

Presented by:
Andrew Dibrov,
Vice-President of Russian
Association of Foundrymen

**Trends in Russian Foundry
Industry
Revision 2012**



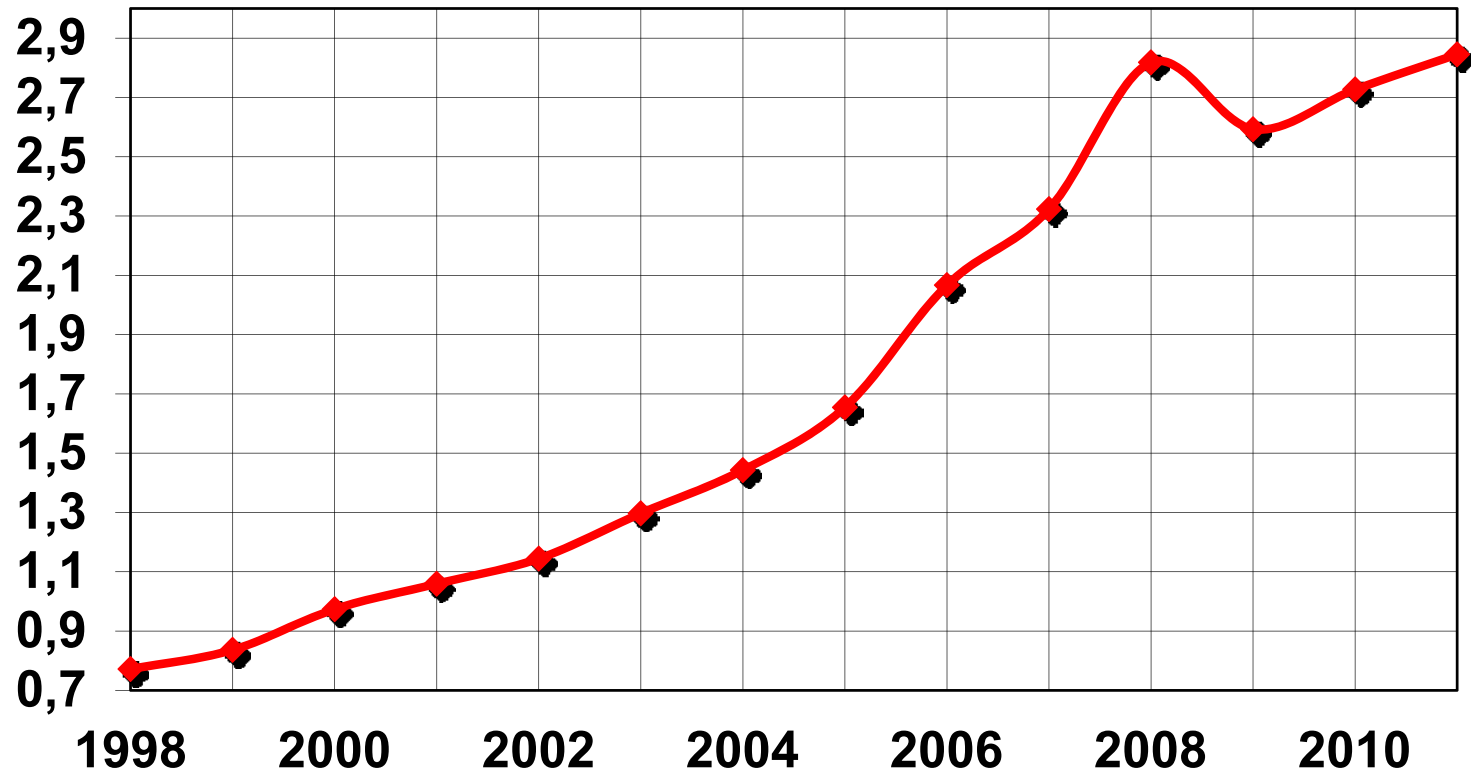
“Trends of Foundry Development in Russia”

General data:

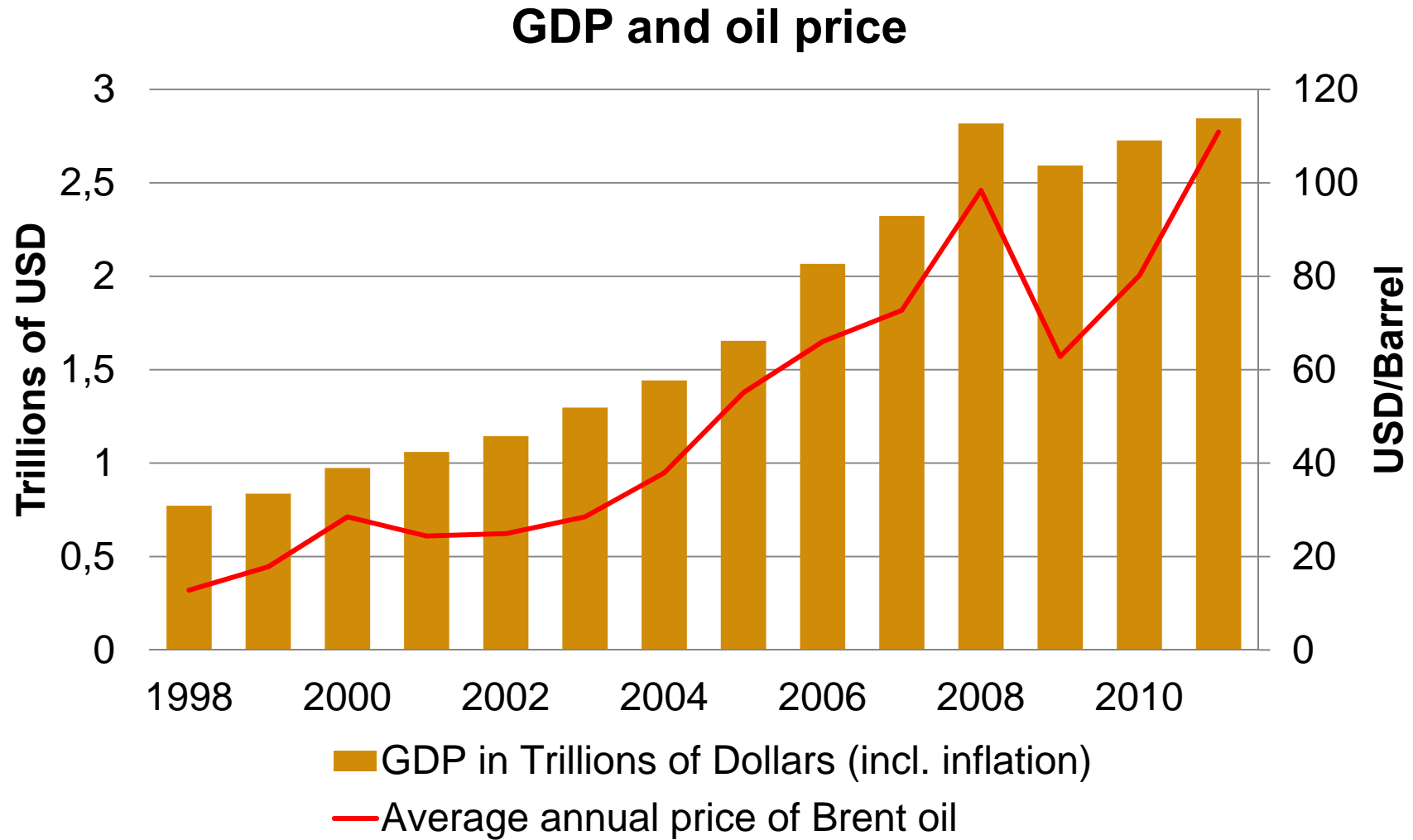
- 1. Territory – 17.100.000 km²**
- 2. Population – 143,7 mln.**
- 3. Working force – 80 mln.**
- 4. Total number of foundries – about 1.350**

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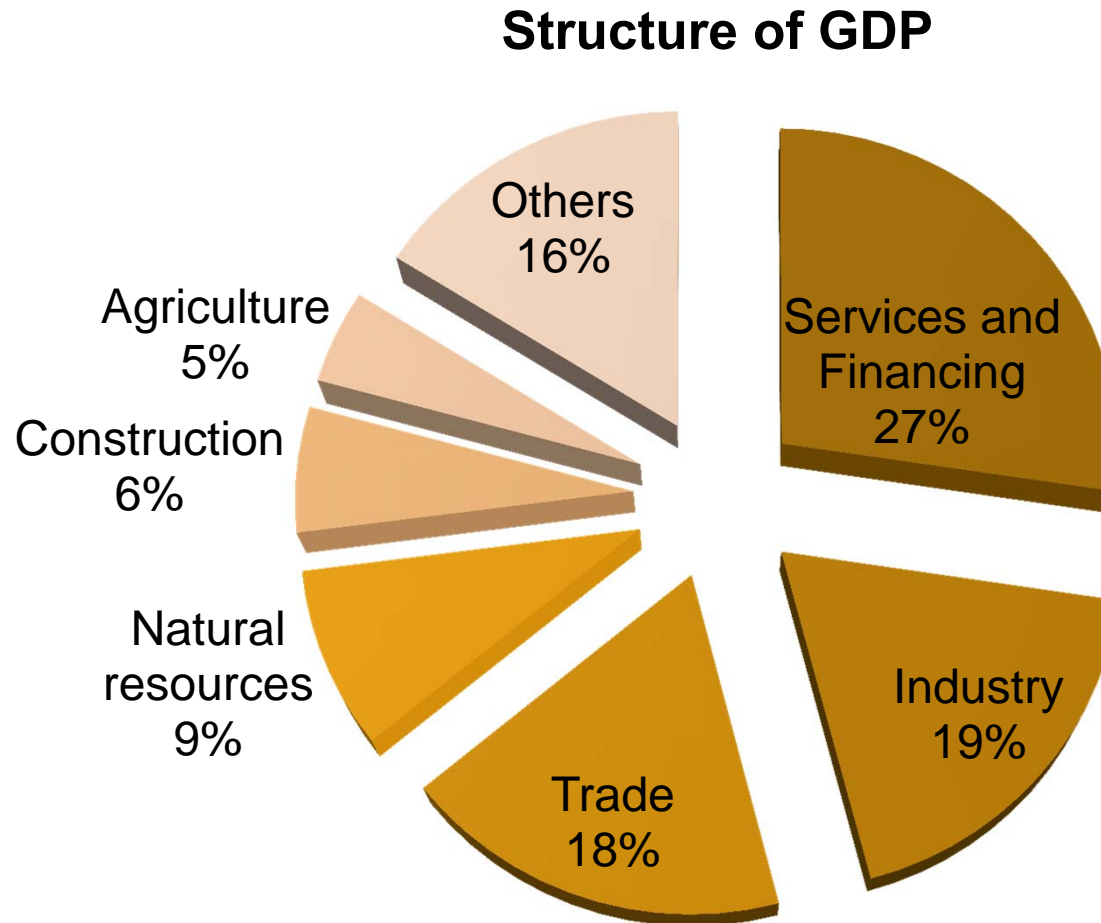
GDP in Trillions of Dollars (incl. inflation)



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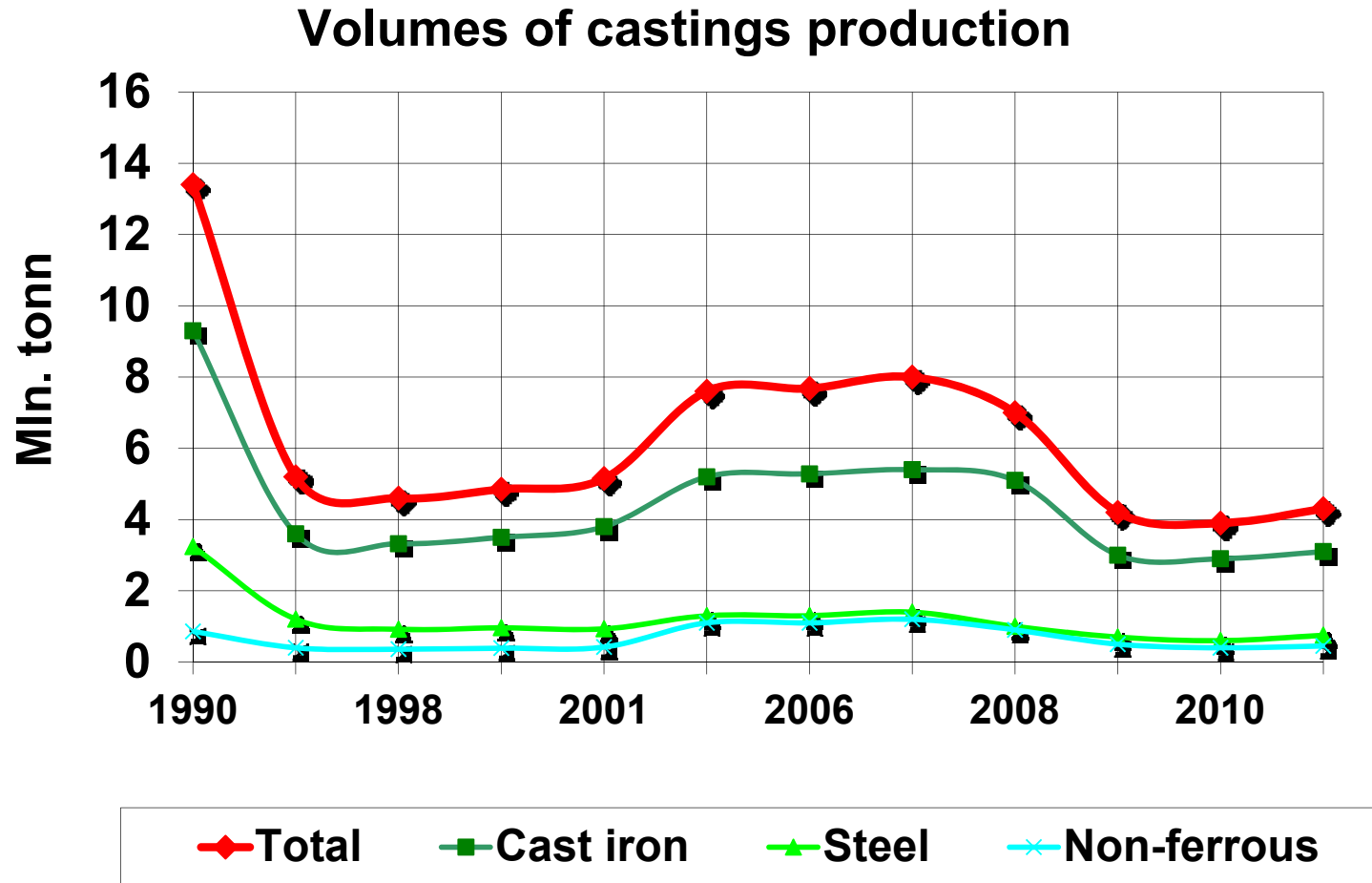


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Automobile industry – main consumer of castings is 0,8% of GDP

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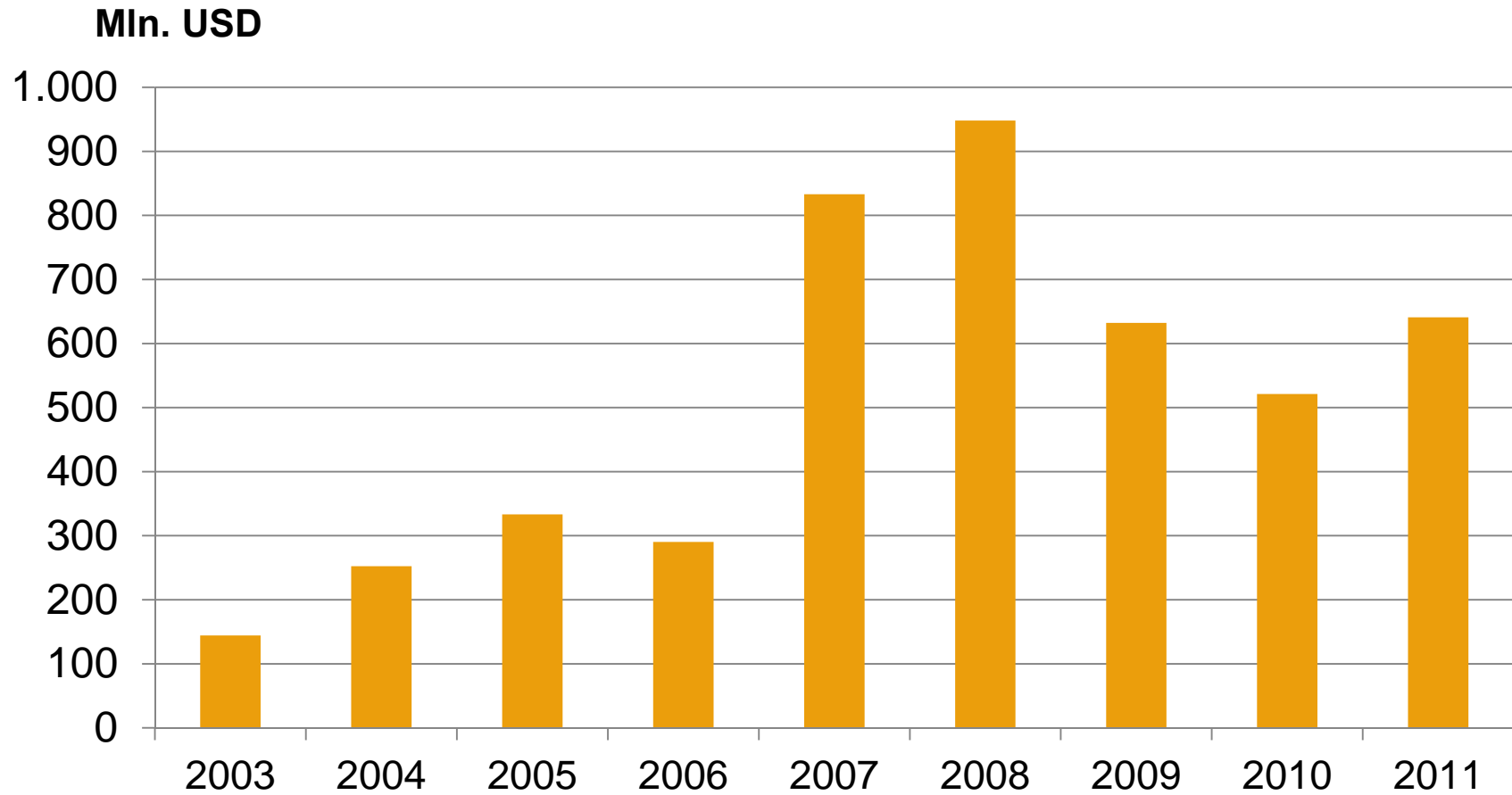


The biggest volume of production was in 1985 – Russia produced 18,5 mln. tons

In 2011 total 1240 foundries produced 4,3 mln. tonn of castings, Export only about 2%

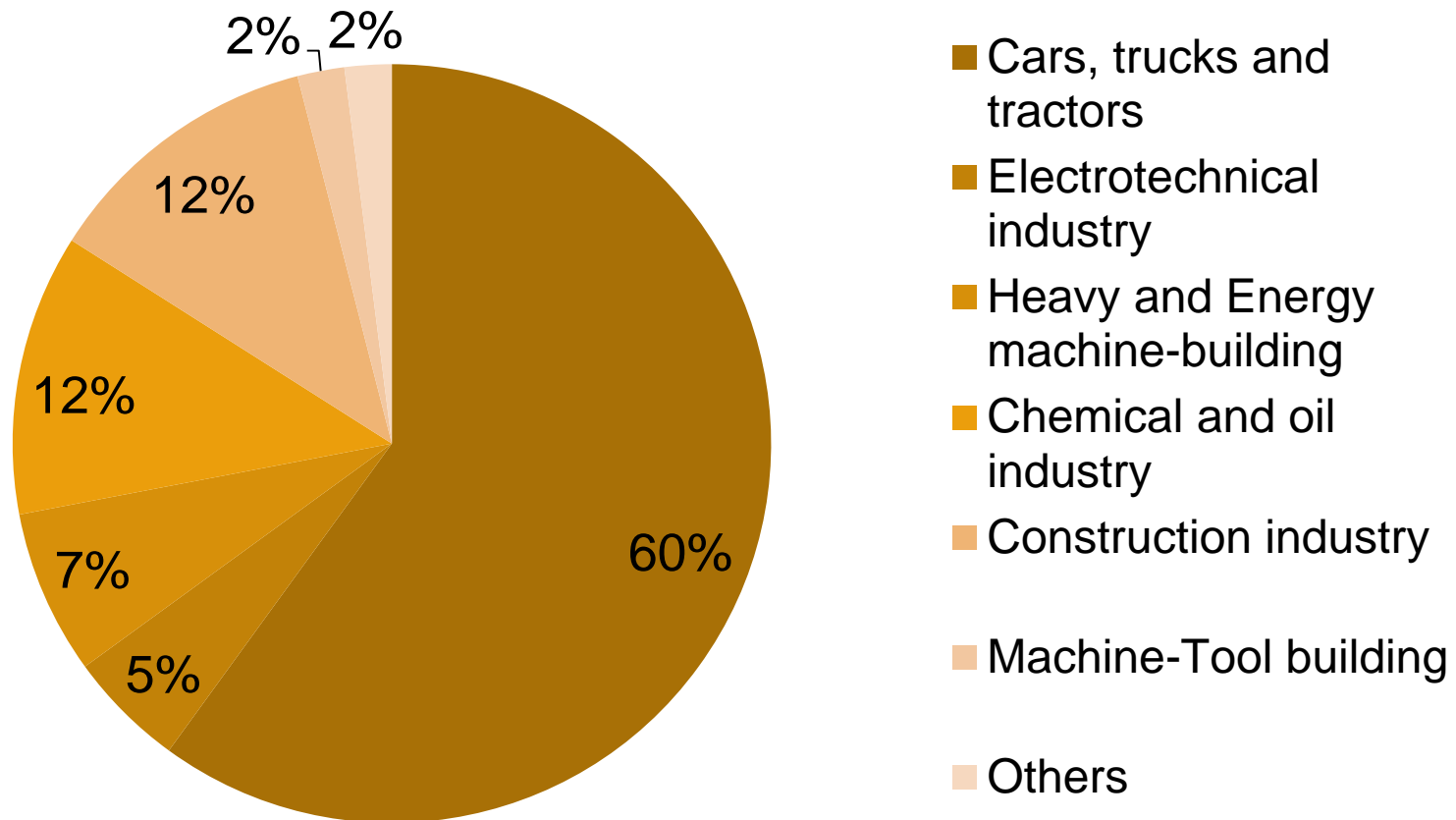
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Import of foundry equipment



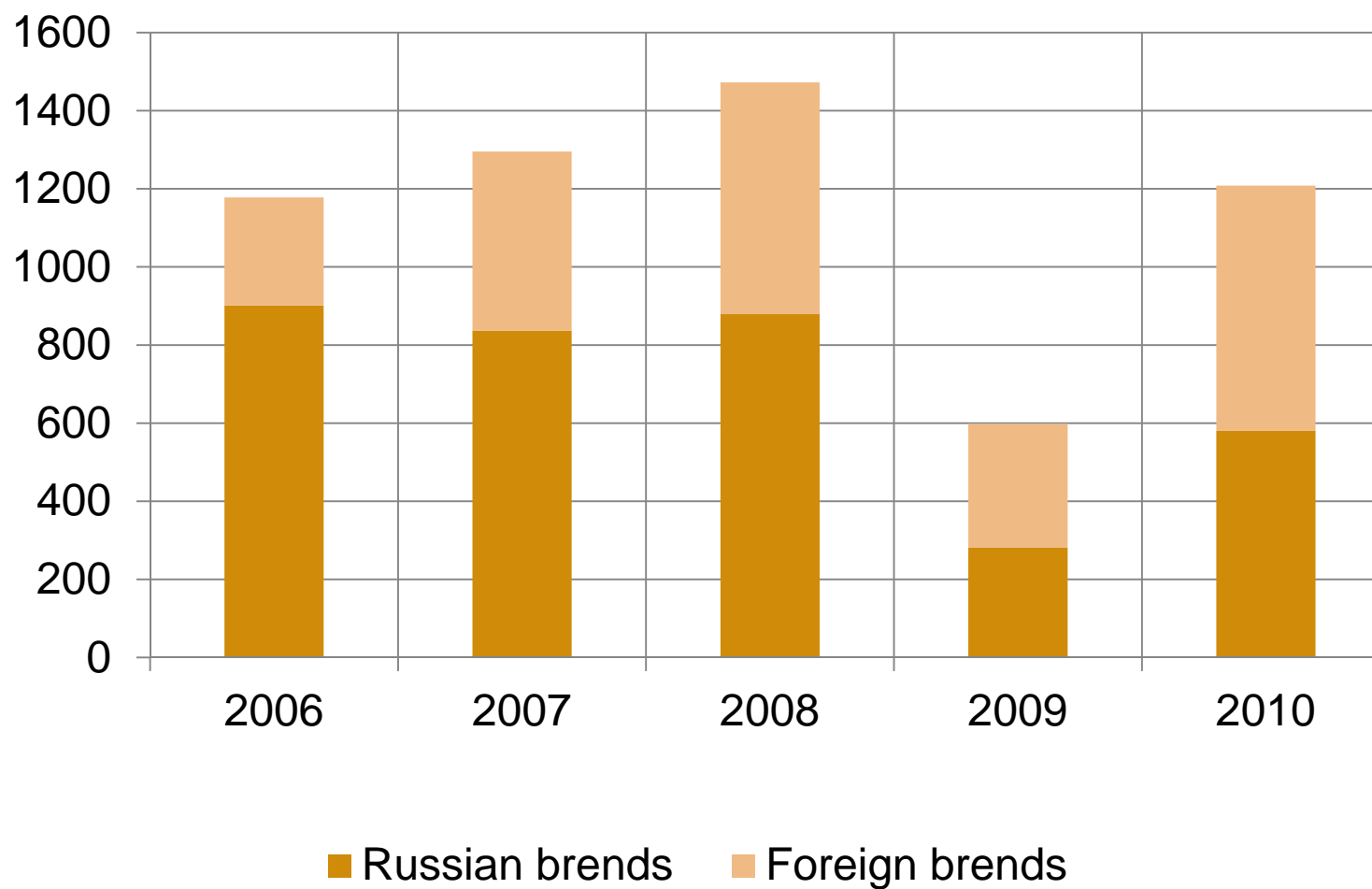
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Production of castings by sectors in 2011г.



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Production of cars, thousands pcs



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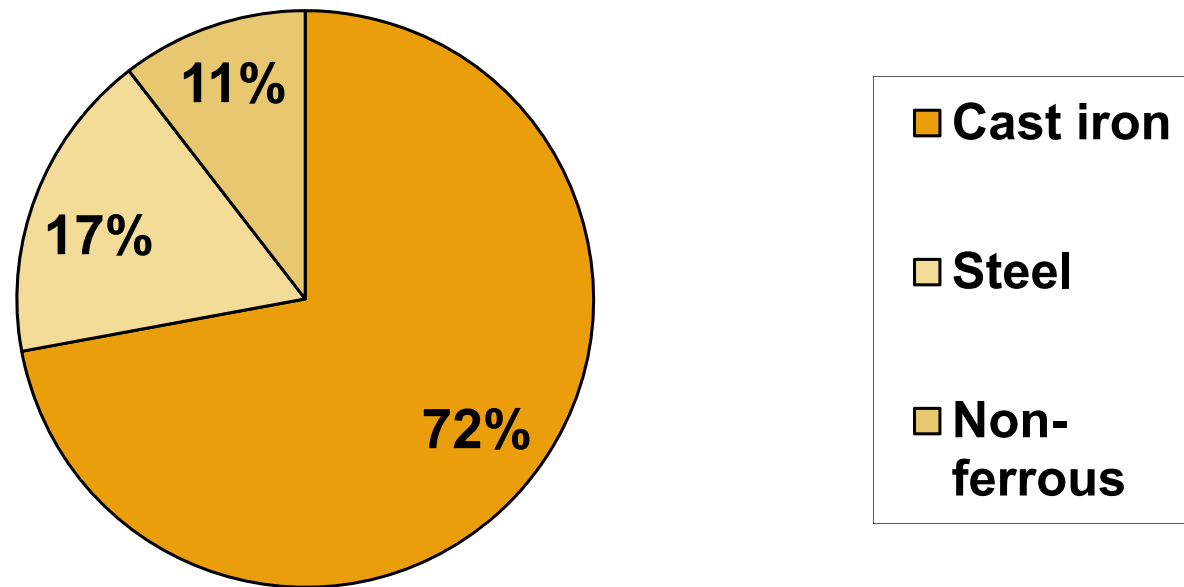
Areas with high quality casting demand:

- 1. Railway - boogie**
- 2. Oil & gas transport – steel valves**
- 3. Mining – wear parts, Mn steel**
- 4. Defence/military – large steel castings and AL and Mg castings**

Main need is in steel castings!

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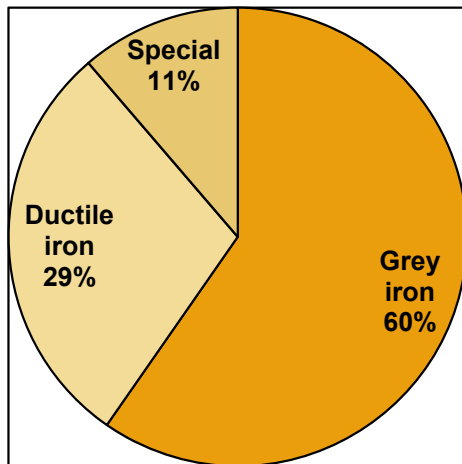
Distribution of castings by alloys in 2011



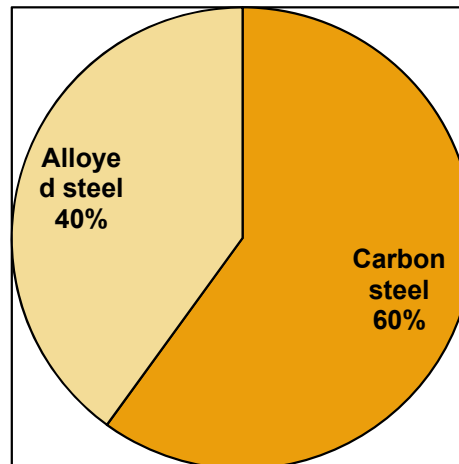
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Distribution of castings by alloys in 2011

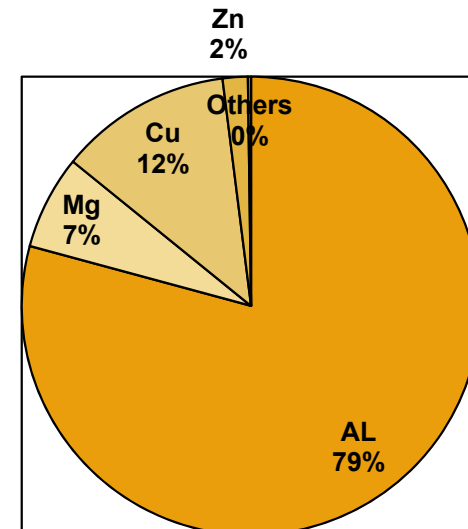
Cast iron - 72%



Steel – 17%



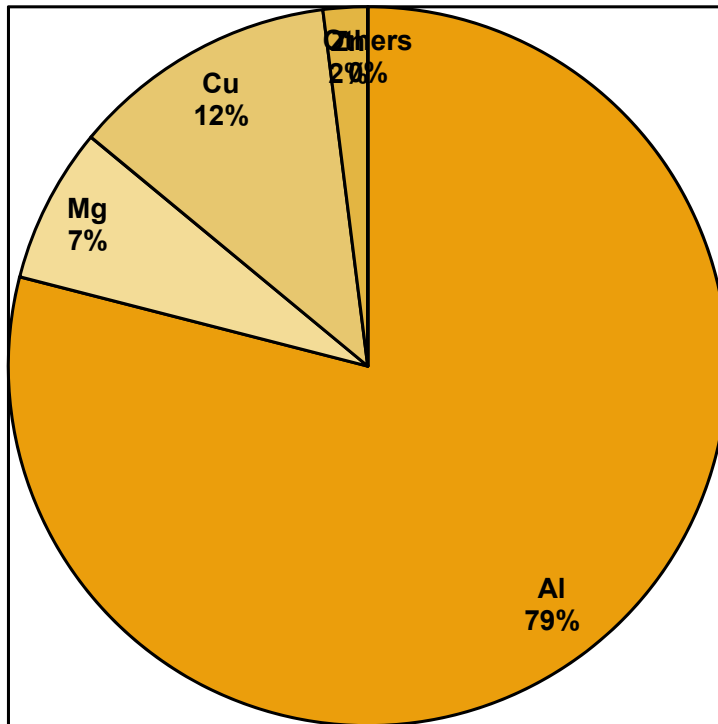
Non-ferrous-11%



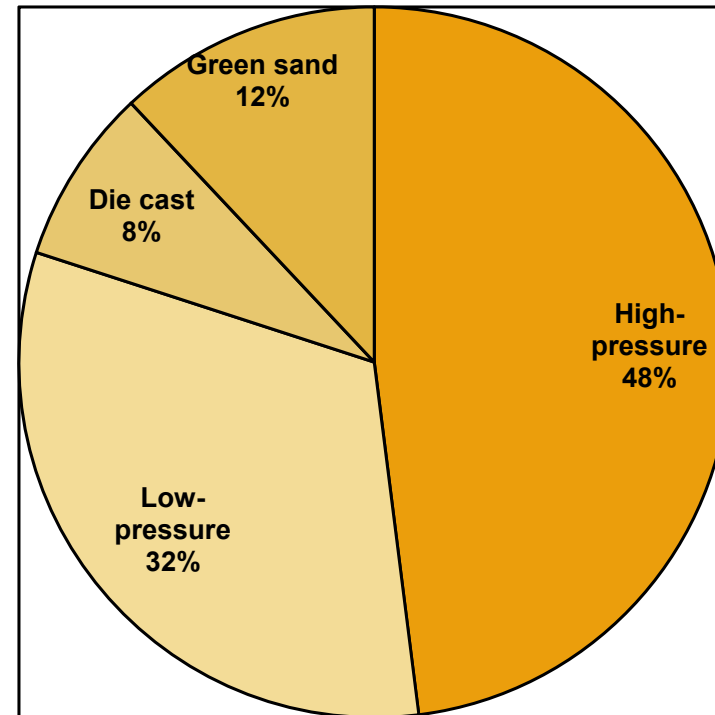
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Non-ferrous castings production

**Non-ferrous -11%
from total**

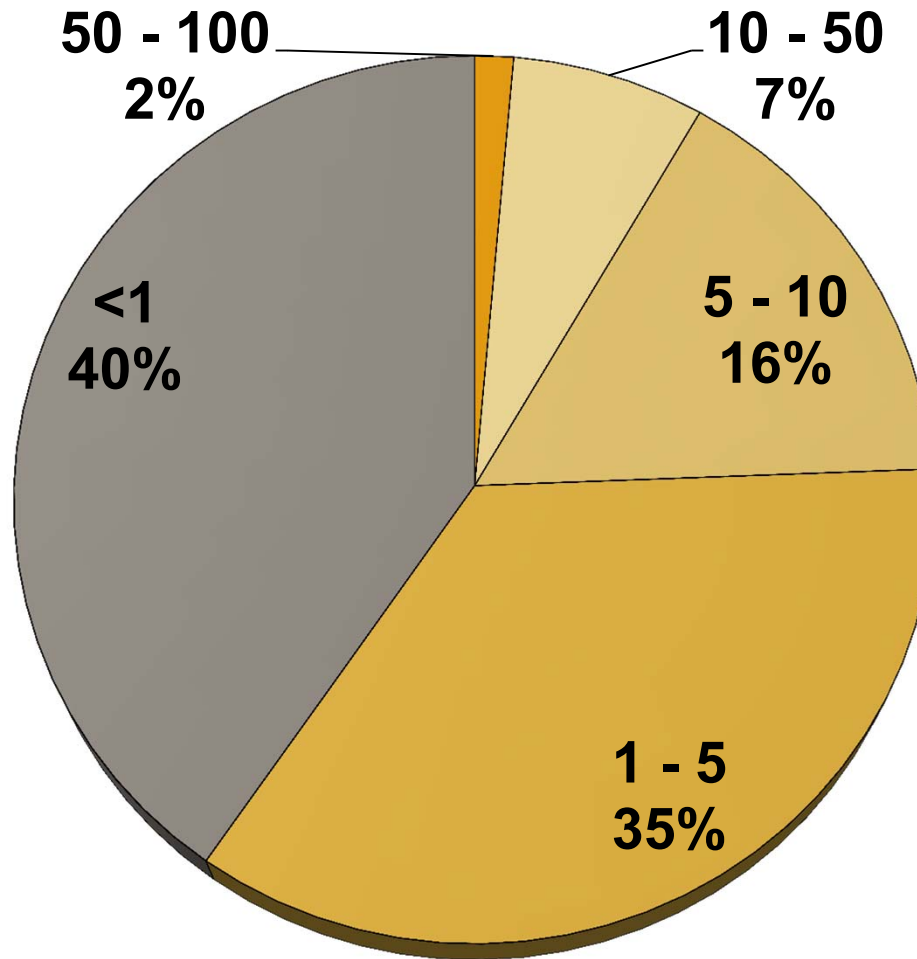


**Aluminium - 79%
from total non-
ferrous**



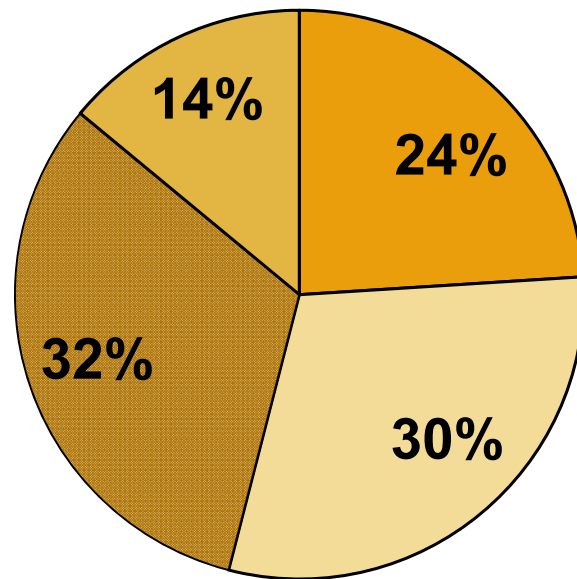
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Distribution of foundries by capacity, 1000 t/year



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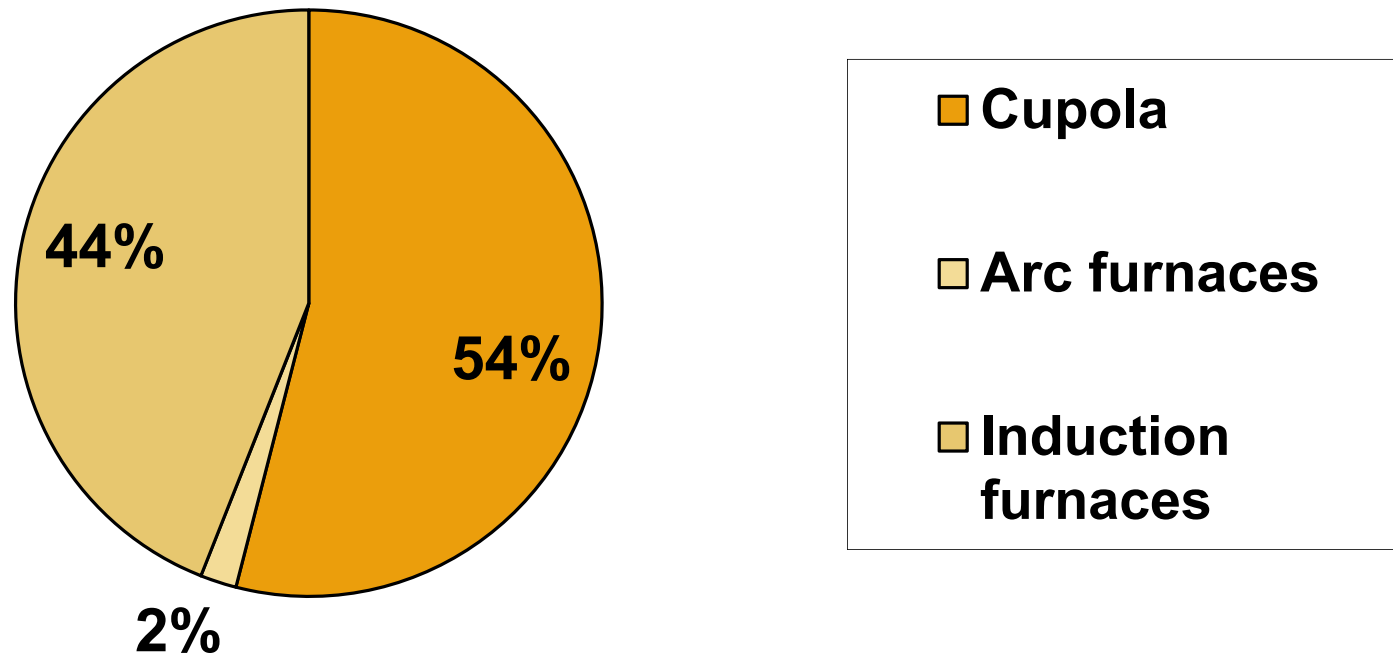
Level of foundries automatization by q-ty of castings produced on:



- Automatic lines
- Semi-automatic lines
- Single machines
- Manually

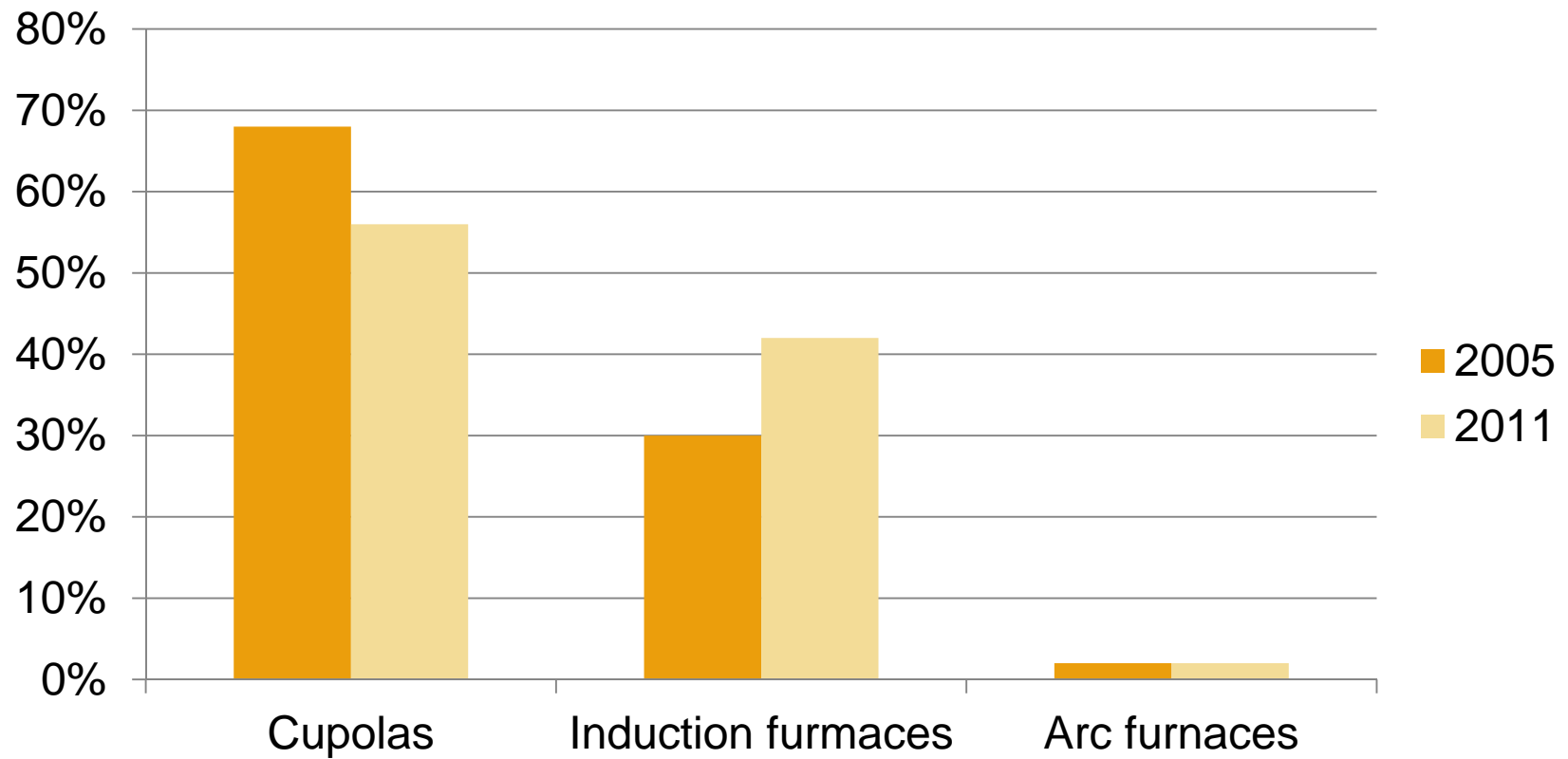
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Melting of cast iron (by q-ty of castings)



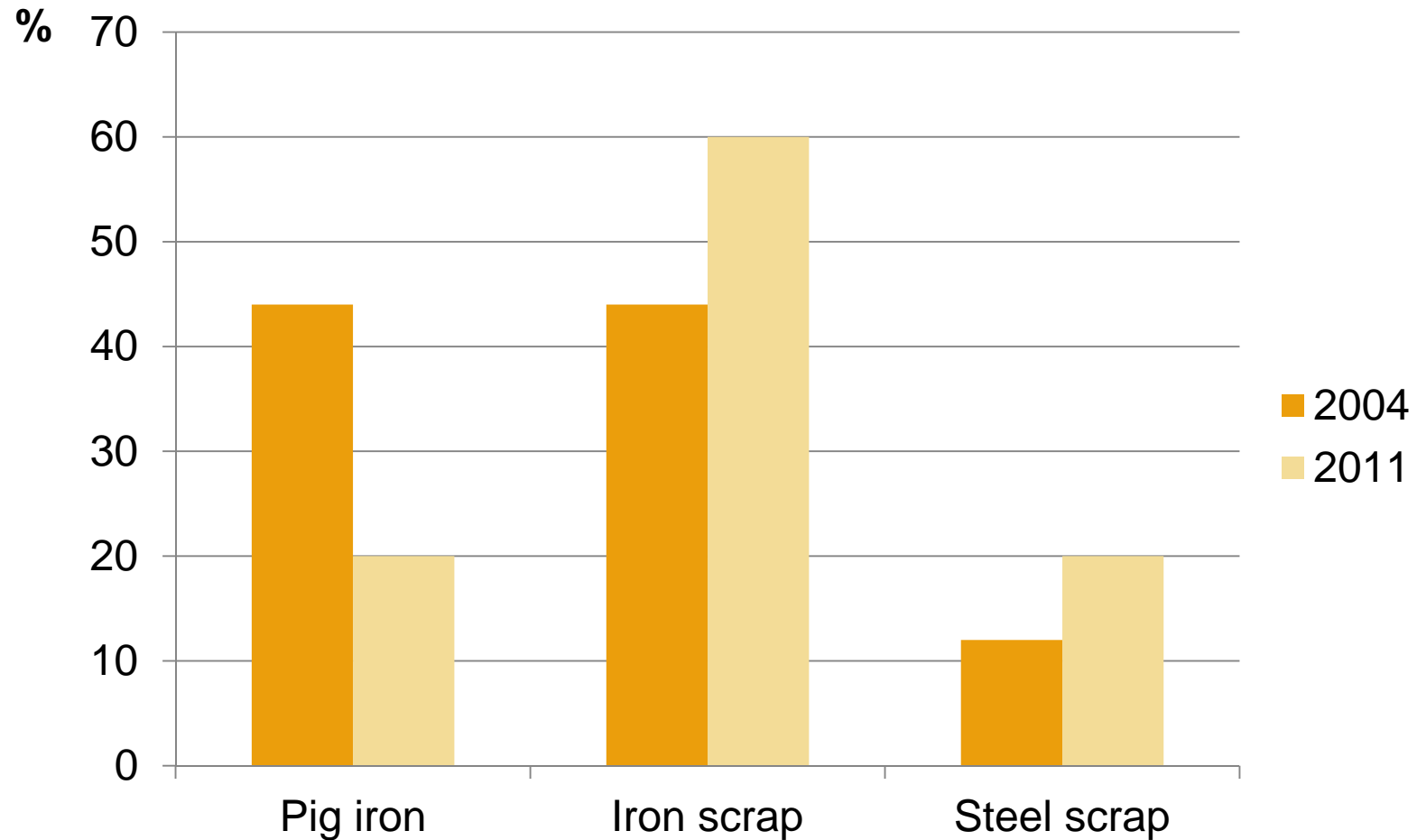
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Trends in melting for cast iron (by quantity of castings)



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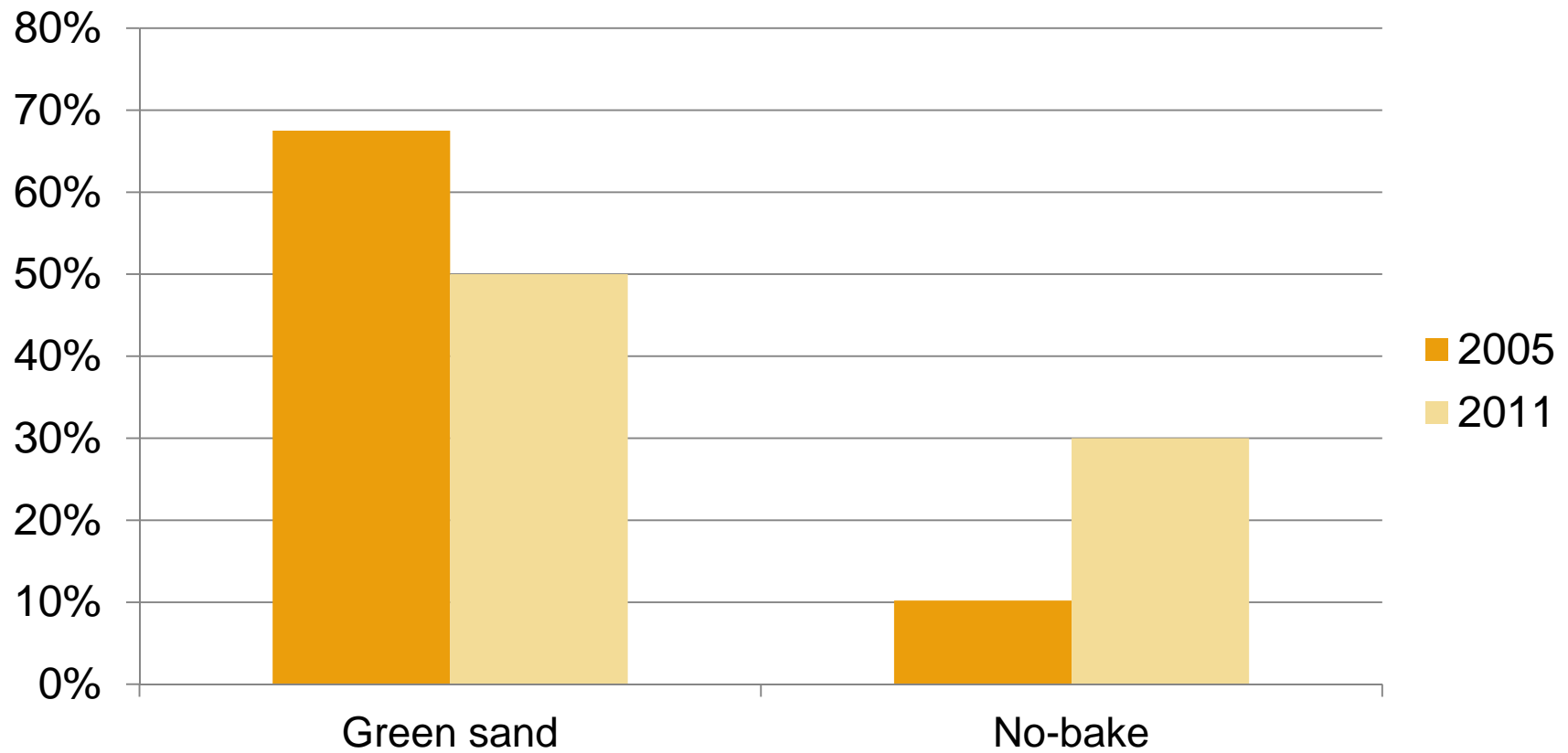
Composition of the melting charge



Deficit of high quality scrap

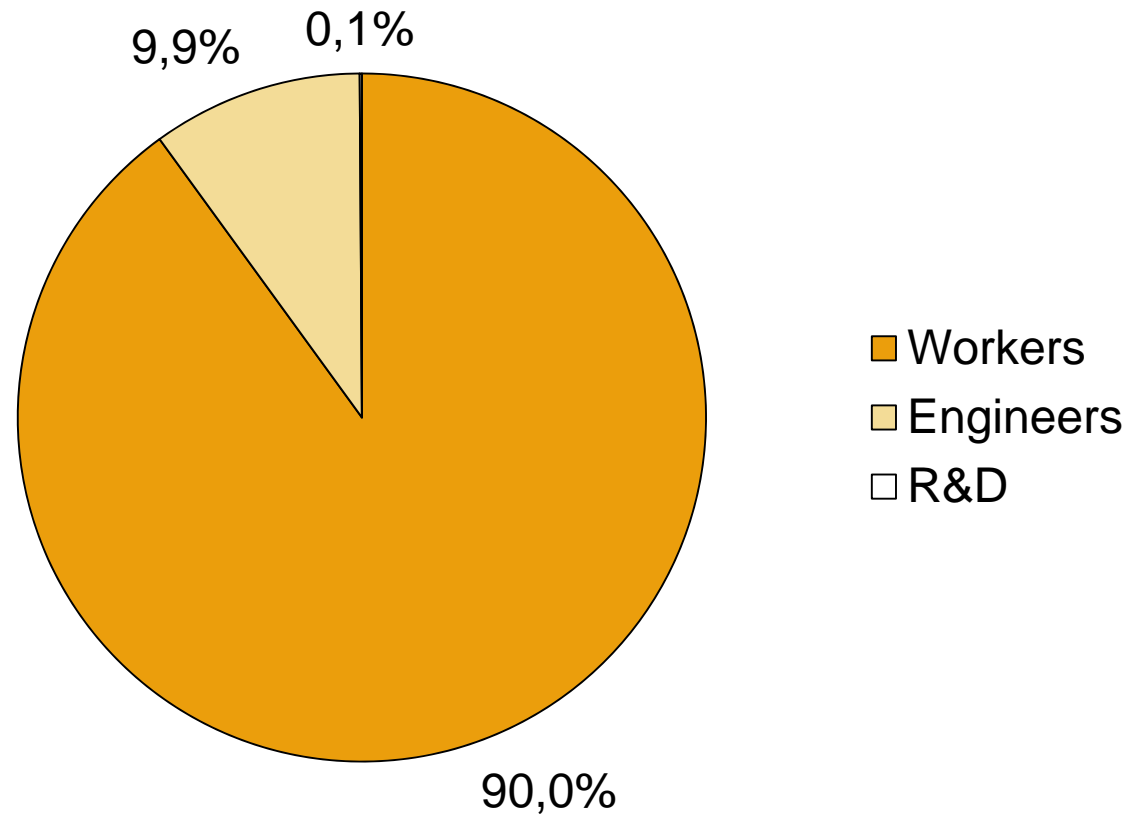
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No-bake and green sand moulding



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Structure of workers in foundry industry



Need in new technologies and equipment from abroad

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Most perspective directions of development:

- Production of No-Bake / Core moulds
- Production of cold-box cores
- Melting in medium frequency induction furnaces and DC arc furnaces
- Growth in production of ductile iron and Al alloys as replacement of malleable iron and steel
- Building of new foundries and reconstruction of existing, more big corporations

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Main conclusions:

- Internal market has big enough value and tendency to grow, Russia continues to import castings
- Low level of export – will not change soon
- Growth of expenses for environmental protection
- Lack of skilled workers and engineers – high cost of castings
- Reduction of number of foundries (only in 2009 – minus 300 foundries)

THANK YOU!