

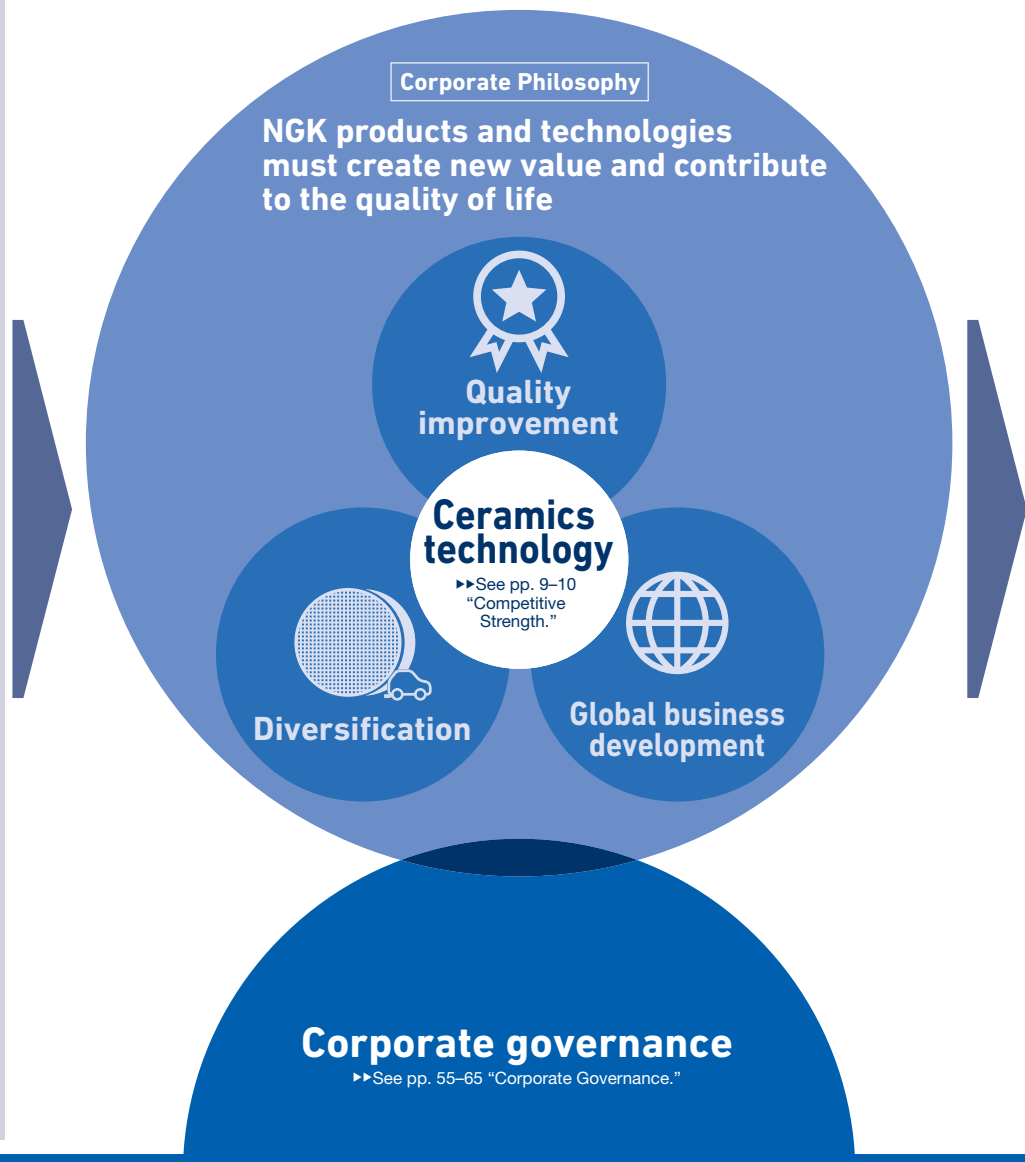
Using Advanced Technology to Power a Unique “Value Creation Engine”

Thanks to the unique ceramics technology it has cultivated over many years, the NGK Group is able to develop a wide variety of high-quality products that it seeks to offer in a growing range of overseas markets. As a result, the NGK Group creates diverse value, which helps to address social problems.

Social problems	
Development of electricity infrastructure	Spread and expansion of renewable energy
Environmental pollution prevention	IT innovation

Input (fiscal 2017)	
Financial capital	
• Total assets	836.3 billion yen
• Cash and cash equivalents	169.9 billion yen
Manufactured capital	
• Capital investment	71.7 billion yen
• Fixed assets	363.9 billion yen
Intellectual capital	
• Investment in R&D	21.1 billion yen
• Number of patents held	4,186
Human capital	
• Employees	19,000 people
Social and relationship capital	
• Consolidated subsidiaries	Domestic 21 companies Overseas 37 companies
Natural capital	
• Electricity	880,000 MWh
• Gas	142 million Nm ³
• Oil	2.25 million liters
• Raw materials	192,000 metric tons
• PRTR-listed substances	707 metric tons
• Water	4.32 million m ³

Value creation engine of the NGK Group



Output

Power business



Insulators



NAS® batteries

Ceramic products business



Ceramics for purifying automobile exhaust



NOx sensors

Electronics business



Ceramics for electronic and electrical devices



Beryllium-copper products

Process technology business



Ceramics for semiconductor manufacturing equipment



Industrial machinery and devices

Results

(fiscal 2017)

Consolidated net sales

451.1 billion yen

Profit attributable to owners of parent

45.8 billion yen

ROE

10.4%

Total sales of products contributing to environmental protection

245.6 billion yen

Social contribution spending

0.3 billion yen

Avoided NOx emissions

4 million metric tons per year

Note: Assumes exhaust systems are equipped on new automobiles that do not have equivalent systems.

Values provided by the NGK Group

Ensure access to affordable, reliable, sustainable, and modern energy for all



- Insulators are indispensable to stable power supply
- NAS batteries allow stable supply of renewable energy
- Ceramics for purifying automobile exhaust make exhaust gas clean, thus enabling clean usage of fossil fuels

Build resilient infrastructure, promote inclusive and sustainable industrialization, and foster innovation



- Ceramics used in electronics make ICT cheap and ubiquitous
- Ceramics used in semiconductor manufacturing equipment let the semiconductor industry be the foundation for modern daily life
- Metal products are widely used in mobile phones, automobiles, industrial equipment, and other devices that undergird modern life

Take urgent action to combat climate change and its impacts



- NAS batteries aid in the fight against climate change by allowing stable supply of renewable energy

Make cities and human settlements inclusive, safe, resilient, and sustainable



- NAS batteries enable innovation in urban energy management for the creation of sustainable cities

Ensure healthy lives and promote well-being for all at all ages



- Ceramics for purifying automobile exhaust make exhaust gas clean

Conserve and sustainably use the oceans, seas, and marine resources for sustainable development



- Ceramic membrane filters purify wastewater to prevent marine pollution

Ensure availability and sustainable management of water and sanitation for all



- Ceramic membrane filters provide highly safe water
- Ceramic membrane filters purify wastewater