

# TOYO TANSO Corporate Profile

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# 1. Corporate Profile

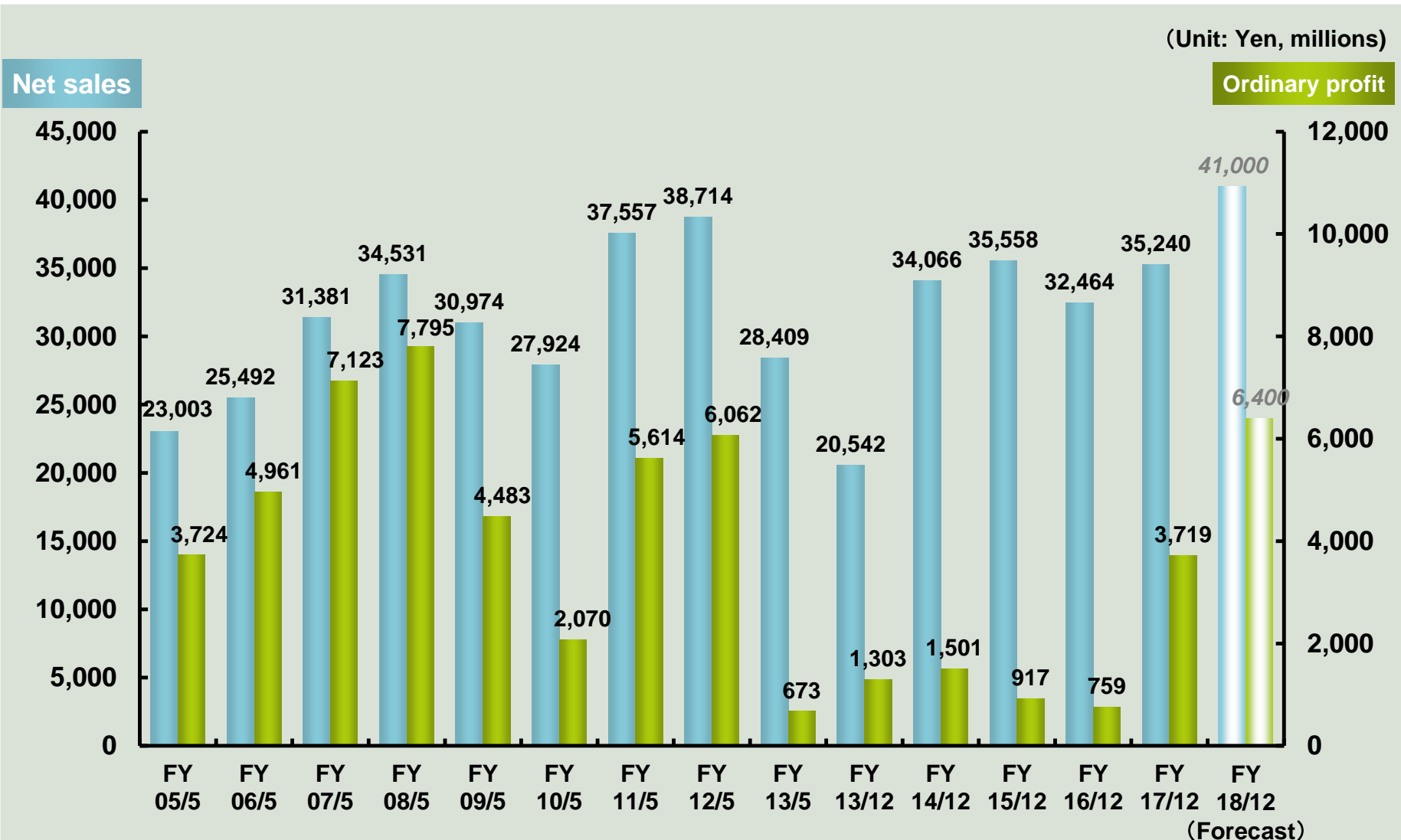
Business outline	Production of specialized, highly functional carbon products
Corporate profile	
Incorporation	July 1947
Capital	7,810 million yen (as of December 2017)
Head office	5-7-12 Takeshima, Nishiyodogawa-ku, Osaka, Japan
President	Representative Director, Chairman & President, CEO Naotaka Kondo



## History

- 1947 Incorporated / Started manufacture of Carbon Brushes
- 1974 Built plant for mass-production of large Isotropic Graphite
- 1985 Built Takuma plant. Increased capacity for Isotropic Graphite
- 1987 Founded T.T. America Inc. in the U.S.
- 1988 Founded Graphites Technologie et Industrie S.A. in France
- 1994 Founded Shanghai TOYO TANSO CO., LTD.
- 2006 Listed on the First Section of the Tokyo Stock Exchange

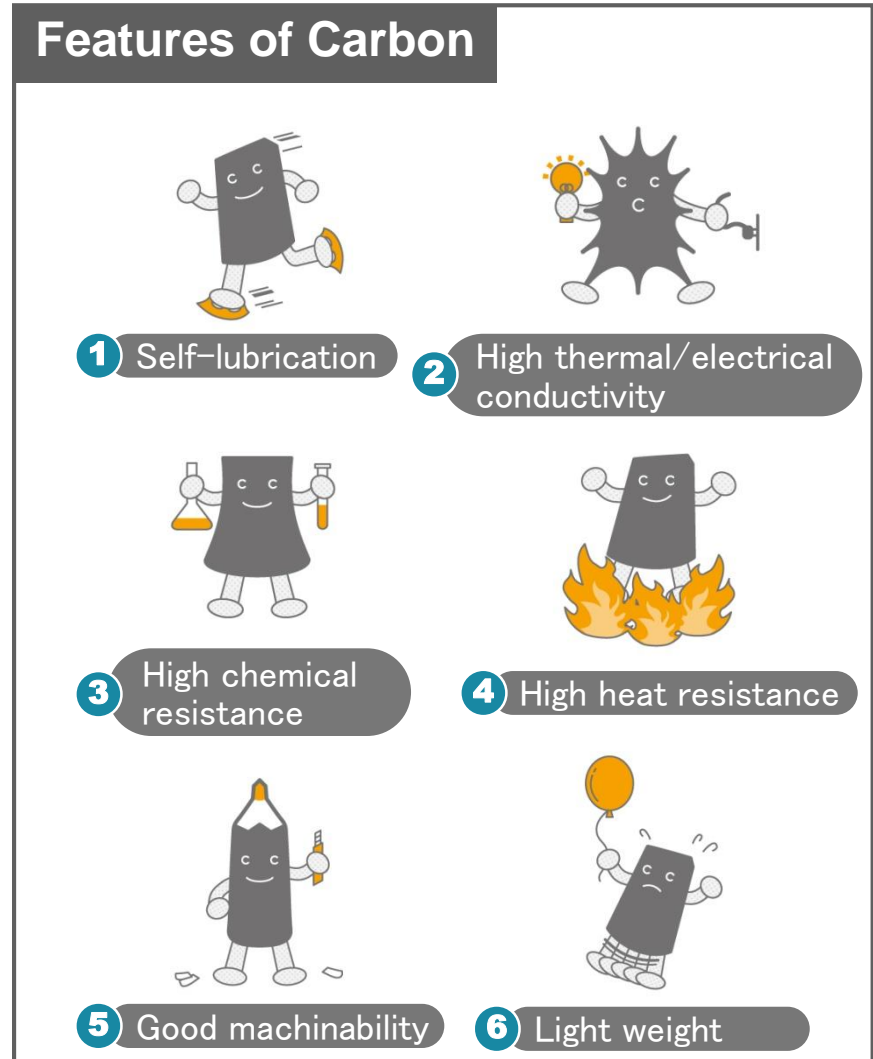
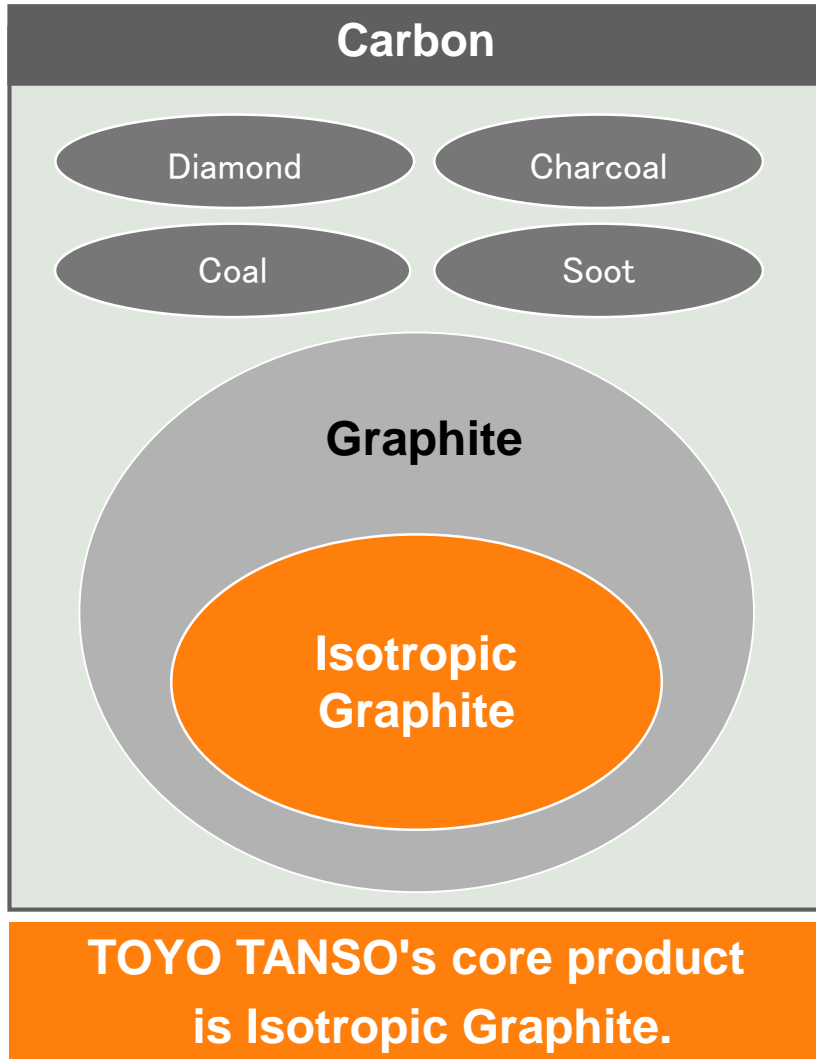
# 2. Earnings Trend



(Note) Toyo Tanso had changed its fiscal year from May 31 to December 31. Accordingly, the fiscal year ending on December 31, 2013, the transitional period, was an irregular seven-month fiscal period.

# 3. High Functional Graphite

## ① Features of Carbon



### Features of Graphite

- Excellent thermal and electrical conductivity
- Superb heat and chemical resistance
- Light weight and easy to machine
- Excellent self lubrication



### Features of Isotropic Graphite material

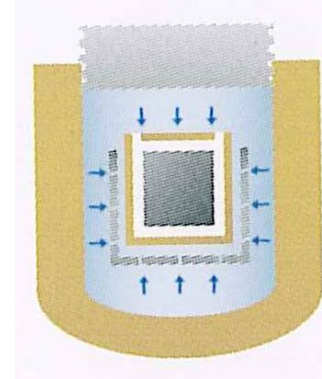
- Uniform properties in any directions
- Fine grain structure and high strength
- Small variation in physical properties



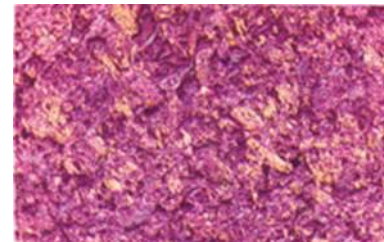
**Started mass production in 1974**

**Leading manufacturer of isotropic graphite**

Cold Isostatic Press



Anisotropic Graphite

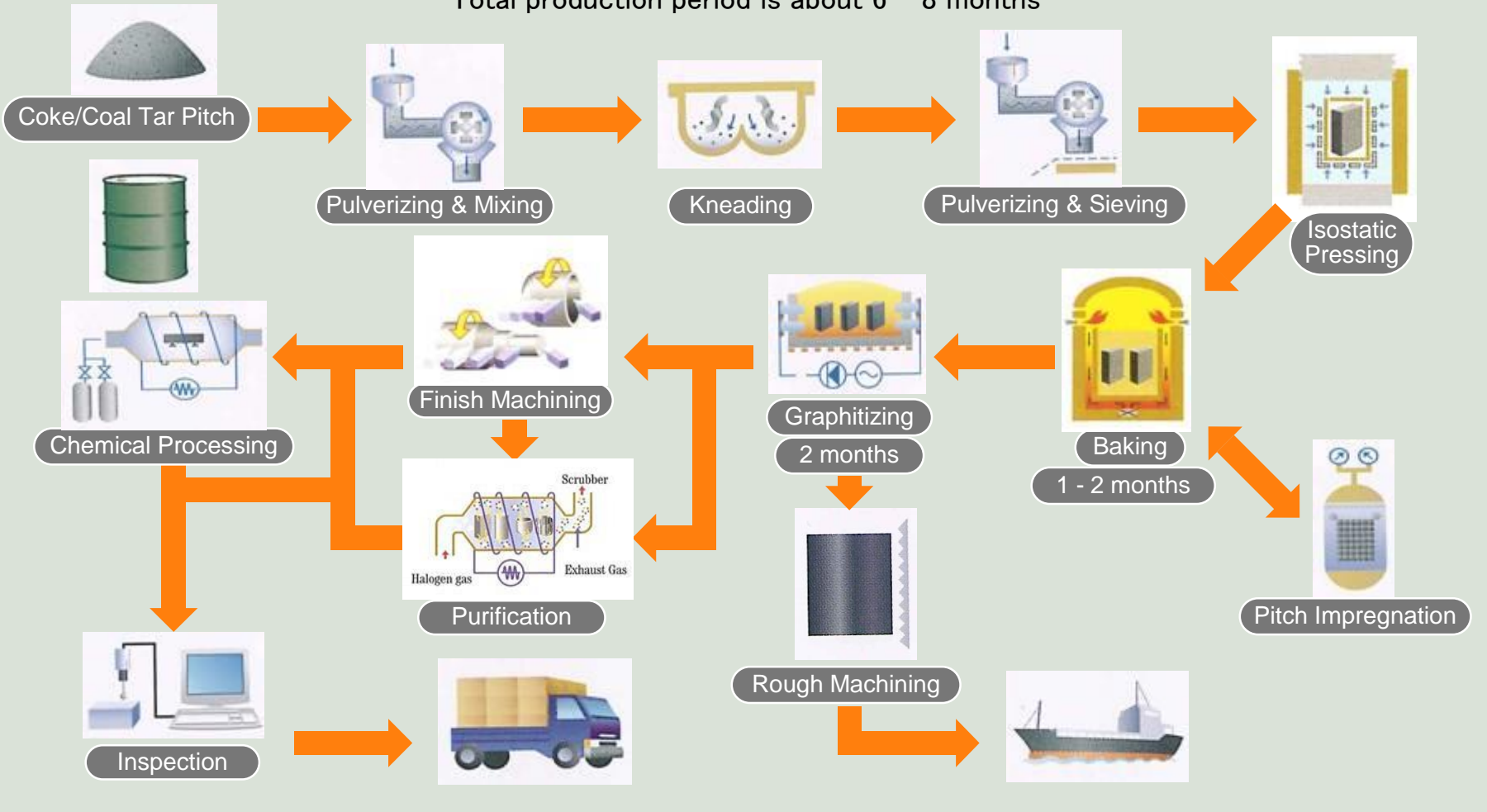


Isotropic Graphite



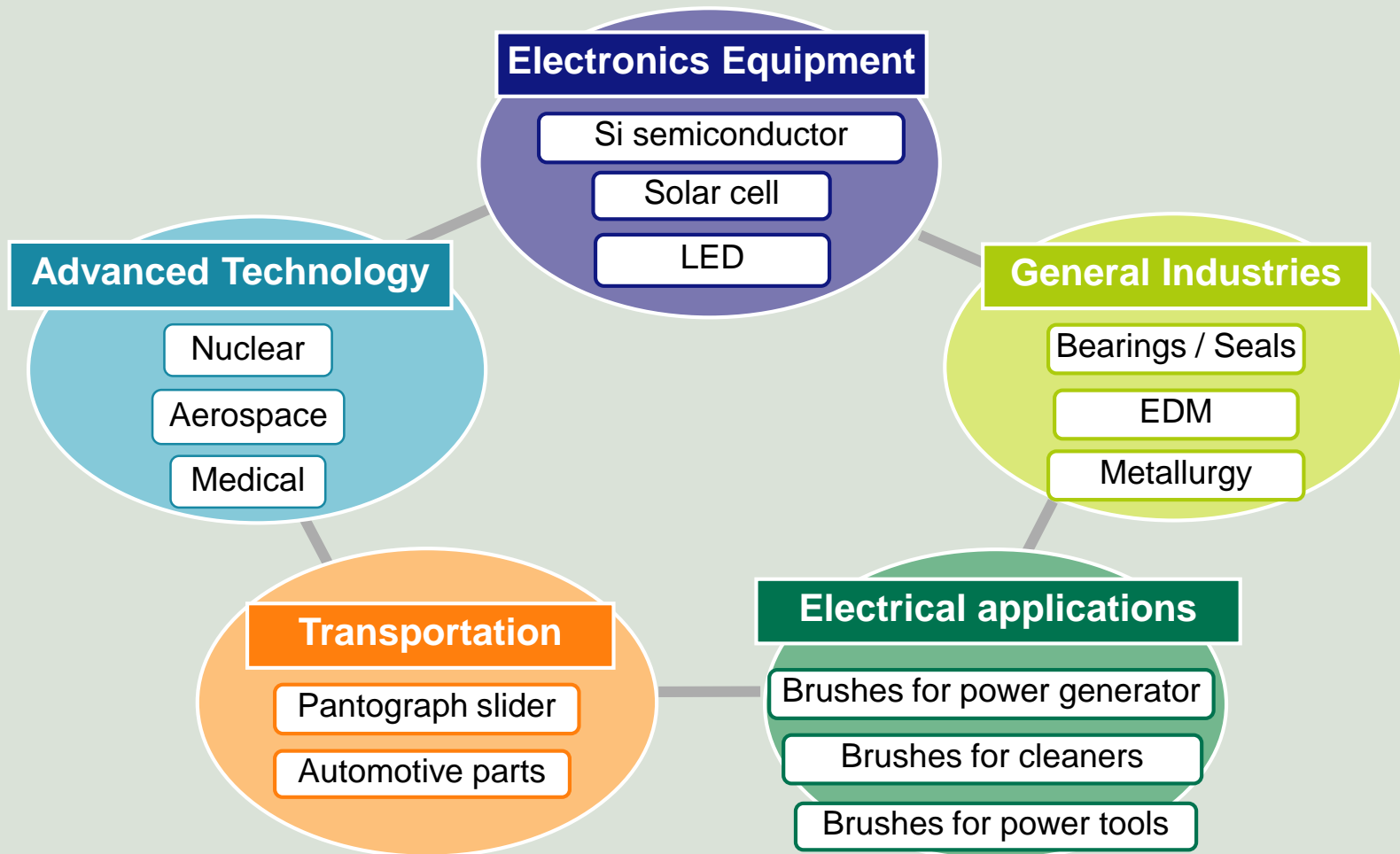
### Manufacturing process of Isotropic Graphite

Total production period is about 6 – 8 months



# 4. Domain Identity

The areas in which our products are used



**The application is being expanding.**



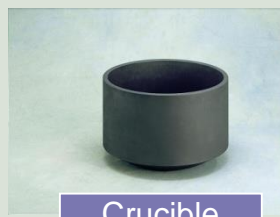
## Special graphite products

### Electronics



Heater

### General industries



Crucible

### General industries



EDM electrode

### Others



Glass sealing jig



Nuclear gas cooled reactor core material

## General carbon products

### Mechanical applications

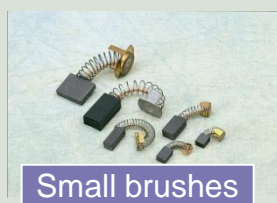


Bearings



Pantograph sliders

### Electrical applications



Small brushes



Large brushes

## Compound materials and other products



C/C composite product



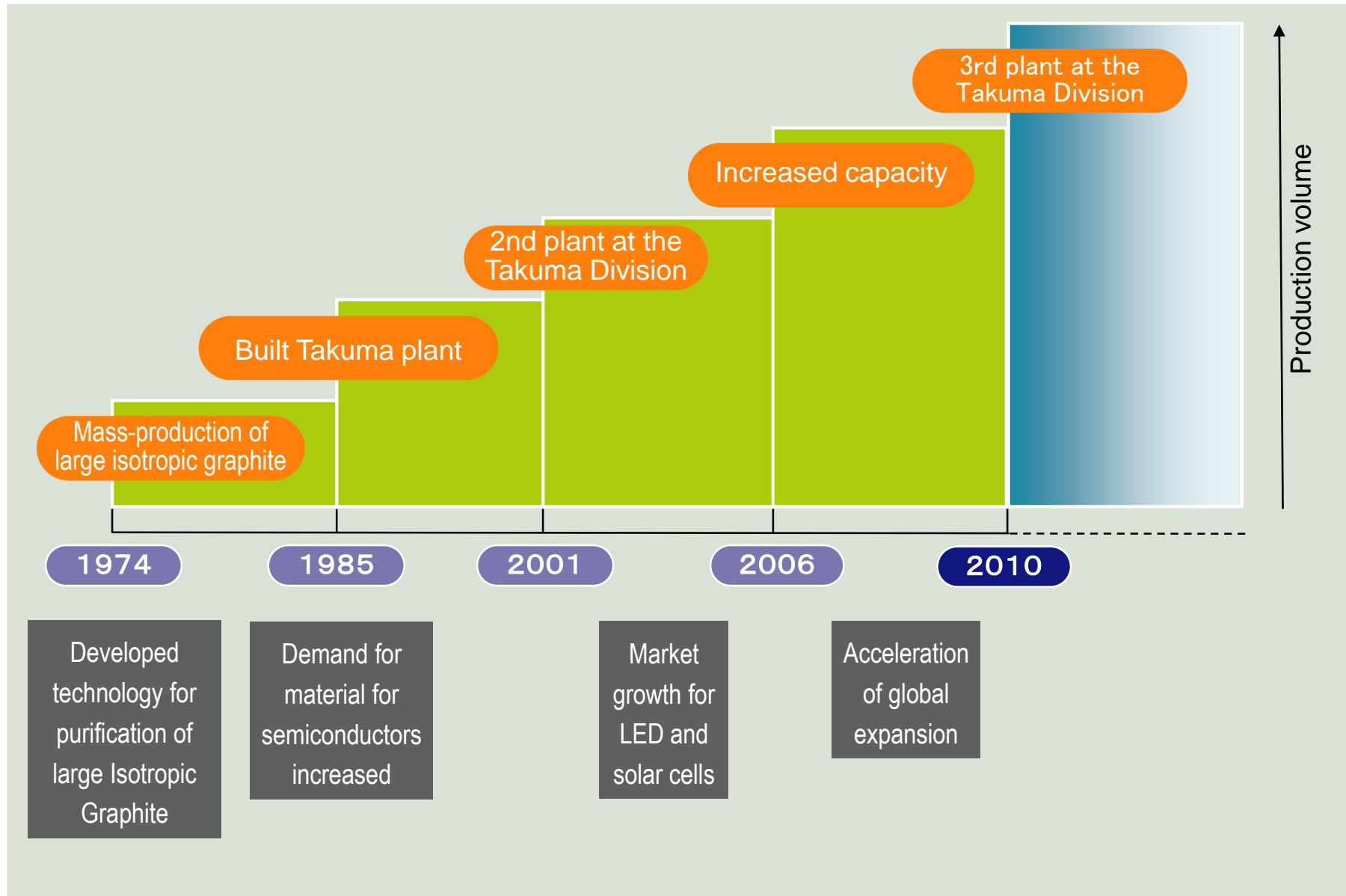
Graphite sheet



SiC coated susceptor

# 6. TOYO TANSO's Strengths

① Pioneer in Isotropic Graphite



### Material manufacturing advantages

#### Concentrated production of material

Optimizing "scale merit" of the group

Superior cost competitiveness

Consistent quality



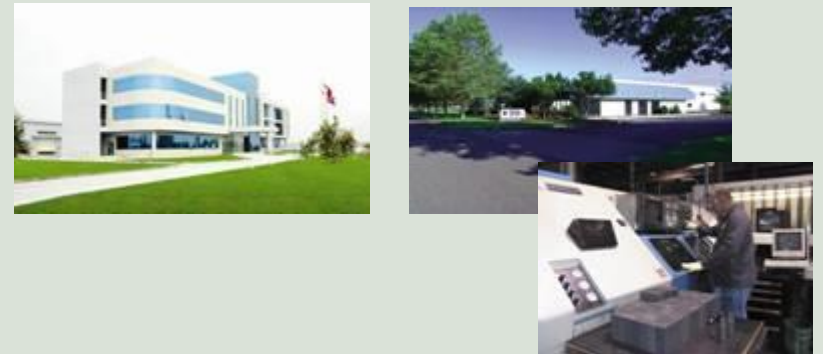
### Processing manufacturing advantages

#### Geared for the customer

Quick delivery

Incorporation of customer needs

Immediate development systems



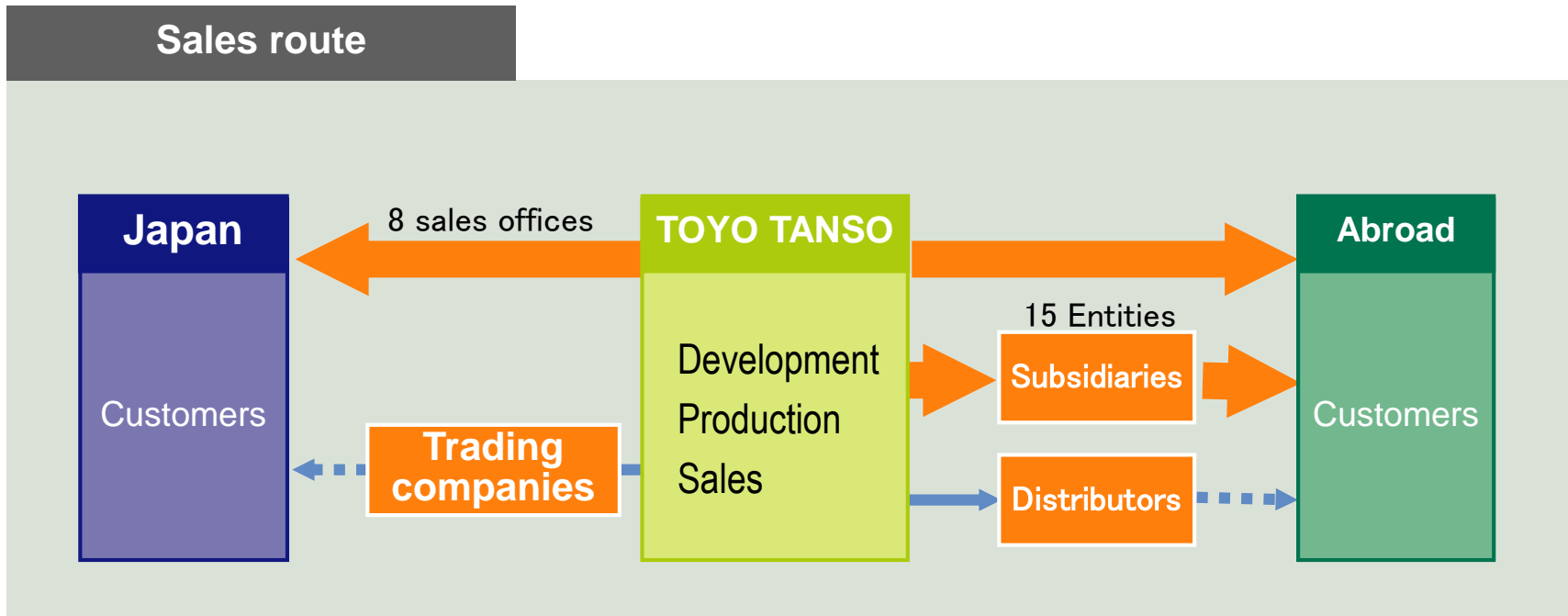
**A solid business model**

# 6. TOYO TANSO's Strengths

③ Direct Sales System Meets Customer Needs

- More than 100 employees at 8 sales offices for customers in Japan
- Nearly 100 employees at sales offices home and abroad for foreign customers
- Accurately gathering market wants through direct contact with end-customers

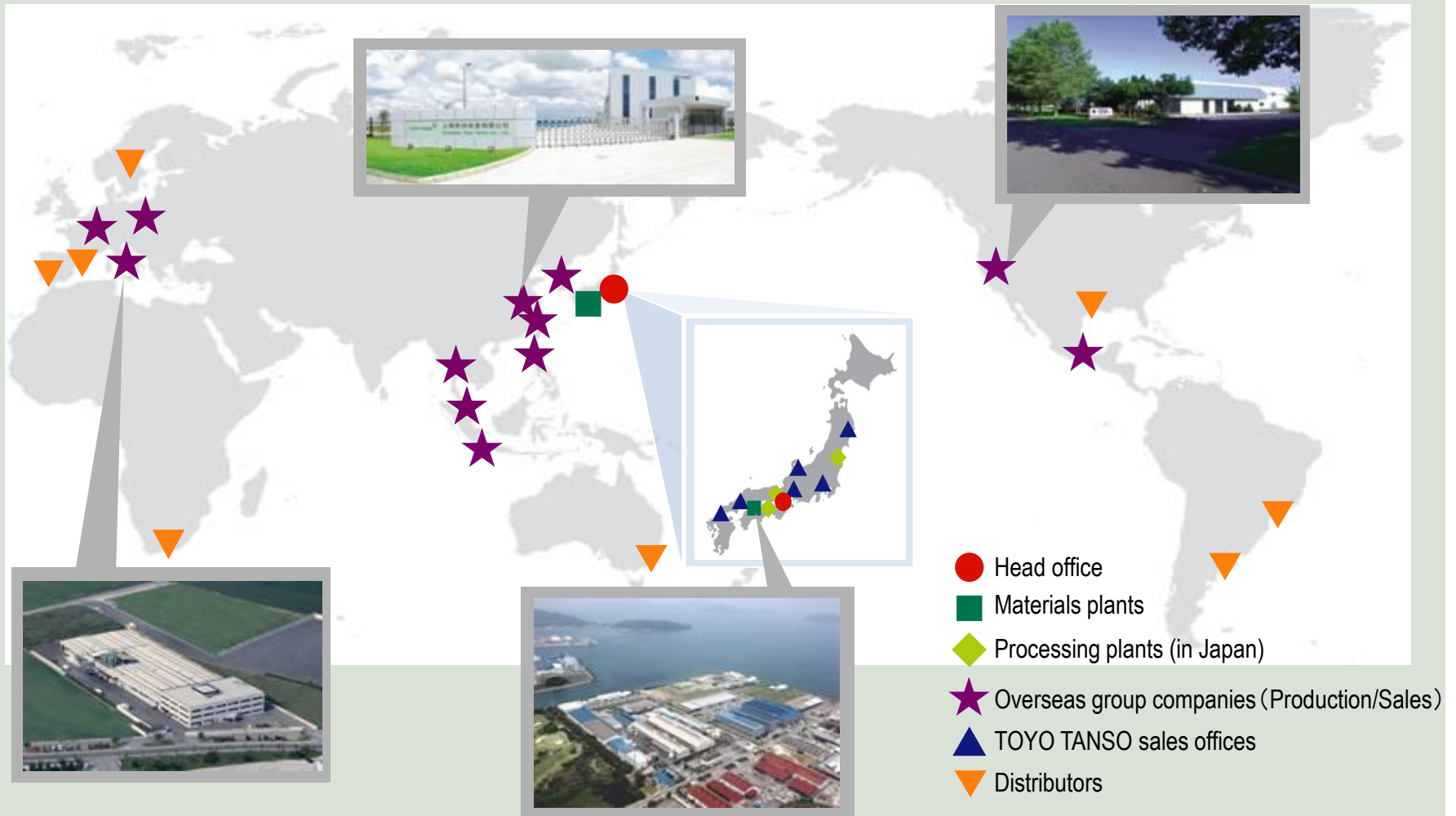
**More than 80% of sales are direct sales**



# 6. TOYO TANSO's Strengths

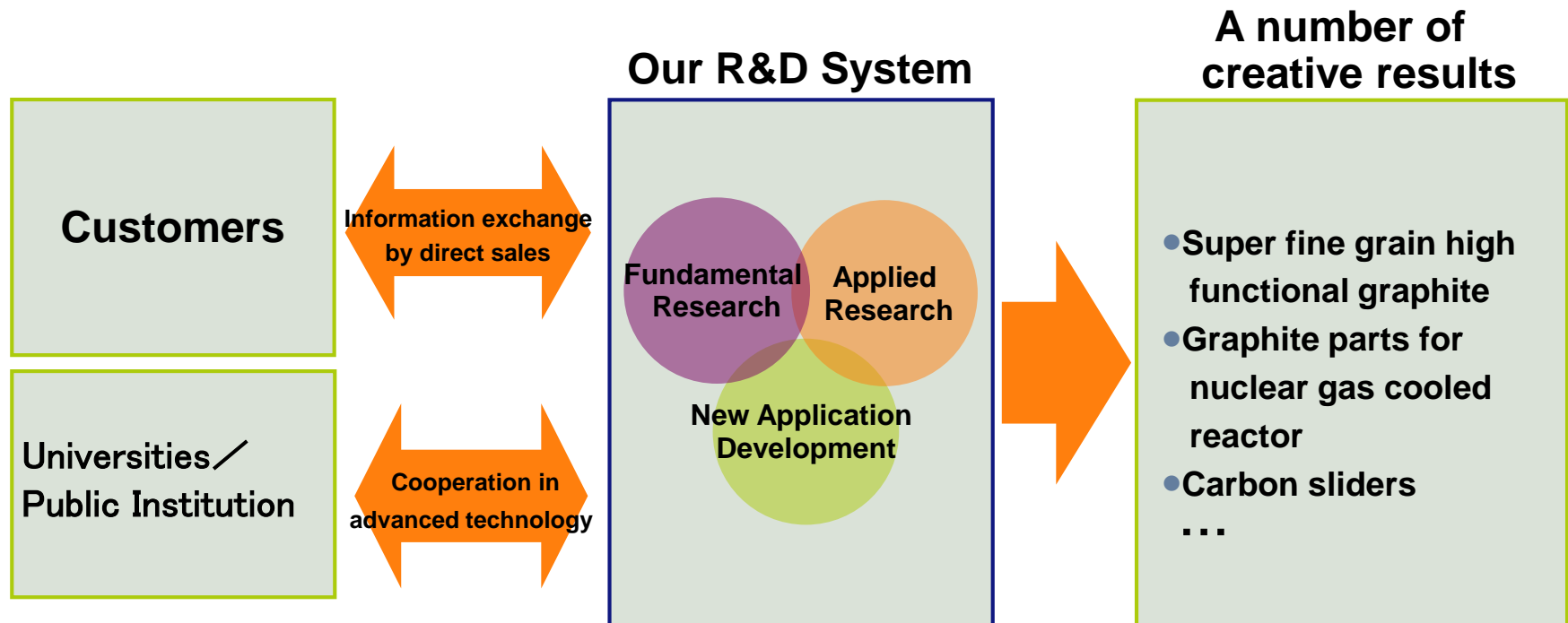
## ④ Global Expansion

Cover the globe with our material plant, system of in-house production, sales offices and dealers.



## Seeds and Needs Oriented R&D Systems

- 3 area : Fundamental/Applied Research and New Application Development
- Well balanced R&D system including seeds and needs
- Seeds from cooperation with Universities and Public Institutions meets needs we take in from direct sales



# 7. The Direction of Growth

## Keys to Growth

The "3Es" = Environment + Energy + Electronics

- Market change in semiconductors, etc.
- Market share increase
- Replacing other material into graphite for existing applications

Expansion of existing products

Overseas growth

Introduction of New products, New applications

- New regions : India, Brazil, Russia, Eastern Europe, etc.
- Further moves in China
- (motor brushes, solar-cell-related products, etc.)
- Enhancement of a world-wide consolidated management

- Expansion of SiC coated graphite, C/C composite, graphite sheet
- Expanding sales of high functional grades
- Worldwide re-evaluation of nuclear power generation
- Promoting business for heat sink and Tac coated graphite

**TOYO TANSO**



Inspiration for Innovation

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2018.05