

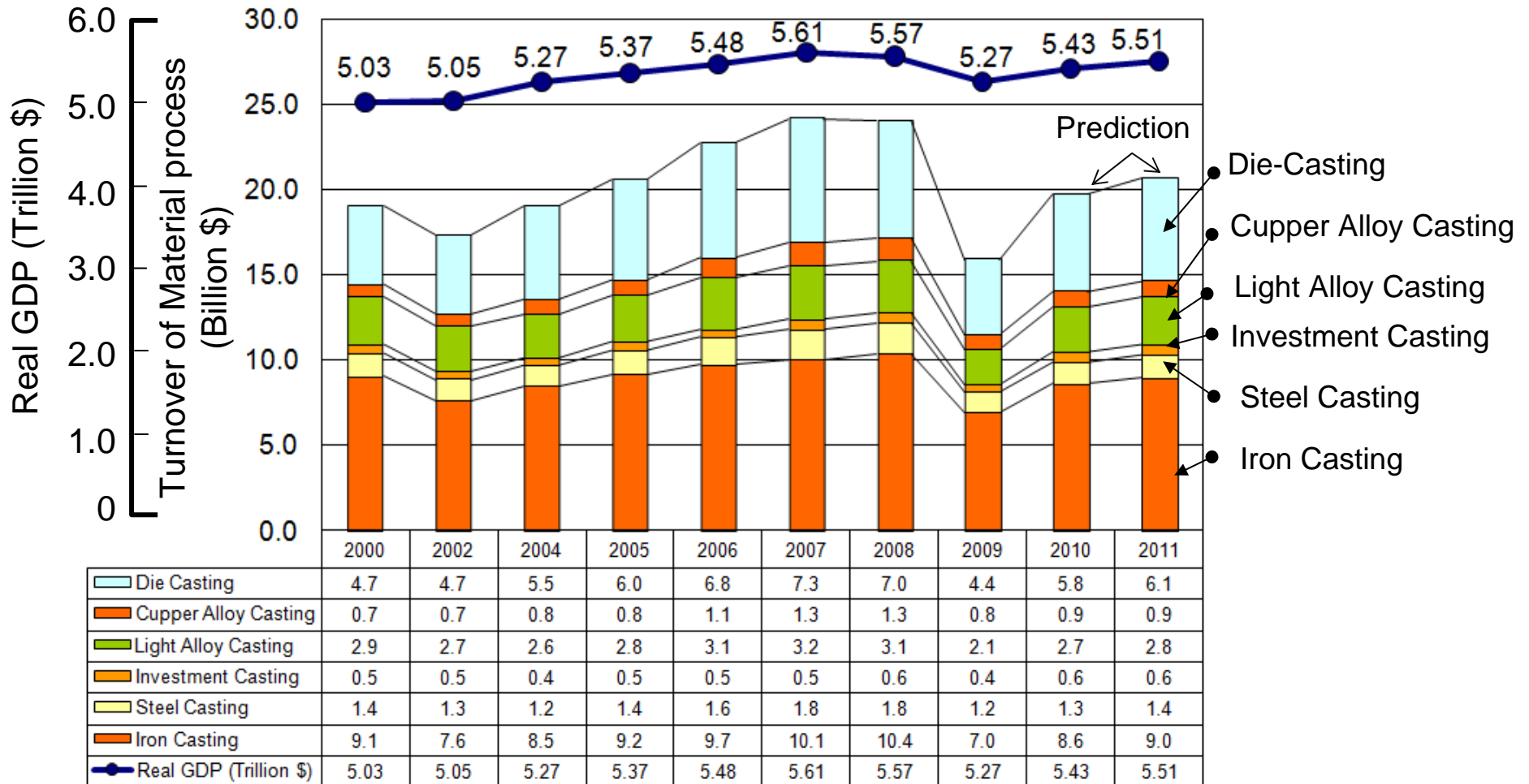
The Present State of Japanese Foundry Industry in 2009 (2009年日本の鑄造産業の現状)

11 September 2010 (IFF: Barcelona)

Japan Foundry Society, Inc.

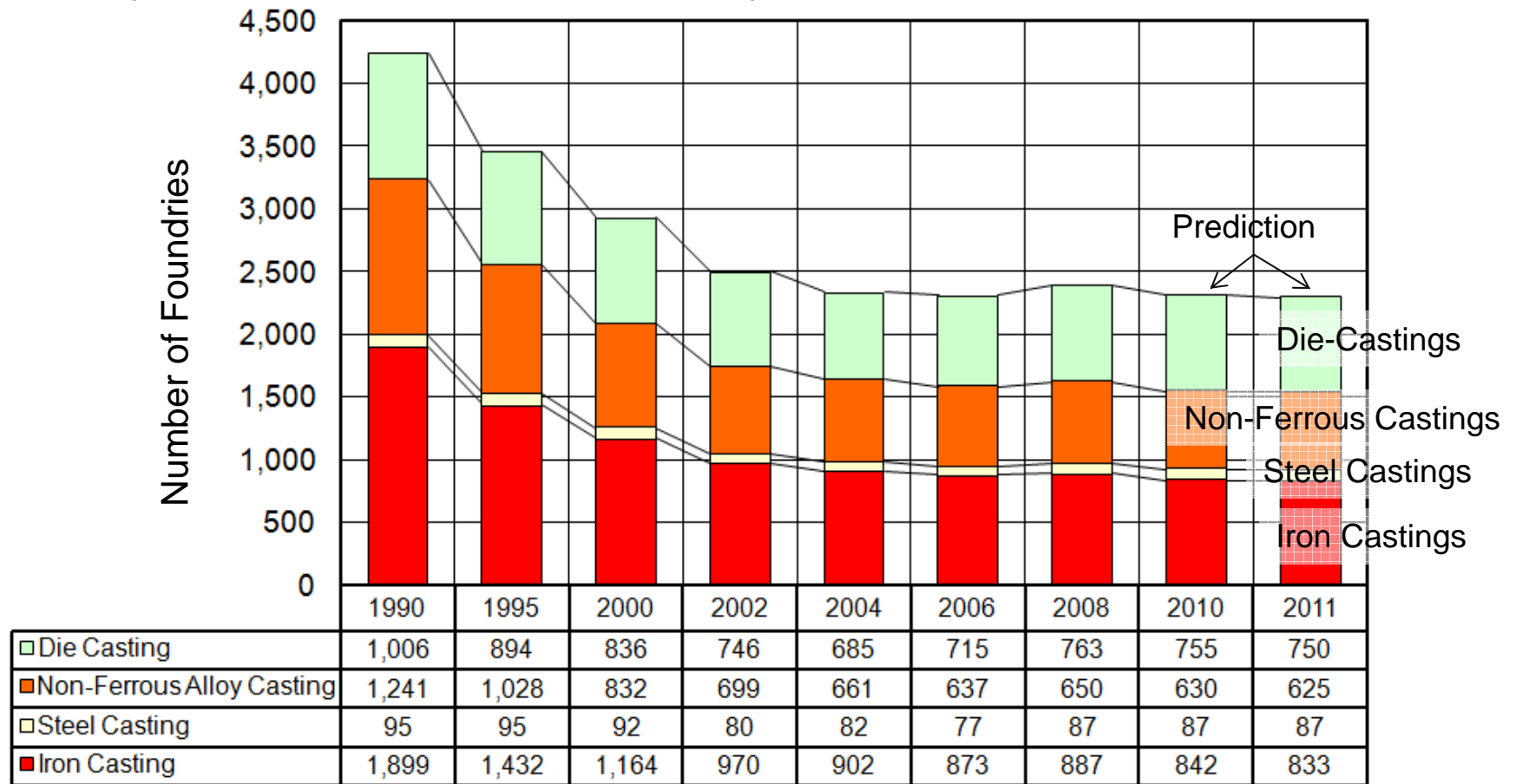
1. Trends of Japanese Foundry Industry (日本鑄造産業の動向) ²

(1) The Transition of the Turnover classified by Material and Process type



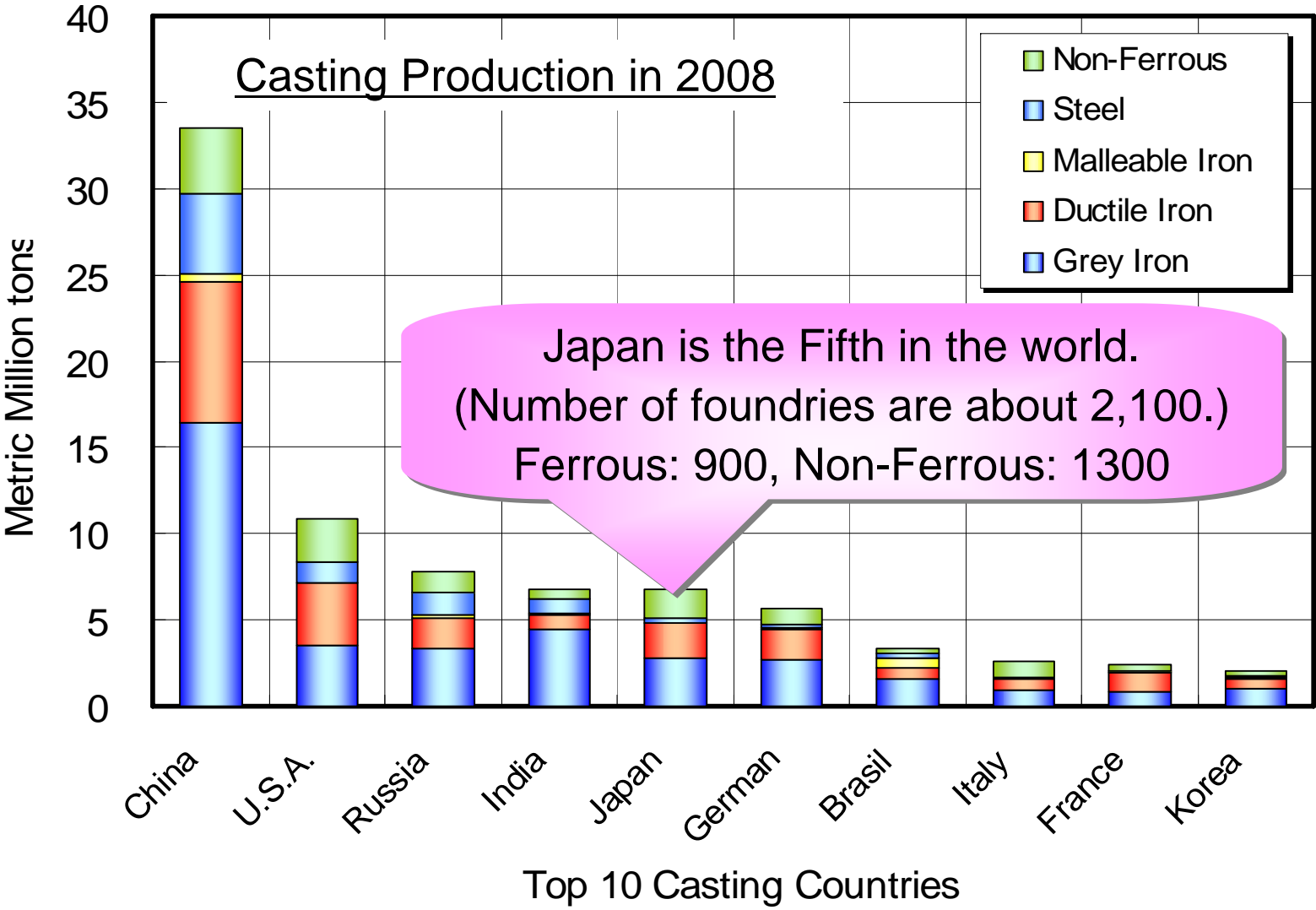
- (1) The turnover of enterprise is increased from 2003 till 2008.
- (2) By the influence of Lehman shock, the turnover of the enterprise decreased by 50% or more in 2009.
- (3) The enterprise in Japan is starting growing up toward the recovery now.

(2) Transition of All Foundry's Number in Japan (日本の鑄造事業所数の推移)



- (1) After 1990, the foundries of 50% or more closed their own workshop.
- (2) The casting traders of 50% are very small enterprises, and the number of employees of their factories is 20 people or less.
- (3) We guess that the number of foundries changes in the stagnant situation for a while.

(3) Rank of Japanese Castings Turnover in the World (世界における日本の鋳造業の位置)

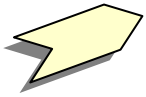
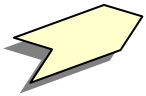
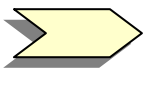
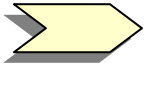


- (1) An Asian region is a foundry in the world today.
- (2) Productivity of the casting industry of Japan is low with about 30% of Germany.

2. The recent production situation & counter recession policy (最近の生産状況と景気対策)

(1) The operation rate of the Japanese Foundries (日本の鑄造工場の稼働率)

Compared to each field of the Year in 2010

	3 rd Quarter	4 th Quarter
Machine Tool	50~60%	
Construction Machine	60~70%	
Automobile	70~80%	
Shipbuilding	80%	

(2) Supporting Policy to Medium and Small-Sized Businesses
by the Japanese Government
(中小企業に対する日本政府の支援策)

① Urgent Stabilization of Employment Aid Fund for Medium
and Small-Sized Businesses

- 300 days max. for 3 years
- 4/5 for Total Shut-down Allowance
- \$60/person· day to be added for educating and training

② Strategic Supporting Organization for Industrial Basic
Technology

(It is commonly called as “Supporting Industry”.)

- 270 cases (150Million \$) in 2009

③ Support for Cash Flow:

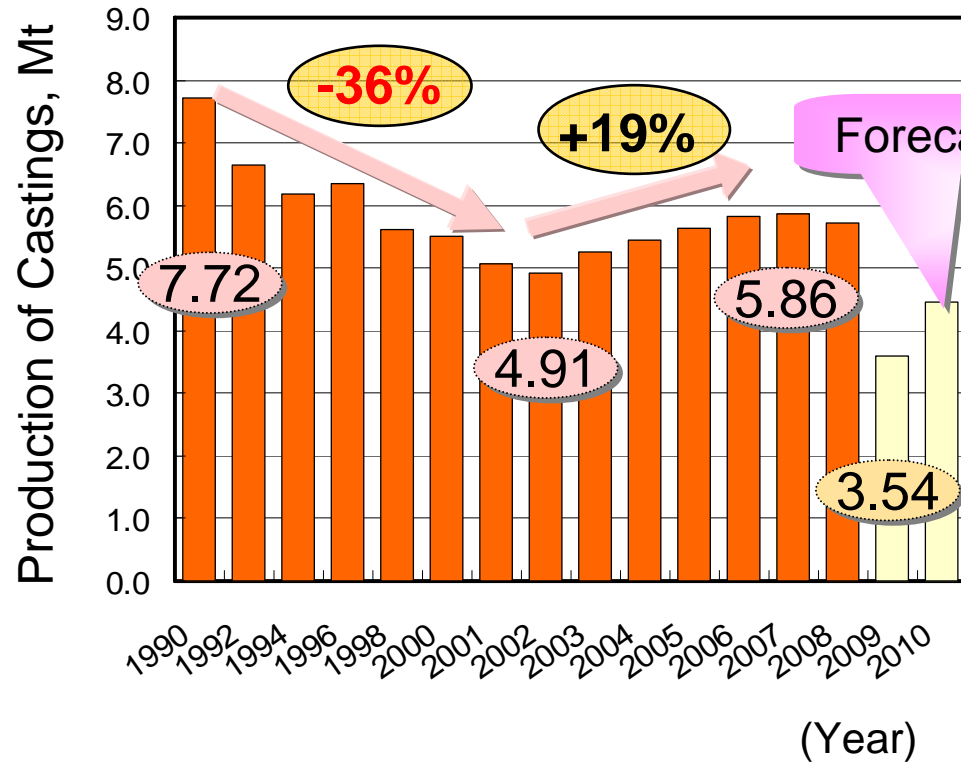
- Urgent Guarantee Ceiling : Increased to \$300 Billion in total
- Target of Urgent Guarantee System:
Over 80% of Medium and Small-Sized Businesses

④ Expanded Employment

- We start the “new recruits training program” for 6 months
 - Training: 340 hours
 - Educating: 90 hours
- Medium and Small-Sized Businesses
 - \$8,700/person • half year to be added for educating and training
- Number of candidates are 20 ~ 30 persons.

3. Production Trend of Ferrous Castings in 2009 (2009年における鑄鉄品の生産傾向)

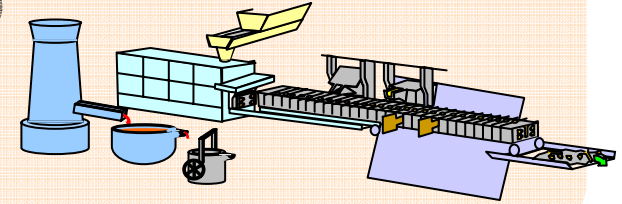
(1) Domestic 3.54 Million Ton
(over a year ago ▲38.1%)



1.8 Mt

About 340 foundries

Mass Production



1.3 Mt

About 555 foundries

Hand Mold Process



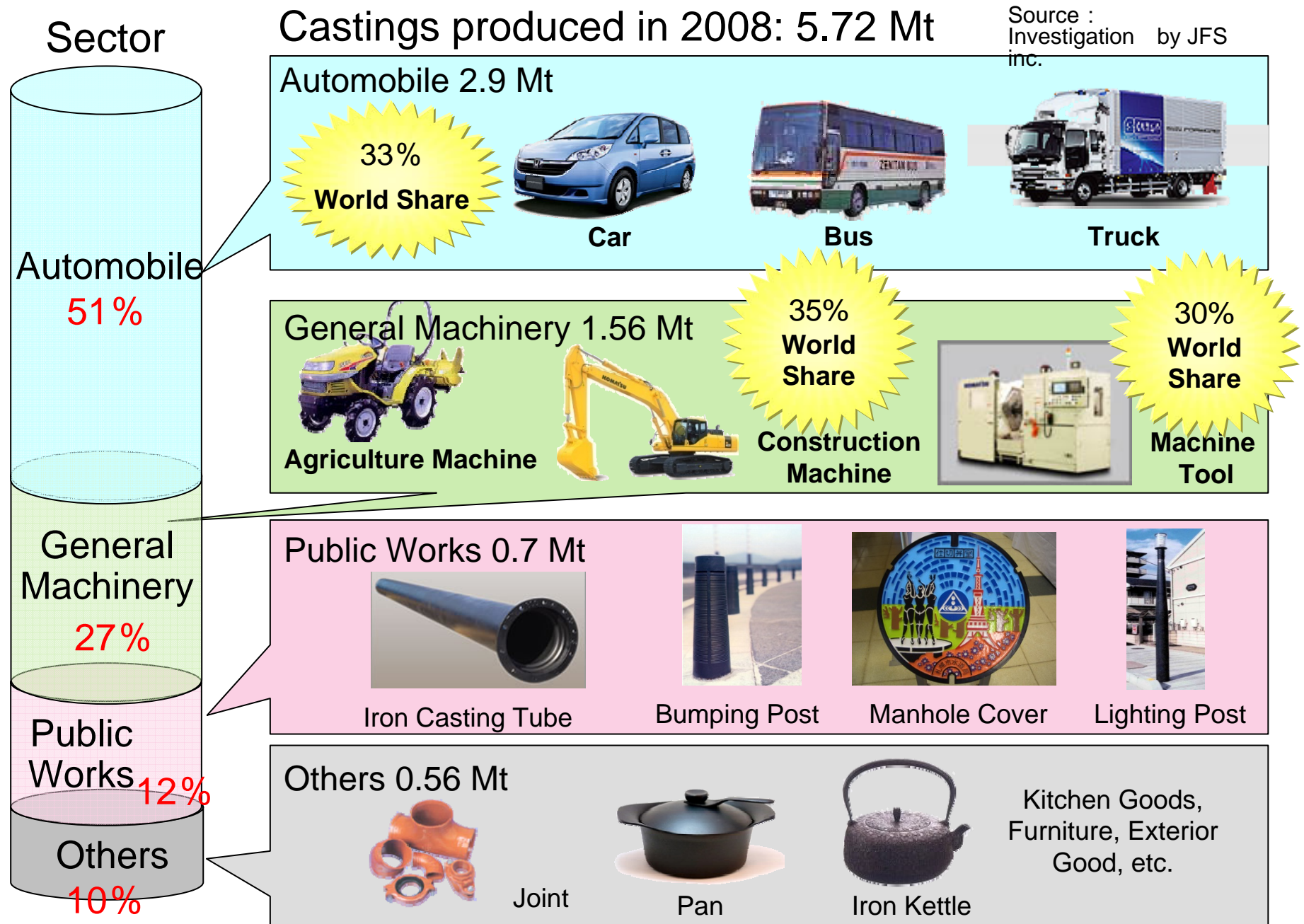
0.4 Mt

About 40 foundries

Centrifugal Casting · Investment Casting & Others

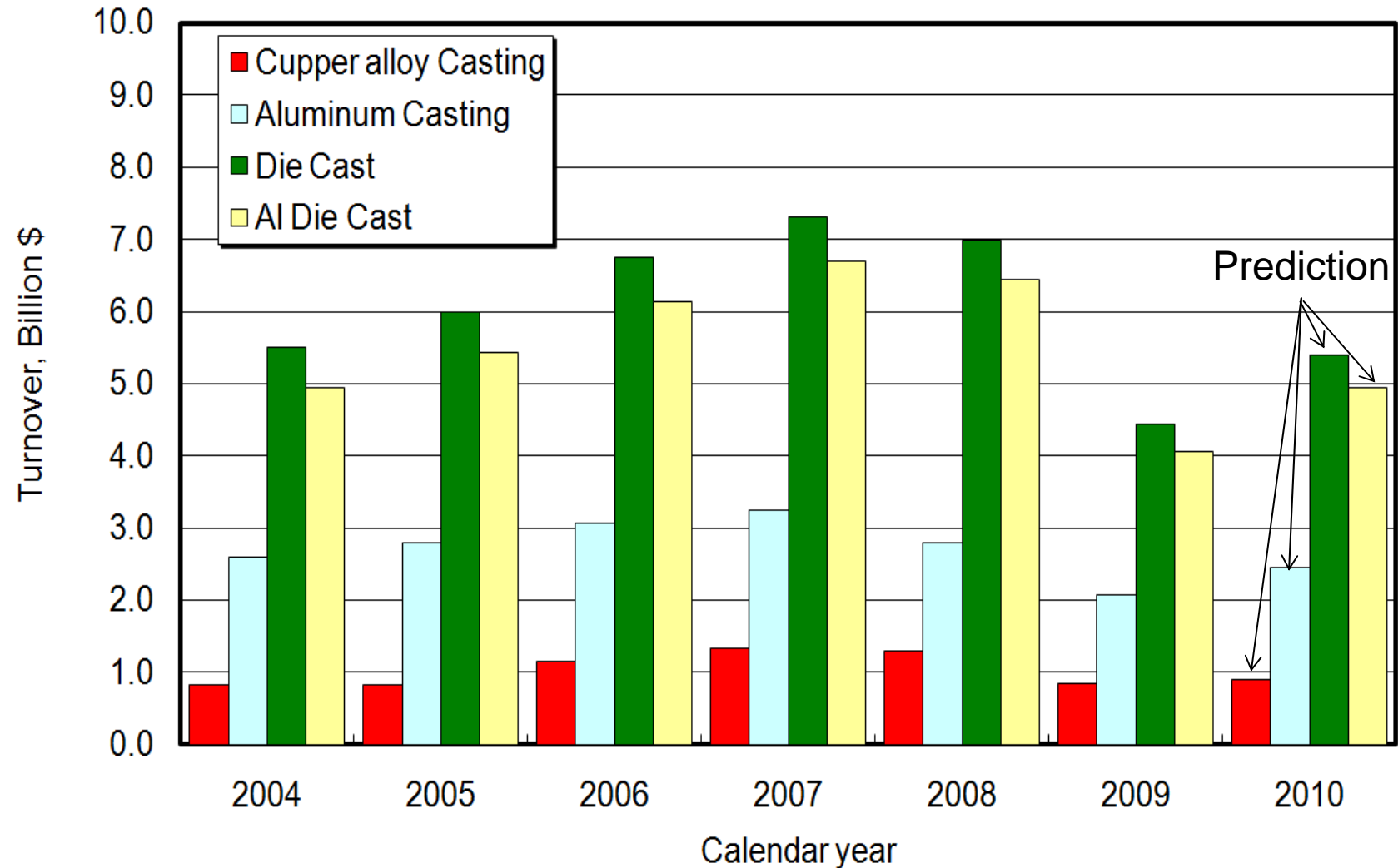


(2) Delivery Structure in 2008 (2008年の分野別生産比率)



4. Non-Ferrous Castings (非鉄鑄物)

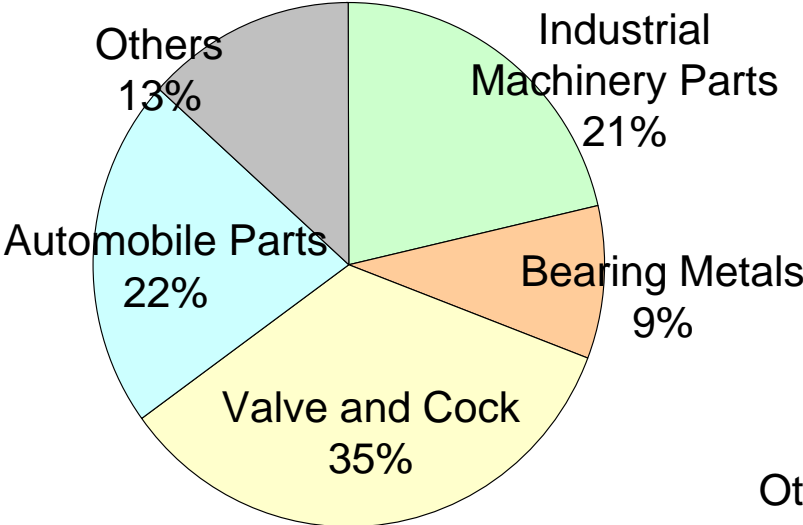
(1) Transition of Turnover (生産金額の推移)



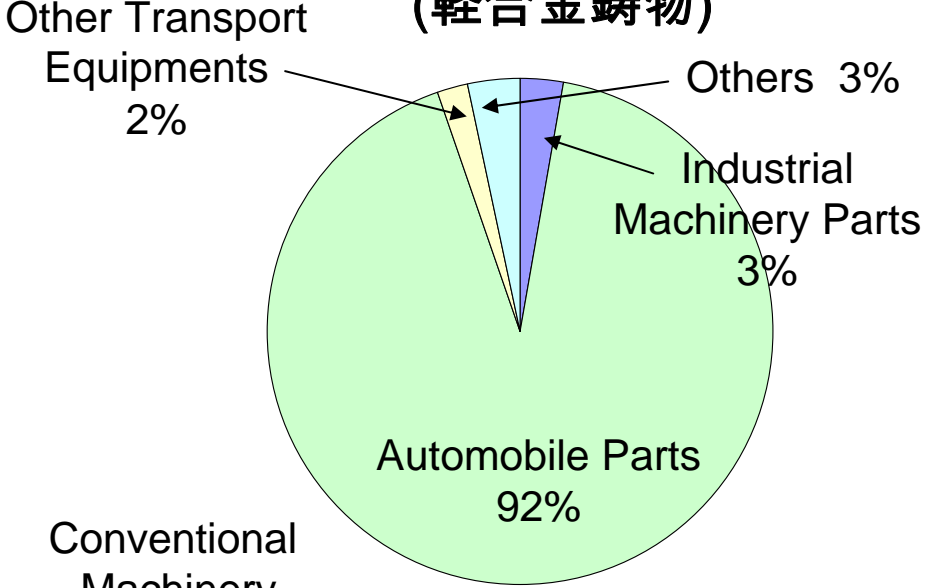
(2) Main Customer (Production of each field in 2007)

(2007年の各分野の主要顧客)

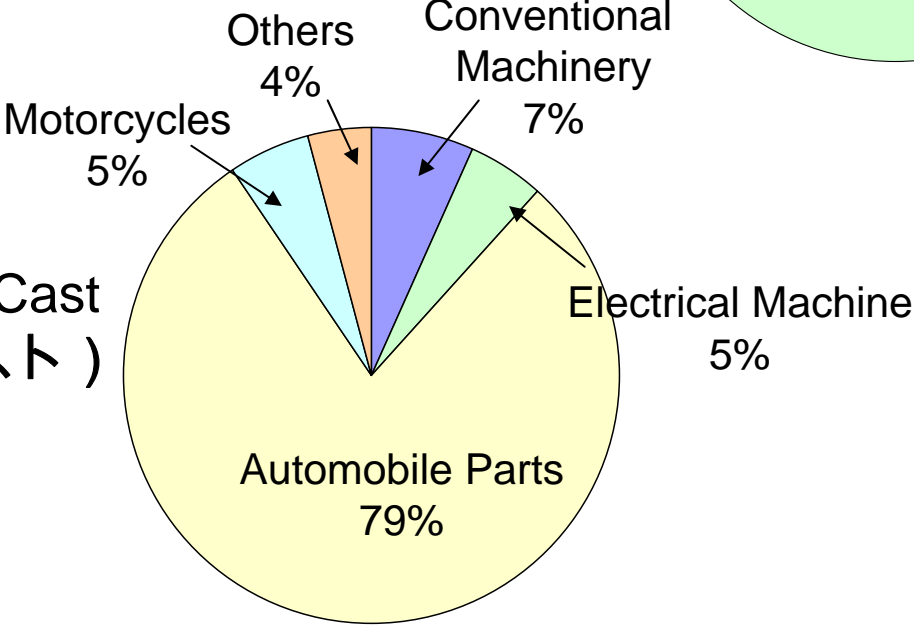
① Cupper Alloy Castings (銅合金鋳物)



② Light Alloy Castings (軽合金鋳物)



③ Al Die Cast (ダイカスト)



5. Investment Castings (精密鑄造)

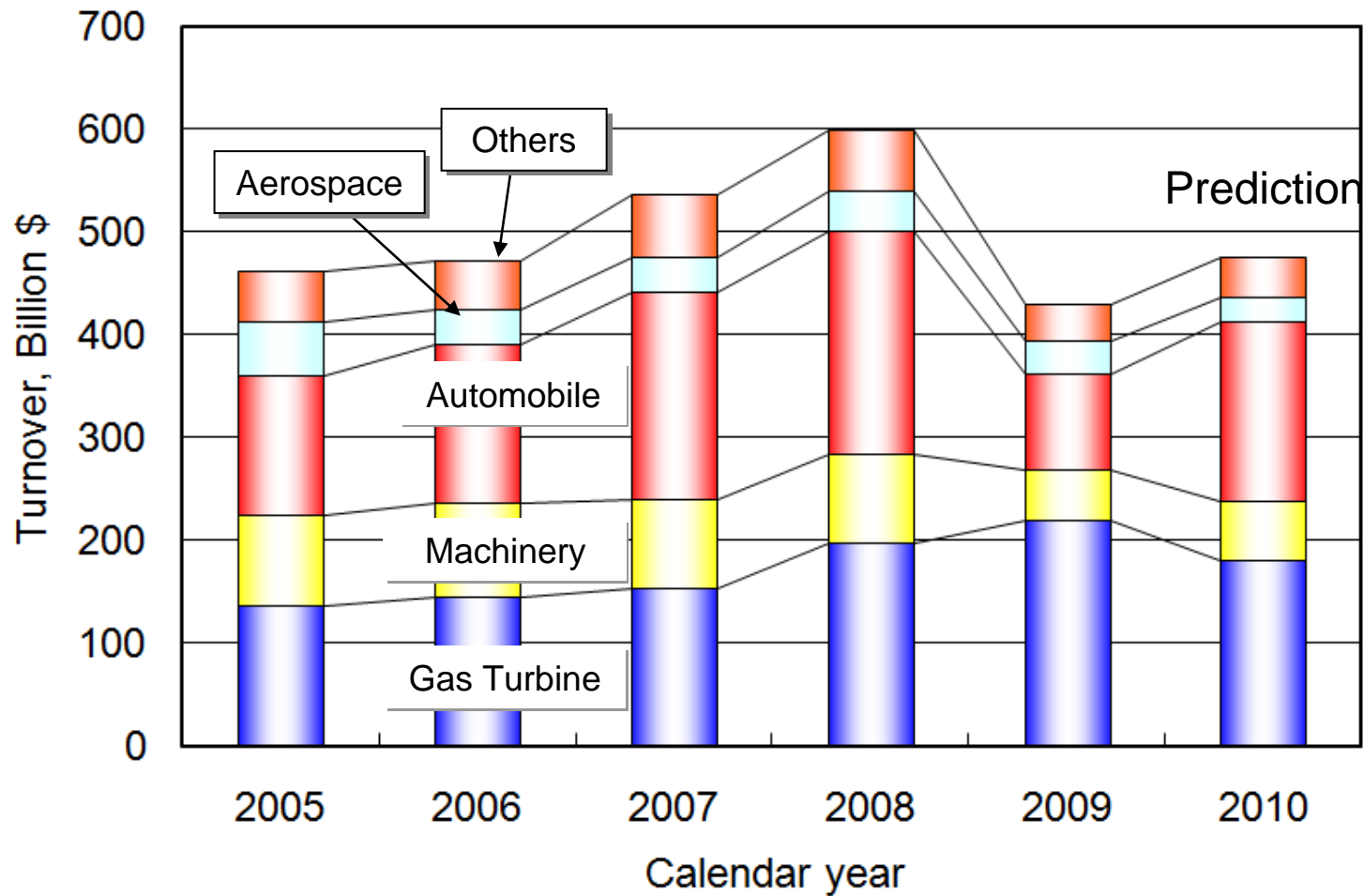
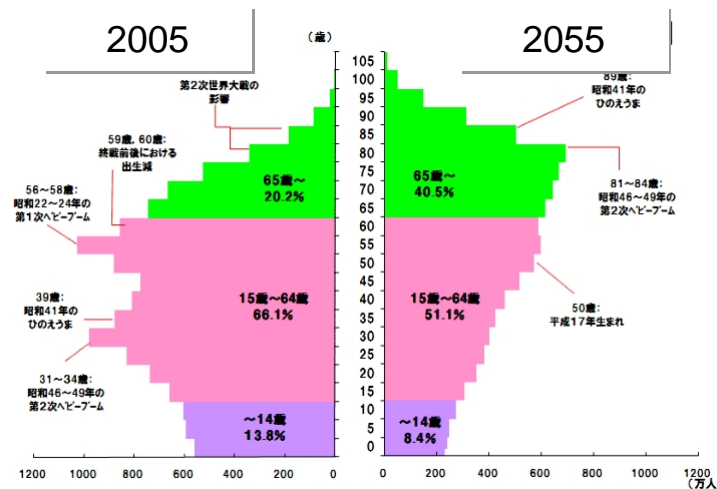


Fig. Turnover for each field in Investment Castings in Japan

- (1) 70% of production weight of investment castings is ferrous.
- (2) Heat resistant ferrous castings grow up more in the future.

6. Background of manufacturing of Japan (日本の製造業の背景)

① Aging society with a falling birthrate

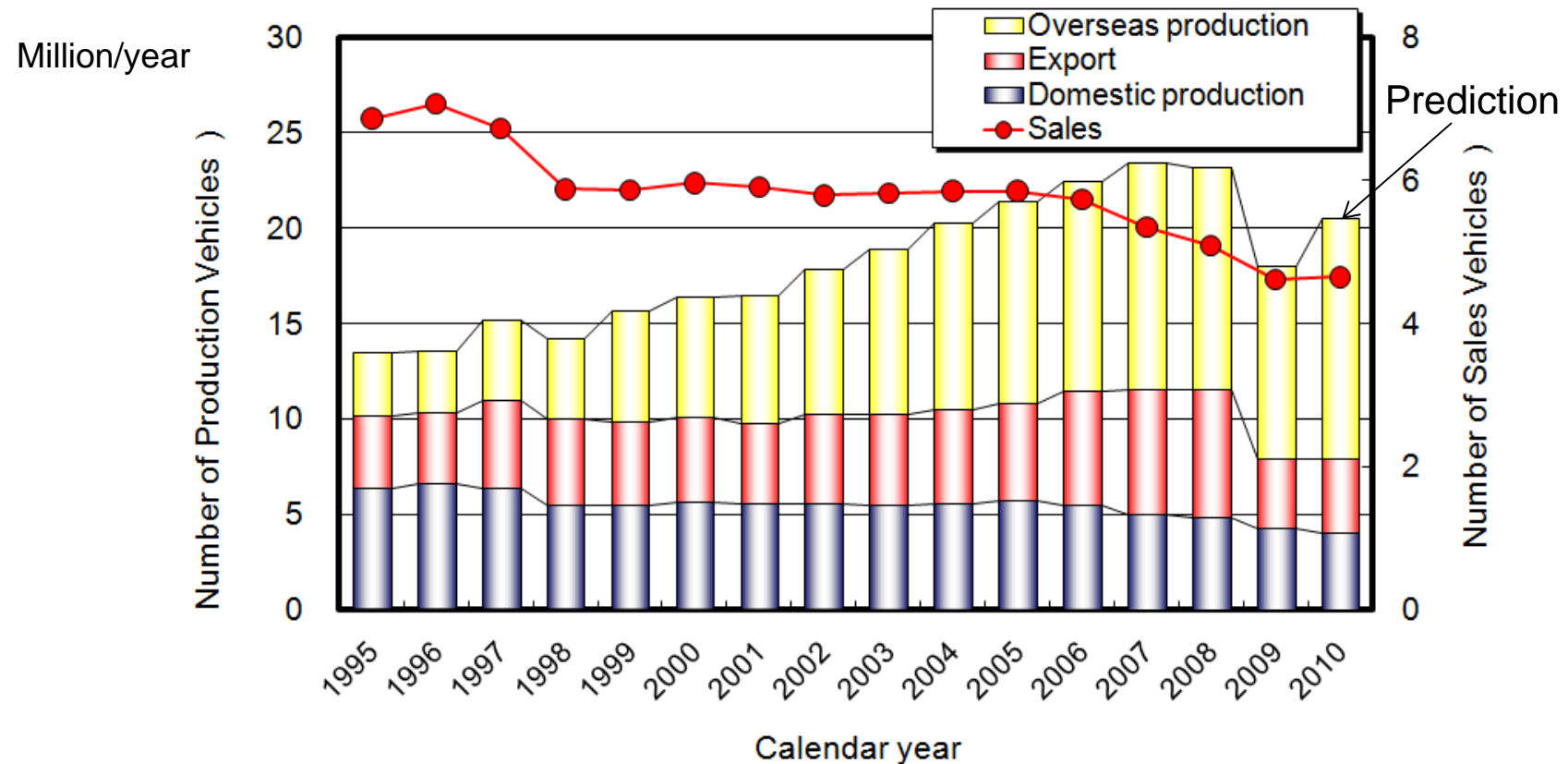


- ② Slumping Demand
(Automobiles, Consumer durables, Constructions)
- ③ From “Half Economy” to “Half Market”
- ④ CO₂ emission reduction
(25% decrease in 2020 compared with 1990)

7. Customer trend (ユーザー動向)

(1) Automobiles (自動車)

① Slumping domestic demand and expanding overseas production



(1) The domestic demands have decreased since 1996.

(2) The amount of domestic production, which includes export volume, is constant of 10 million vehicles.

(3) The overseas production has expounded, especially China and Asian region.

② Increase of fuel-economy car (Ecologically-friendly Car)

- Weight saving
(Increase of lightening material such as aluminum)
- Hybrid Electric Vehicle (HEV)
(Drastic decline of cast iron material)
- Electric Vehicle (EV)
(Disappearance of cast iron materials such as engine parts)



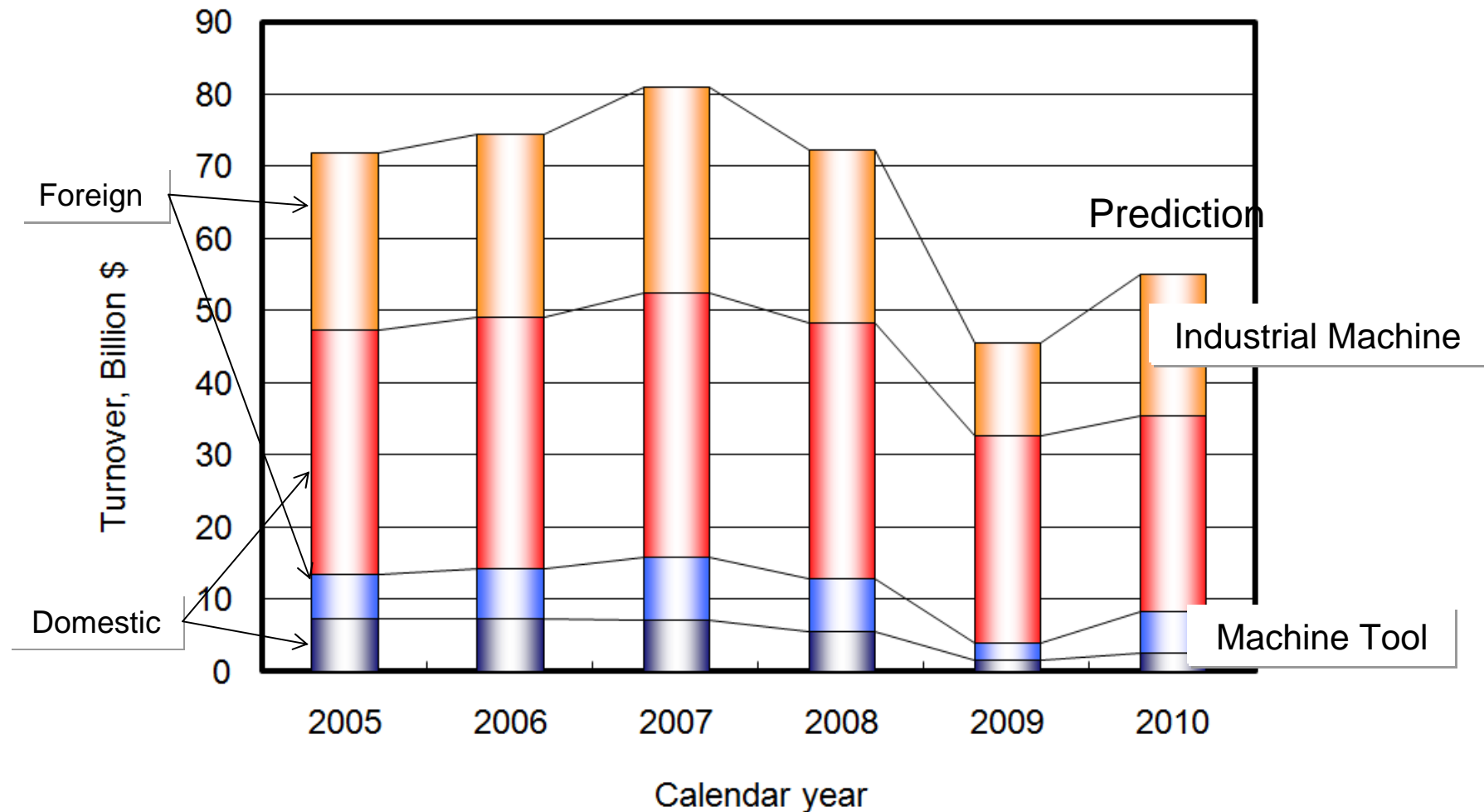
Toyota Prius (HEV)



Mitsubishi iMiEV (EV)

(2) Machine tool · Industrial machine (機械部品・工作機械)

- ① Drop in demand by depression of capital investment for increased production and rationalization
- ② Acceleration of overseas sales and overseas production

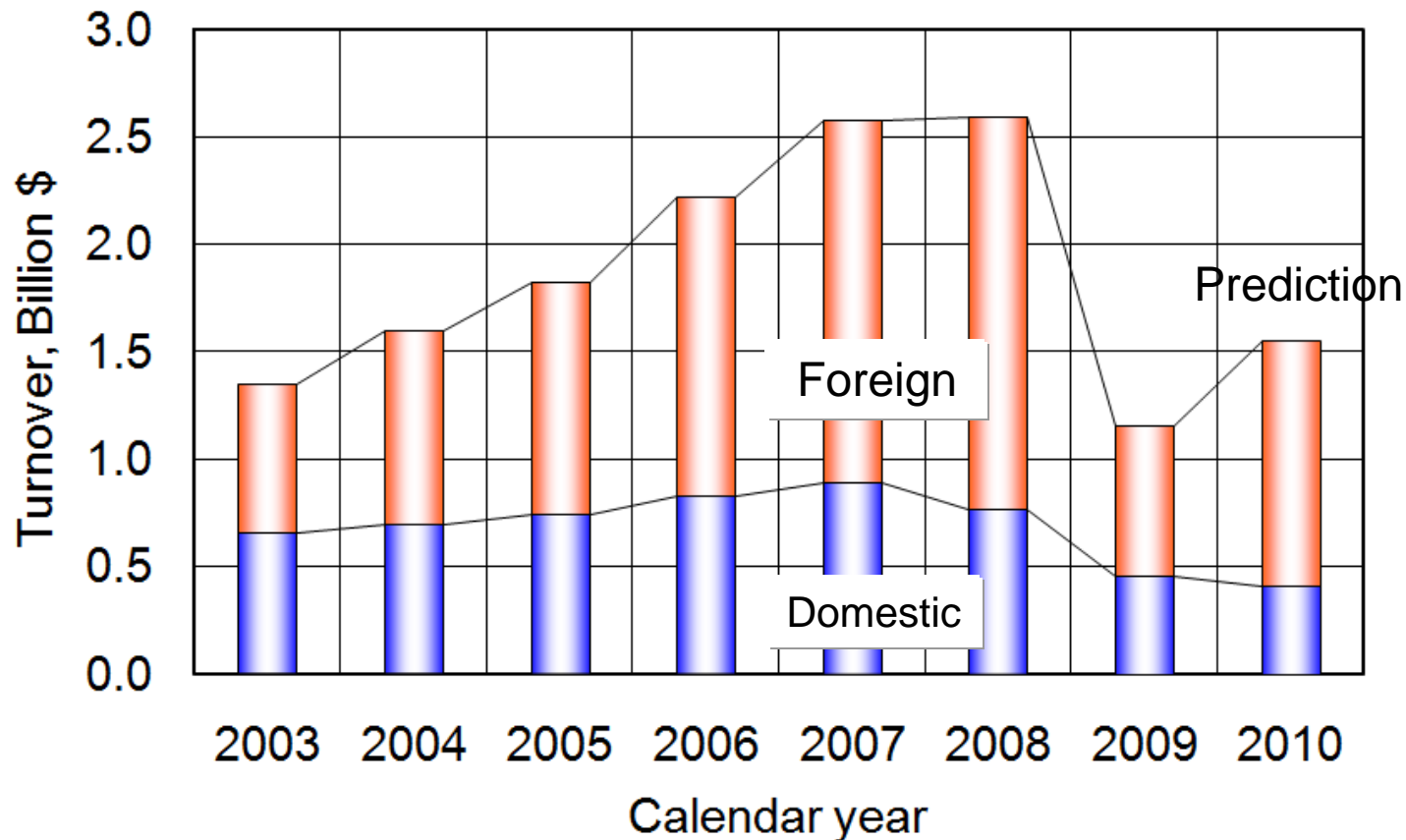


(3) Construction machine (建設機械)

① Change in domestic policy

Sudden decrease of domestic demand by the new concept of Japan Government, that is "Welfare from engineering works"

② Acceleration of overseas sales and overseas production



8. Challenge and the future of casting industry (鑄造産業の挑戦と将来)

(1) Themes (課題)

- ① The ready-made market (automobile, machinery tool, and construction machinery: 80%) rushes into in the Half Market age.
- ② Excessive casting equipment and excessive corporate number.
- ③ Demand of high-quality and high performance metal castings.
 - weight saving, super-heat resistance, super-precision, super-jumbo
- ④ Continuation of the casting program.

(2) The way for us to go (我々が進むべき方向)

① The continuation of the casting industry

- Productivity advance in the casting corporation
- Grouping to wide-ranging material maker from casting business
- Development from ferrous casting to non-ferrous casting and another material

② International cooperation and specialization with countries in Europe, USA and Asia.

(3) Casting Industry Vision of JFS, Inc. (鑄造産業ビジョン)

20

This vision was started in 2006 by Japan Government.

Our vision in 2010 consists in the following six items.

- ① Conduct business aggressively improving the commodity power (character) by the technology and the skill.
(技術・技能で商品力を高め攻めの経営)
- ② Business continuance by reinforcement of business infrastructure and sound management
(経営基盤強化と健全な取引による事業継続)
- ③ Strengthening of competitiveness by cooperate with same or cross-industry.
(同業 / 異業/地域との積極的な連携による競争力強化)
- ④ Cooperation with foreign countries
(海外との連携)
- ⑤ The long-term person's education and training
(息の長い人材の確保・育成)
- ⑥ Strengthening of environment and energy measures
(環境とエネルギー対策の強化)

(4) Investment casting technology innovates the future of the foundry.

Holding “The 13th WCIC (2012) in Kyoto” has been almost approved by EICF and ICI.

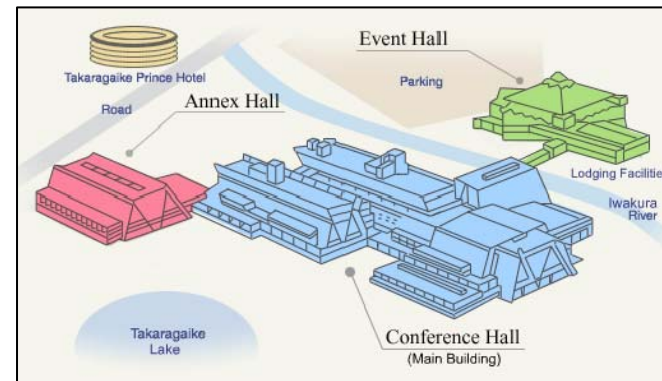
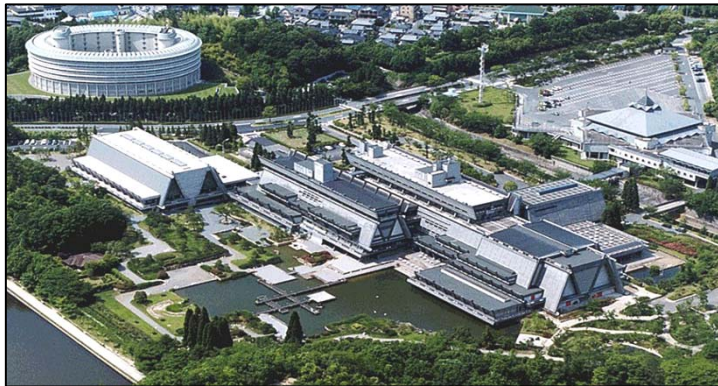
(WCIC: World Conference on Investment Casting)

① Concept “Innovation from Asia” (アジアからの革新)

② Date and Venue

Date: 15th - 18th in April 2012

Venue: **Kyoto International Conference Center (ICC Kyoto)**



Kyoto International Conference Center

From the world, we hope for a lot of people to take part in a conference and to visit the exhibition floor.

Thank you for your kind attention!