



Robotic Industries Association

# The North American Robotics Market: 2013 Recap



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## 2013 Set New Records

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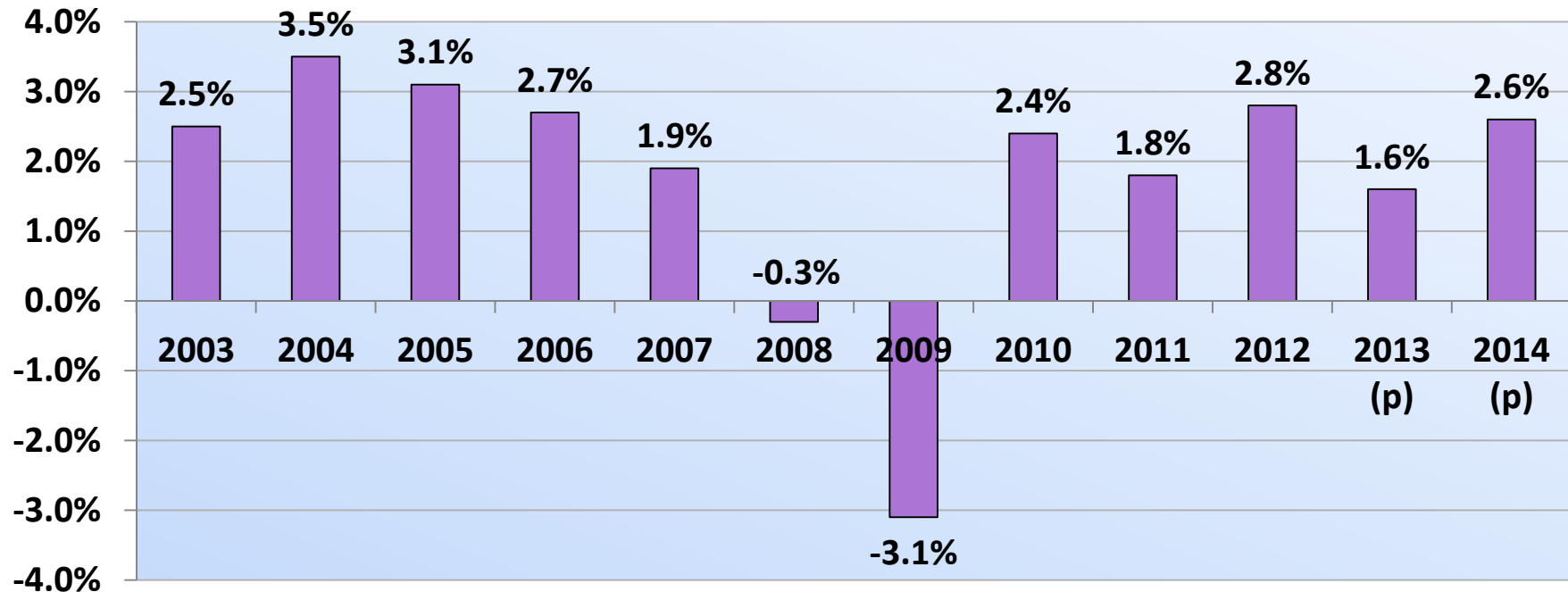
*2013 Was the Best Year Ever for Robot Shipments!*

Shipment Units	<b>22,591</b>	<b>NEW RECORD</b>
Shipment Dollars	<b>\$1.385b</b>	<b>NEW RECORD</b>
Order Units	<b>21,562</b>	
Order Dollars	<b>\$1.338b</b>	

**Robotics is becoming one of the hottest areas of interest in manufacturing in North America**

# U.S. Economy

## U.S. Real Gross Domestic Product (GDP) – Year-Over-Year Percent Change

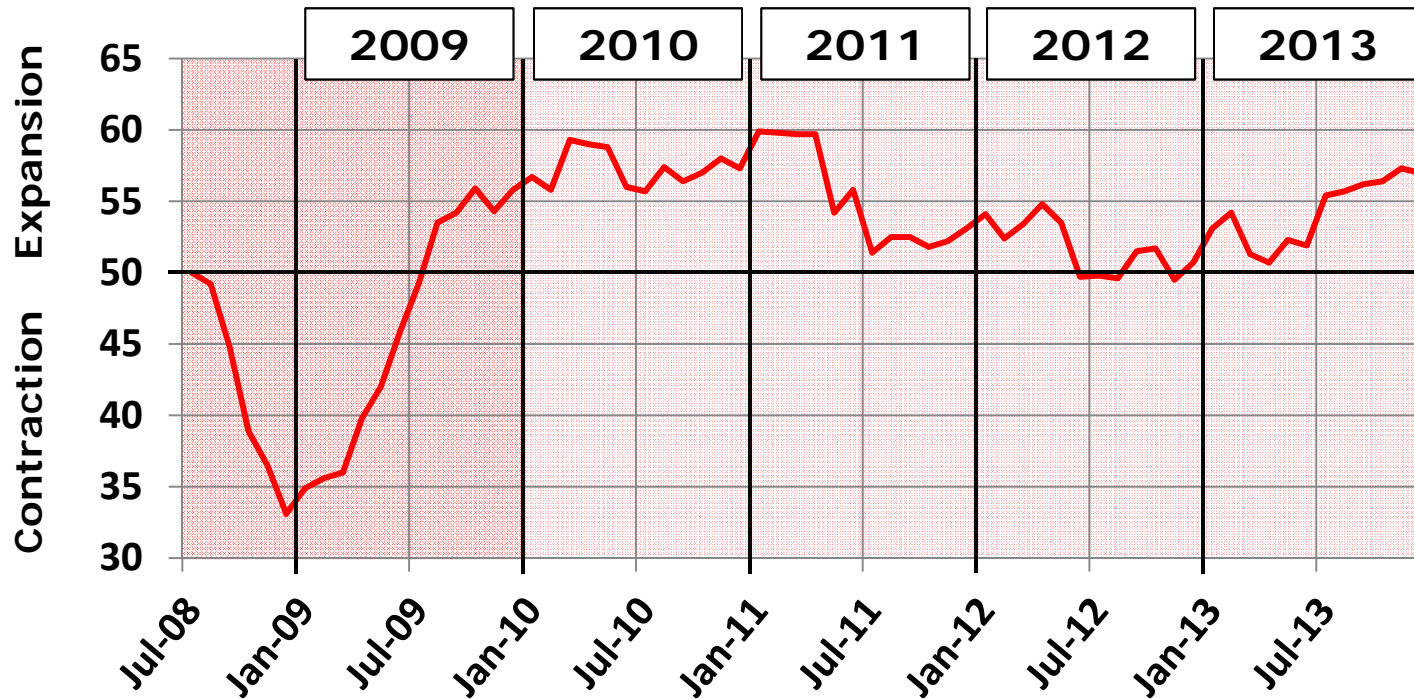


Growth continued in the U.S. economy in 2013 but weaker than initial expectations. Economists are forecasting 2.6% growth for 2014.

Source: IMF

# U.S. Manufacturing

## U.S. Purchasing Manager's Index (PMI)

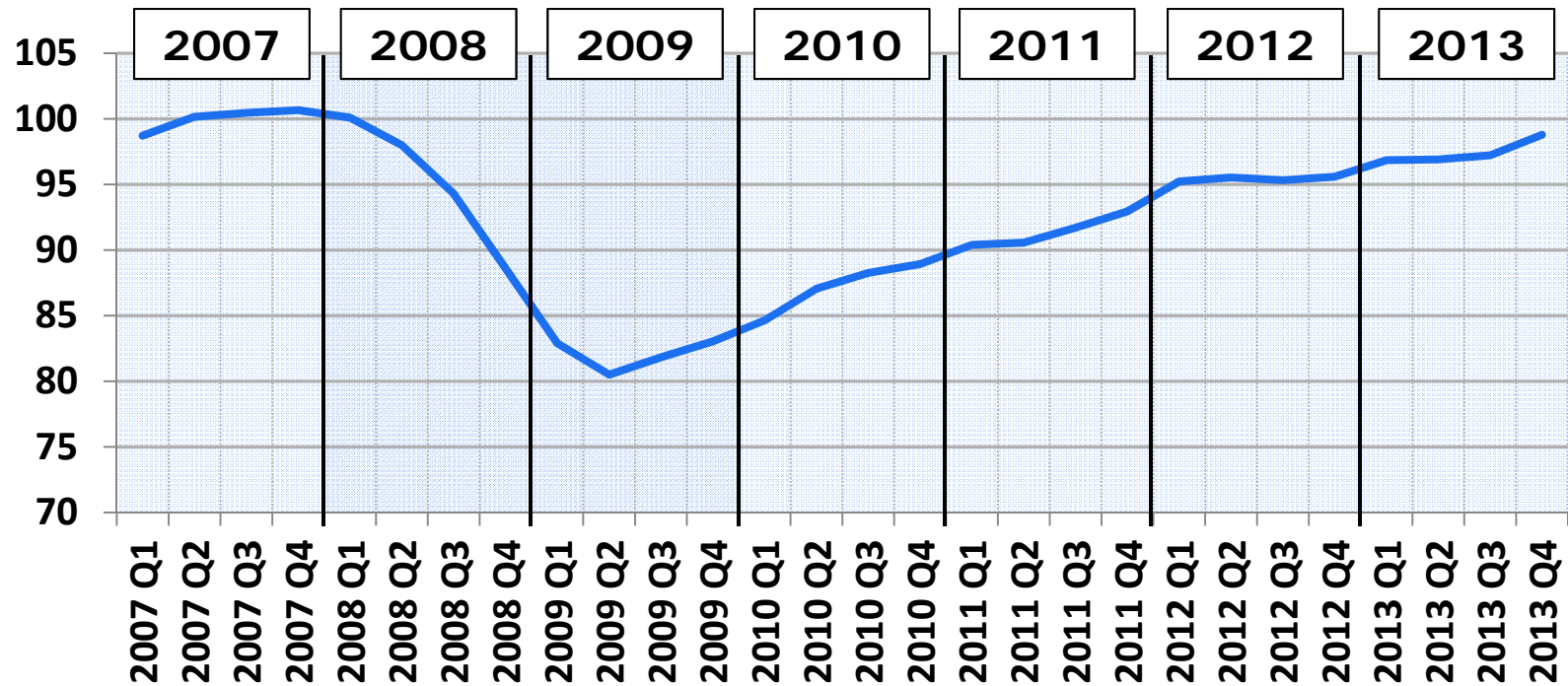


**U.S. Manufacturing PMI was very strong in 2013, never posting a month of contraction.**

Source: Markit & HSBC

# U.S. Manufacturing

Index of U.S. Industrial Production (Quarterly Data – 2007 to 2013, Manufacturing Only – 2007 = 100)

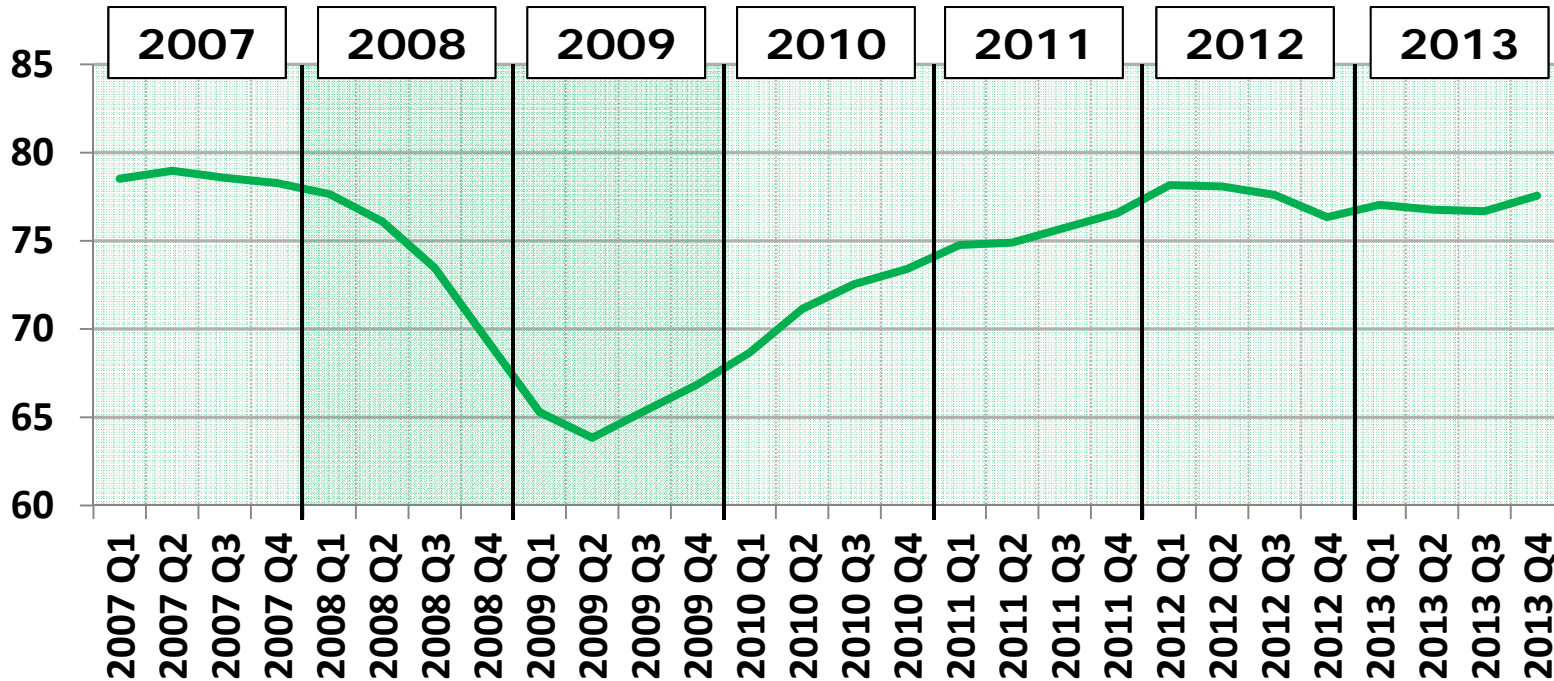


**U.S. Industrial Production continued its ascent back to pre-recessionary levels throughout the year.**

Source: Federal Reserve

# U.S. Manufacturing

*Percent U.S. Manufacturing Capacity Utilization*

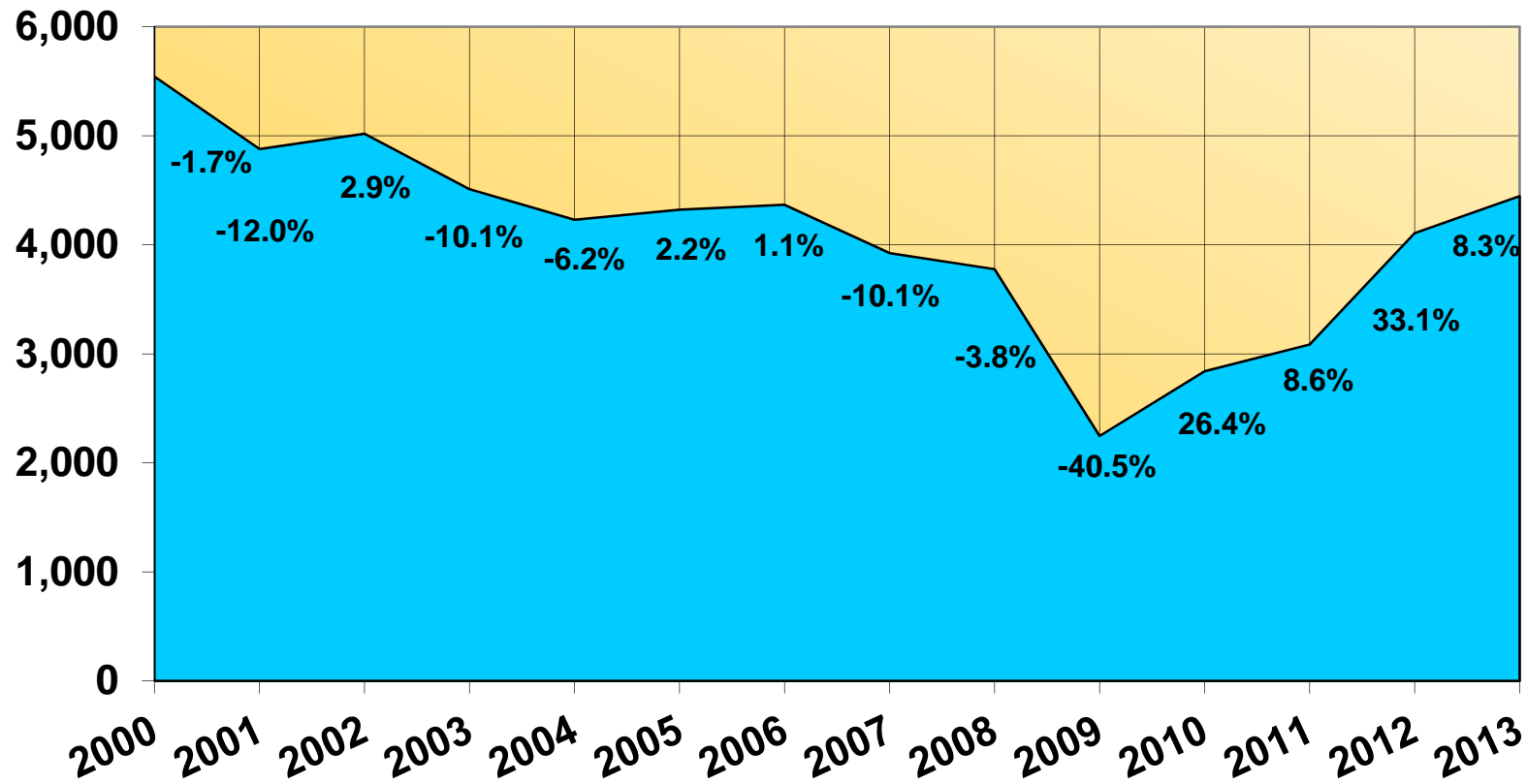


**U.S. Capacity Utilization also remained at healthy levels in 2013, increasing a bit toward the end of the year.**

Source: Federal Reserve

# U.S. Manufacturing

## U.S. Car Sales



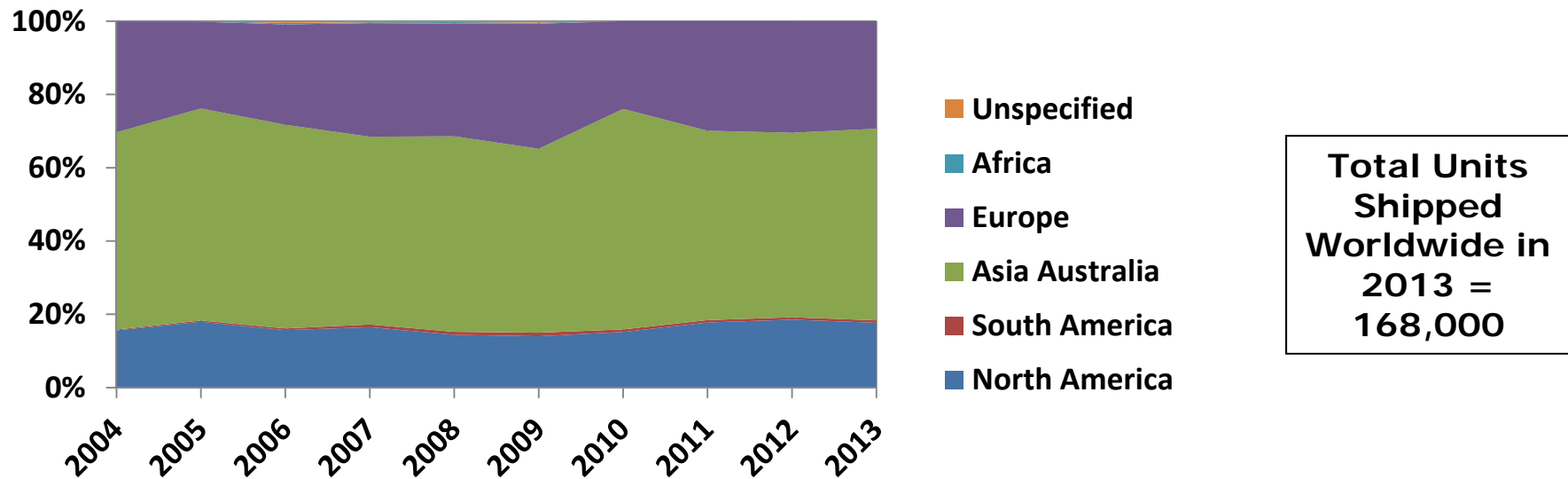
U.S. car sales continued to increase in 2013, albeit at a slower rate than 2012.

Source: BEA



# Market Overview

*North America as a Percent of the Worldwide Industrial Robot Market  
(Based on Shipped Units)*

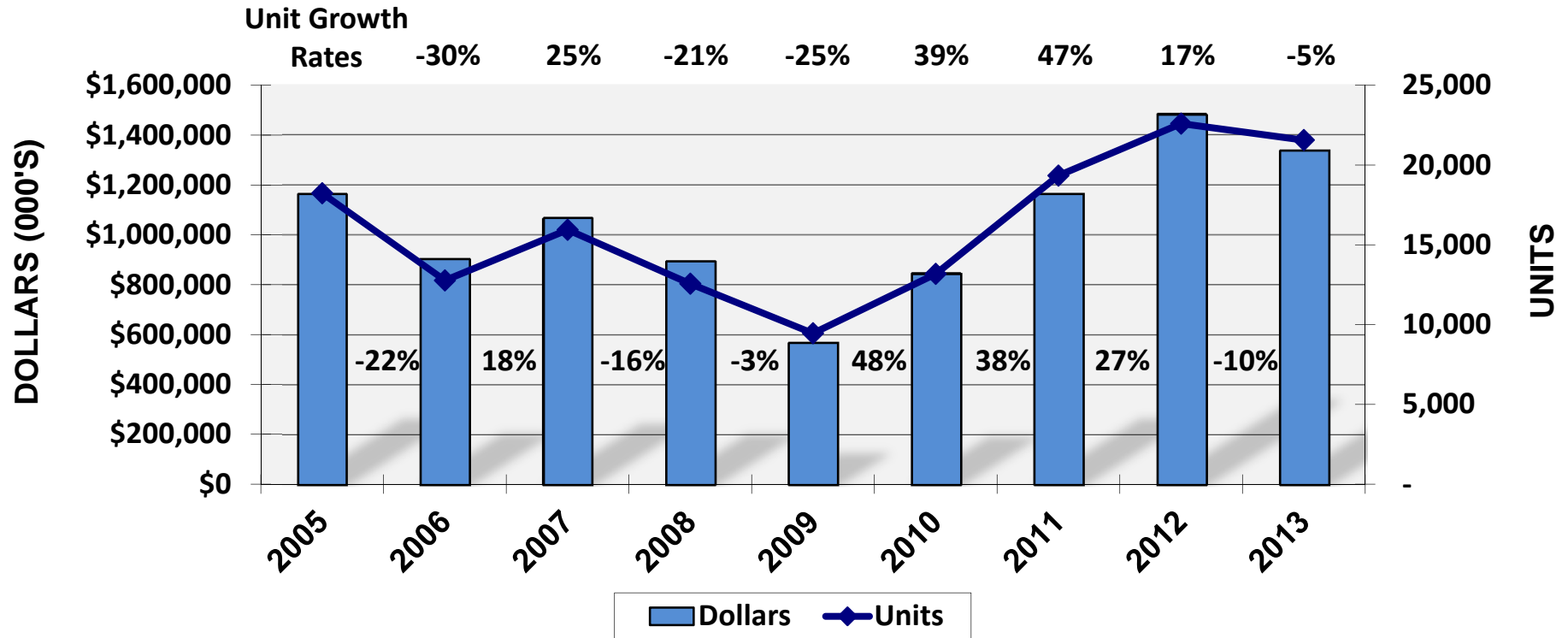


Year	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
NA Share	15.6%	18.0%	15.7%	16.5%	14.4%	14.0%	15.1%	17.1%	17.5%	16.7%

**North America has represented 14% to 18% of the world market (Average = 16.0%).**

# Market Overview

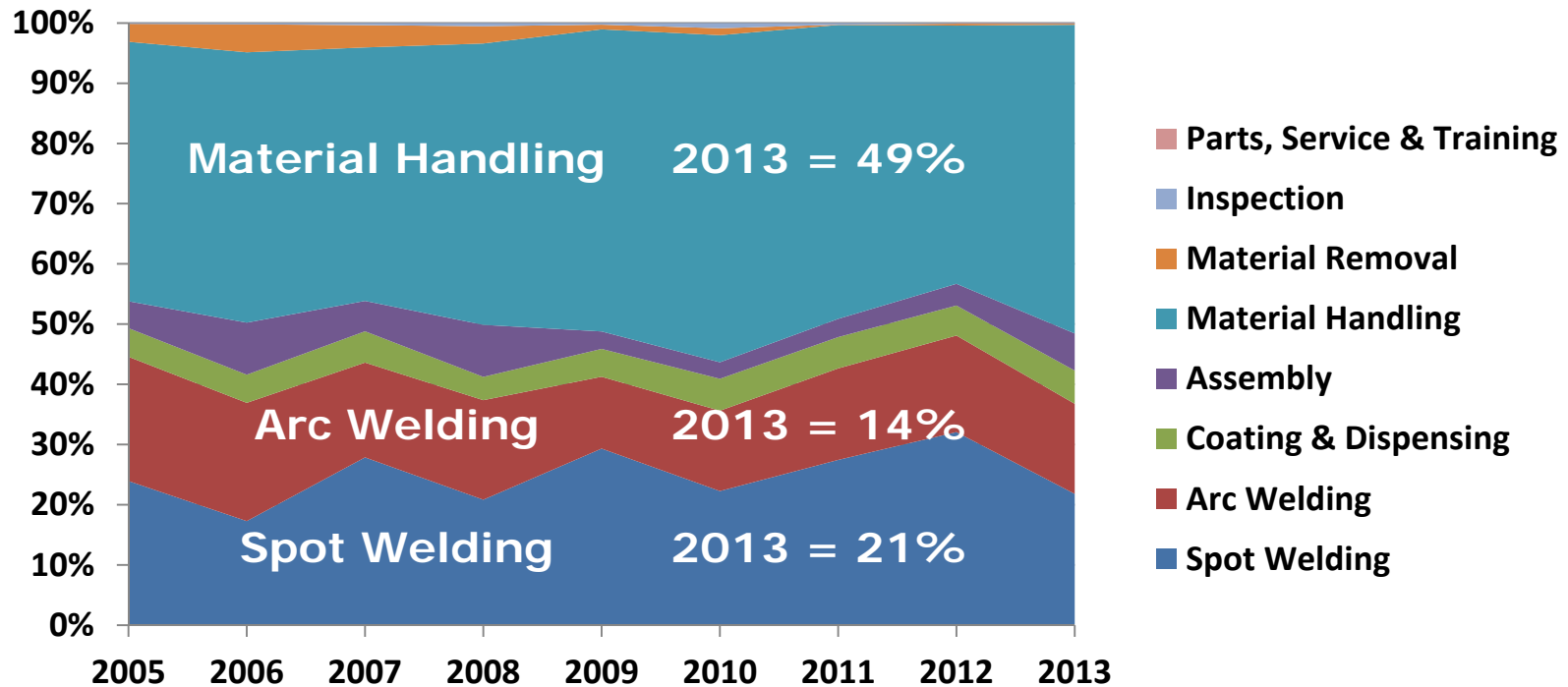
## Total Net Orders in Dollars and Units – North America



**Net Orders in North America contracted in 2013 due largely to a slowdown in automotive related orders**

# Robot Applications

*Orders Broken Down by Applications in Units – Relative Share*

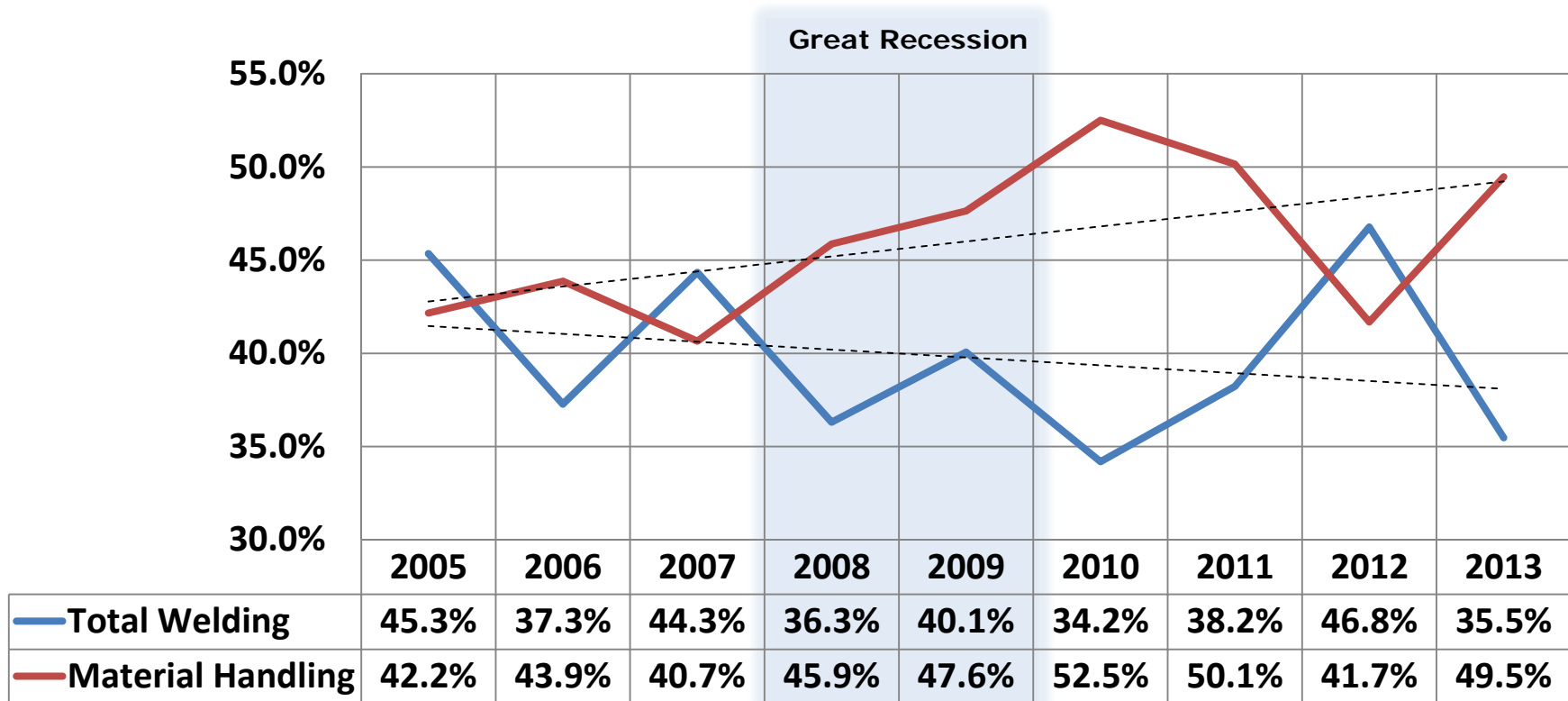


**In 2013 the most important application in percent of orders was material handling followed by spot welding and arc welding.**

# Robot Applications

## Orders Broken Down by *Applications in Units* – *Major Trends*

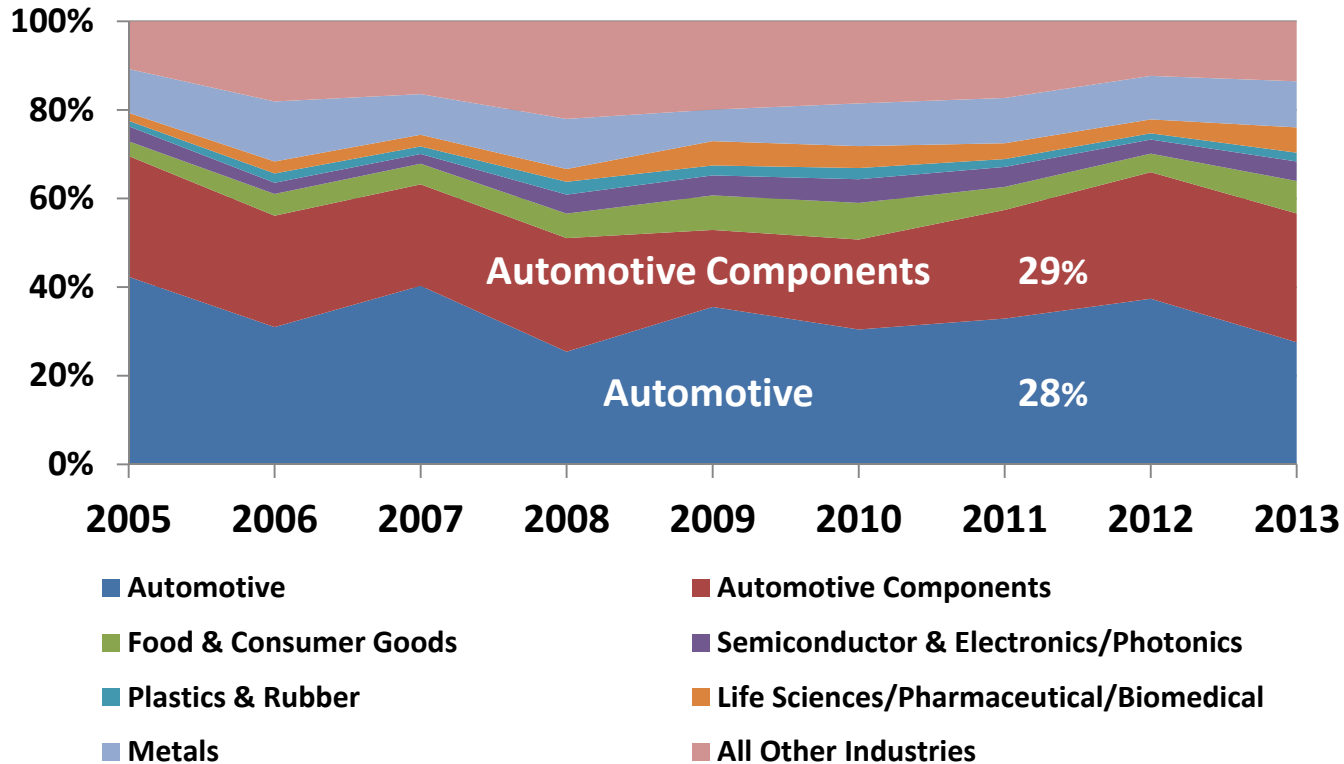
*Material Handling and Welding as Percent of Total Orders*



**In 2012, welding increased in importance as the focus of North American robotics companies while material handling decreased. The reverse is true for 2013.**

# Robot Industries

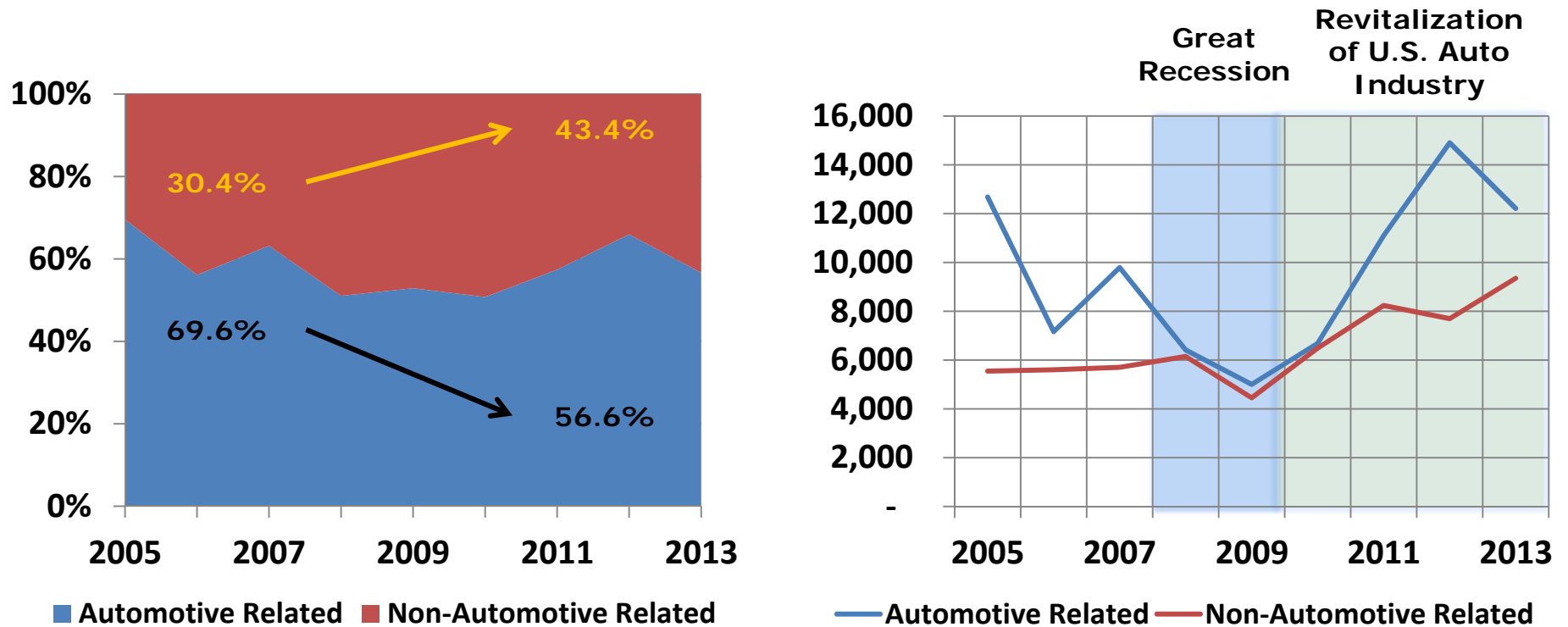
*Orders Broken Down by Industry in Units – Relative Share*



**Automotive and Automotive Components are the Most Important Industries in Terms of Robot Orders.**

# Robot Industries

## Orders Broken Down by Industry in Units – Major Trends



Since 2005, automotive related orders have declined in percentage of total orders while other industries such as life sciences, semiconductors, and metals have grown.

# Robot Industries

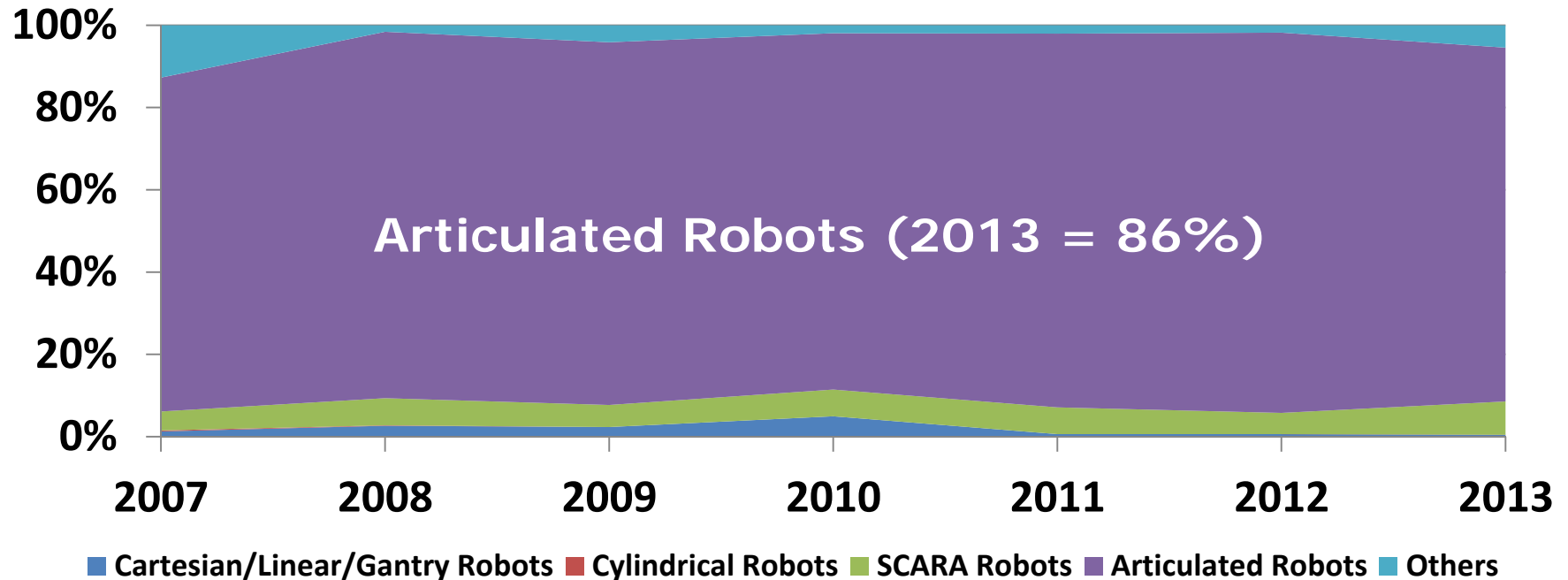
## Orders Broken Down by *Industry* in Units – *Growth Rates*

Industry	2010	2011	2012	2013	Average
Automotive	19%	59%	47%	-30%	24%
<b>Automotive Components</b>	<b>63%</b>	<b>77%</b>	<b>21%</b>	<b>-3%</b>	<b>40%</b>
Food & Consumer Goods	47%	-7%	-6%	67%	25%
Semiconductor & Electronics/ Photonics	66%	24%	-18%	32%	26%
Plastics & Rubber	57%	2%	-6%	35%	22%
Life Sciences/Pharma/ Biomedical	26%	6%	3%	73%	27%
<b>Metals</b>	<b>90%</b>	<b>56%</b>	<b>12%</b>	<b>1%</b>	<b>40%</b>
All Other Industries	29%	37%	-17%	5%	14%
<b>Total</b>	<b>39%</b>	<b>47%</b>	<b>17%</b>	<b>-5%</b>	<b>25%</b>

**Automotive components and metals are growing fastest on average post-Great Recession.**

# Robot Types

*Orders Broken Down by Type of Robots in Units – Relative Share*



**Articulated robots continue to account for the largest share of robots sold in North America.**



# Robot Types

## *Orders Broken Down by Type of Robots in Units – Growth Rates*

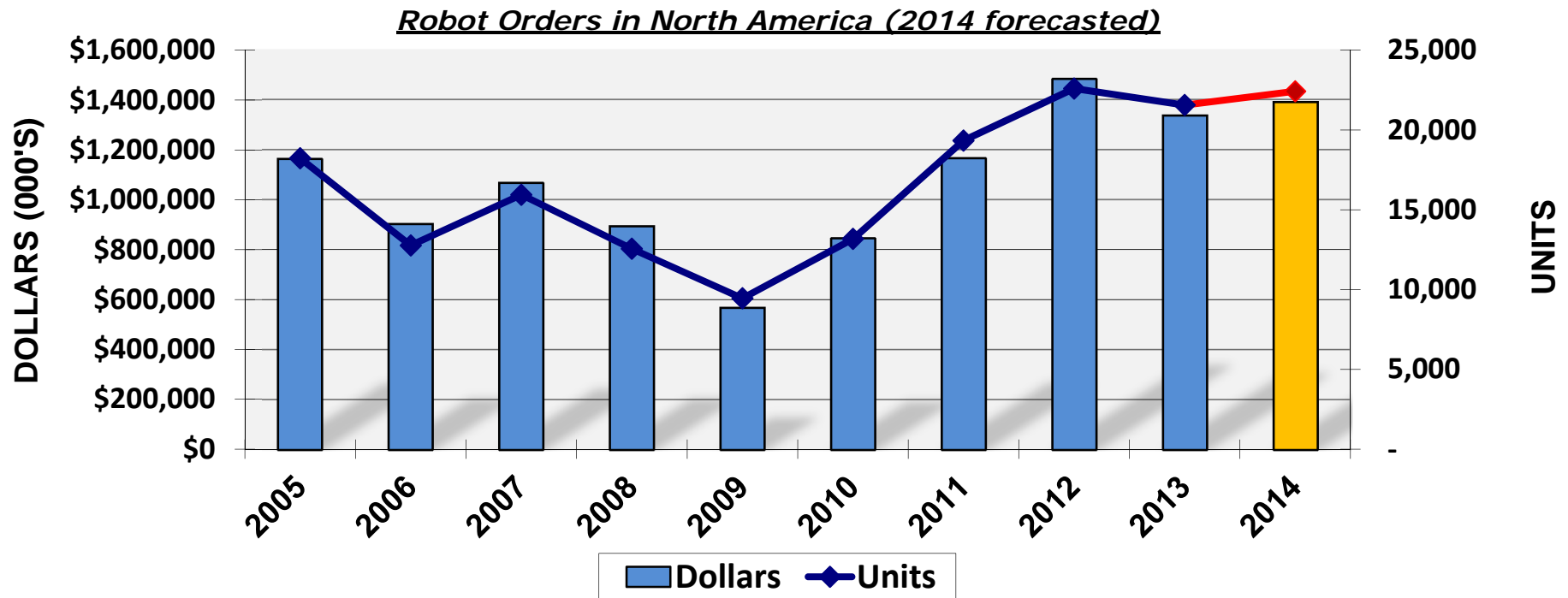
Robot Type	2010	2011	2012	2013	Average
Cartesian/Linear/ Gantry Robots	196%	-82%	16%	-30%	25%
Cylindrical Robots	N/A	N/A	N/A	N/A	N/A
SCARA Robots	69%	46%	-7%	49%	39%
<b>Articulated Robots</b>	<b>37%</b>	<b>54%</b>	<b>19%</b>	<b>-11%</b>	<b>25%</b>
Others	-35%	55%	3%	187%	53%
<b>Total</b>	<b>39%</b>	<b>47%</b>	<b>17%</b>	<b>-5%</b>	<b>25%</b>

Orders for all types of robots have grown at a healthy average since the Great Recession. In 2013, the Other category grew the most, likely due to an increase in demand for Delta type robots.

# What to Expect in 2014

*U.S. Economy to **Grow***  
*Manufacturing Remains **Strong***  
*Automotive is **Cyclical***

**+4%**





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