type: none"> <li>· Providing proper information via product packaging and online</li> <li>· Reflecting customer feedback on developing and improving products and services</li> <li>· Enhancing communication to share the benefits of umami and MSG</li> <li>· Thorough quality assurance and human resource training based on the Ajinomoto System of Quality Assurance (ASQUA)</li> </ul>	
<b>Diverse talent</b>	<ul style="list-style-type: none"> <li>· Employee engagement / decent work</li> <li>· Diversity and inclusion</li> <li>· Employee health, safety, and well-being</li> <li>· Labor relations</li> <li>· Fair labor practices</li> <li>· Compensation and benefits</li> <li>· Recruitment, development and retention</li> </ul>	<ul style="list-style-type: none"> <li>○ Company growth by improving employee engagement</li> <li>○ Creation of an innovative environment</li> <li>● Rising costs due to intense competition for human resources</li> </ul>	<ul style="list-style-type: none"> <li>· Enhancing employee ASV engagement (ASV as one's own initiative)</li> <li>· Promoting PDCA cycle using engagement surveys</li> <li>· Organizational culture reform to promote diversity and inclusion</li> <li>· Training and promotion of female employees</li> <li>· Promoting health management</li> <li>· Human rights awareness training</li> <li>· Fostering a corporate culture of innovation</li> </ul>	
<b>Climate change adaptation and mitigation</b>	<ul style="list-style-type: none"> <li>· Reduction of greenhouse gas emissions (Scope 1, 2, and 3)</li> <li>· Energy management</li> <li>· Fuel management</li> <li>· Air quality</li> </ul>	<ul style="list-style-type: none"> <li>○ Cost competitiveness ensured through renewable energy and reduced carbon tax burden</li> <li>○ Collaboration with outside organizations on decarbonization</li> <li>● Failure to procure raw materials due to climate change</li> <li>● Damaged corporate value due to delayed response to climate change</li> </ul>	<ul style="list-style-type: none"> <li>· Long-term effort to turning the overall product lifecycle carbon neutral</li> <li>· Initiatives to reduce energy use during production and transportation</li> <li>· Shifting to renewable energy</li> <li>· Use of internal carbon-pricing</li> <li>· Disclosing information in line with the Task Force on Climate-related Financial Disclosures (TCFD) (scenario analysis, etc.)</li> <li>· Lowering environmental impact by feed-use amino acids (reduction of soil and water pollution)</li> </ul>	
<b>Contribution to a circular economy</b>	<ul style="list-style-type: none"> <li>· Waste reduction and 3Rs (Reduce, Reuse, Recycle)</li> <li>· Product packaging</li> <li>· Waste and hazardous materials management</li> <li>· Reduction of environmental impact from containers and packaging</li> <li>· Lifecycle impact of products and services</li> </ul>	<ul style="list-style-type: none"> <li>○ Gaining market share through the development of environmentally friendly materials</li> <li>● Damaged corporate value due to delays in waste reduction or recycling efforts</li> </ul>	<ul style="list-style-type: none"> <li>· Supplying highly biodegradable amino acid-based detergent</li> <li>· Promoting the 3Rs of containers and packaging (reduction of plastic waste, etc.)</li> <li>· Eco-friendly packaging materials (mono-materials, biodegradable plastics, plant-derived materials) and certified paper</li> <li>· Promoting use of environmentally friendly product labels</li> <li>· Appeals on packaging labels to reduce plastic waste</li> </ul>	
<b>Reduction of food loss and waste</b>	<ul style="list-style-type: none"> <li>· Efficient use of materials</li> <li>· Consumer edification (sustainable consumption, etc.)</li> <li>· Waste reduction in the distribution process</li> </ul>	<ul style="list-style-type: none"> <li>○ Cost reduction through efforts to improve yield in the manufacturing process, reduce product returns and waste</li> <li>● Damage to corporate value due to delays in addressing food loss and waste</li> </ul>	<ul style="list-style-type: none"> <li>· Using raw materials in manufacturing process without waste</li> <li>· Upgrading, optimizing supply chain management using digital technology</li> <li>· Reducing product returns and waste by extending product best-before dates, etc.</li> <li>· Reducing food loss and waste during product use by consumers</li> <li>· Proposing eco-friendly lifestyles for enjoying food without leftovers</li> </ul>	
<b>Sustainable materials sourcing</b>	<ul style="list-style-type: none"> <li>· Biodiversity impacts</li> <li>· Deforestation control</li> <li>· Elimination of child labor and forced labor</li> <li>· Supply chain management</li> <li>· Sustainable land use</li> <li>· Animal welfare</li> <li>· Animal and plant nutrition</li> </ul>	<ul style="list-style-type: none"> <li>● Failure to procure raw materials, product returns due to quality issues in the supply chain</li> <li>● Failure to procure raw materials and damage to corporate value due to delays in addressing social and environmental issues in the supply chain</li> <li>● Failure to procure raw materials due to food resource depletion</li> </ul>	<ul style="list-style-type: none"> <li>· Promoting awareness and understanding of procurement policies and guidelines among suppliers</li> <li>· Establishing a CSR audit system for suppliers and contract manufacturers</li> <li>· Management of fair operating practices (traceability, etc.)</li> <li>· Establishing a PDCA cycle related to human rights due diligence</li> <li>· Identifying important raw materials and engaging in responsible procurement (paper, palm oil, skipjack, etc.)</li> <li>· Ensuring fair competition and providing thorough employee training</li> <li>· Contributing to sustainable agriculture by using co-products</li> </ul>	
<b>Conservation of water resources</b>	<ul style="list-style-type: none"> <li>· Water and wastewater management</li> <li>· Agriculture and livestock water use</li> </ul>	<ul style="list-style-type: none"> <li>○ Stable procurement of raw materials and stable supply of products by reducing water risk</li> <li>● Production stagnation due to droughts, floods or water quality deterioration</li> <li>● Damage to corporate value due to delays in addressing water resource conservation</li> </ul>	<ul style="list-style-type: none"> <li>· Maintaining forests for water sources</li> <li>· Developing wastewater treatment technology</li> </ul>	
<b>Strong corporate governance</b>	<ul style="list-style-type: none"> <li>· Compliance</li> <li>· Accident and safety management</li> <li>· Competitive behavior</li> <li>· Intellectual property protection</li> <li>· Political activities and contributions</li> <li>· Business ethics and transparency of payments</li> <li>· IT management</li> <li>· Response to natural disasters and diseases</li> <li>· Systemic risk management</li> <li>· Data security and customer privacy</li> <li>· Regulatory capture and political influence</li> <li>· Environment, social impacts on assets and operations</li> <li>· Succession planning</li> <li>· Management transparency</li> <li>· Human rights and community relations</li> </ul>	<ul style="list-style-type: none"> <li>○ Appropriate risk-taking</li> <li>● Business continuity risk or other unexpected losses due to failures in corporate governance or internal controls</li> <li>● Lack of appropriate information disclosure resulting in a loss of investor confidence</li> <li>● Decreased competitiveness due to vulnerabilities in IT management structure</li> <li>● Delay or suspension of operations due to a combination of natural disasters, diseases, and pandemics (COVID-19, avian influenza, etc.)</li> <li>● Disruptions to organizational operations and decline in business profitability due to changes in macroeconomic conditions</li> <li>● Impact of intellectual property risks on business</li> <li>● Impact of sudden foreign exchange and interest rate fluctuations on business</li> <li>● Higher tax burden due to changes in tax and tax effect</li> </ul>	<ul style="list-style-type: none"> <li>· Raising awareness of the Ajinomoto Group Policies among all Group employees</li> <li>· Establishing whistleblower hotline</li> <li>· Strengthening corporate governance system</li> <li>· Stronger business continuity management (BCM)</li> <li>· Occupational safety and health management</li> <li>· Selecting Group-wide significant risks and considering appropriate responses</li> <li>· Strengthening cybersecurity countermeasures by ensuring information security regulations</li> <li>· Managing intellectual property risk</li> <li>· Engagement in dialogue with various stakeholders</li> </ul>	
<b>Preparation for intense global competition</b>	<ul style="list-style-type: none"> <li>· Business selection and focusing</li> <li>· Early creation of innovation</li> <li>· Open innovation</li> <li>· Enhancement of basic infrastructure</li> </ul>	<ul style="list-style-type: none"> <li>○ Business foundation reform through digital disruption</li> <li>○ Value creation from external collaboration</li> <li>○ Specialty creation through technological innovation</li> <li>○ Establishment of competitive advantage by forecasting future changes</li> <li>● Opportunity loss and loss of competitive ability due to neglect of IT investment</li> <li>● Emergence of multiple competitors due to an inability to erect strong barriers to entry</li> </ul>	<ul style="list-style-type: none"> <li>· Stronger collaboration between food and AminoScience divisions</li> <li>· Evolving supply chain management (digitization, establish ecosystem, etc.)</li> <li>· Promoting digital transformation</li> <li>· Establishing solutions-oriented R&amp;D structure</li> <li>· Executing global strategy in consumer food businesses (seasonings, quick nourishment, frozen foods)</li> <li>· Competitive intelligence (medium- to long-term initiatives)</li> <li>· Promoting open &amp; linked innovation</li> <li>· Reviewing global production system, logistics system, and employment system</li> </ul>	

\*1 United Nations (UN), 2019  
 \*2 Food and Agriculture Organization of the UN, 2017  
 \*3 UN, 2020  
 \*4 Intergovernmental Panel on Climate Change, 2013