

OCTOBER 8, 2014

MOTOR MARKET UPDATE

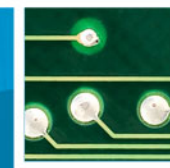
MOTOR SUMMIT 2014

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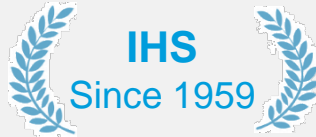
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About IHS

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- Product Design
- Supply Chain



Motor Market Update

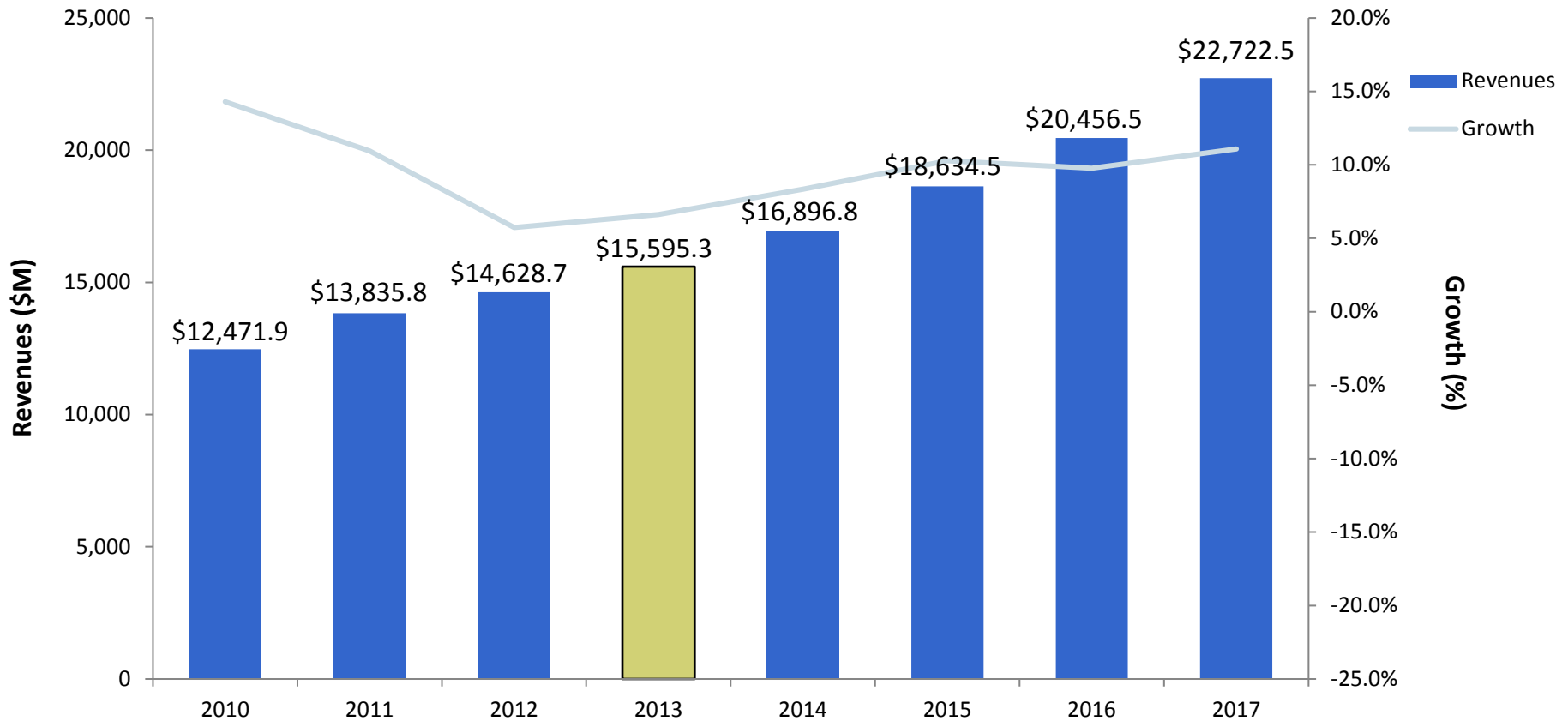
GLOBAL ECONOMIC FORECAST

	2011	2012	2013	2014	2015	2016
World	3.1	2.5	2.6	2.7	3.2	3.6
United States	1.6	2.3	2.2	2.3	2.7	2.9
Eurozone	1.8	-0.7	-0.4	0.8	1.3	1.6
United Kingdom	1.6	0.7	1.7	3.1	2.8	2.7
Japan	-0.4	1.5	1.5	1.0	1.1	0.8
China	9.3	7.7	7.7	7.3	7.1	7.1
India	6.6	4.7	5.0	5.5	6.3	6.8
Brazil	2.7	1.0	2.5	-0.1	1.0	3.2
Russia	4.3	3.4	1.3	-0.5	0.5	1.5

Source: IHS

LOW VOLTAGE MOTORS – 2013 MARKET DATA

Global Low Voltage Motors - Market Size (\$M) and Growth



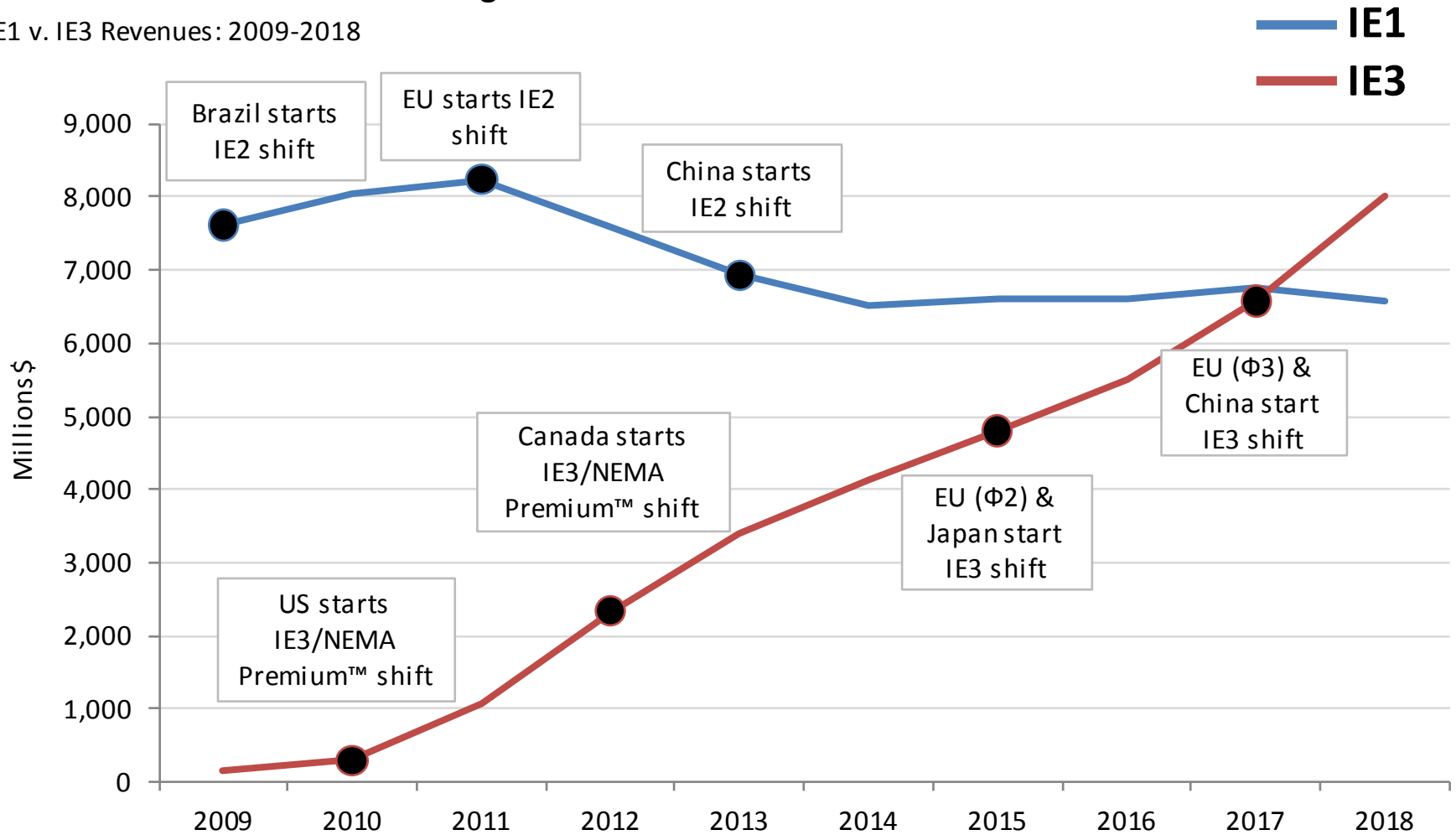
LV IHP motors ≈ 50 million units shipped, Average Selling Price ≈ \$300

Reference: Industrial FHP Motors ≈ 80 million, Auto – 2.5B, Non-Industrial ≈ 9B

MARKET TRANSFORMATION

The World Market for Low Voltage Motors

IE1 v. IE3 Revenues: 2009-2018



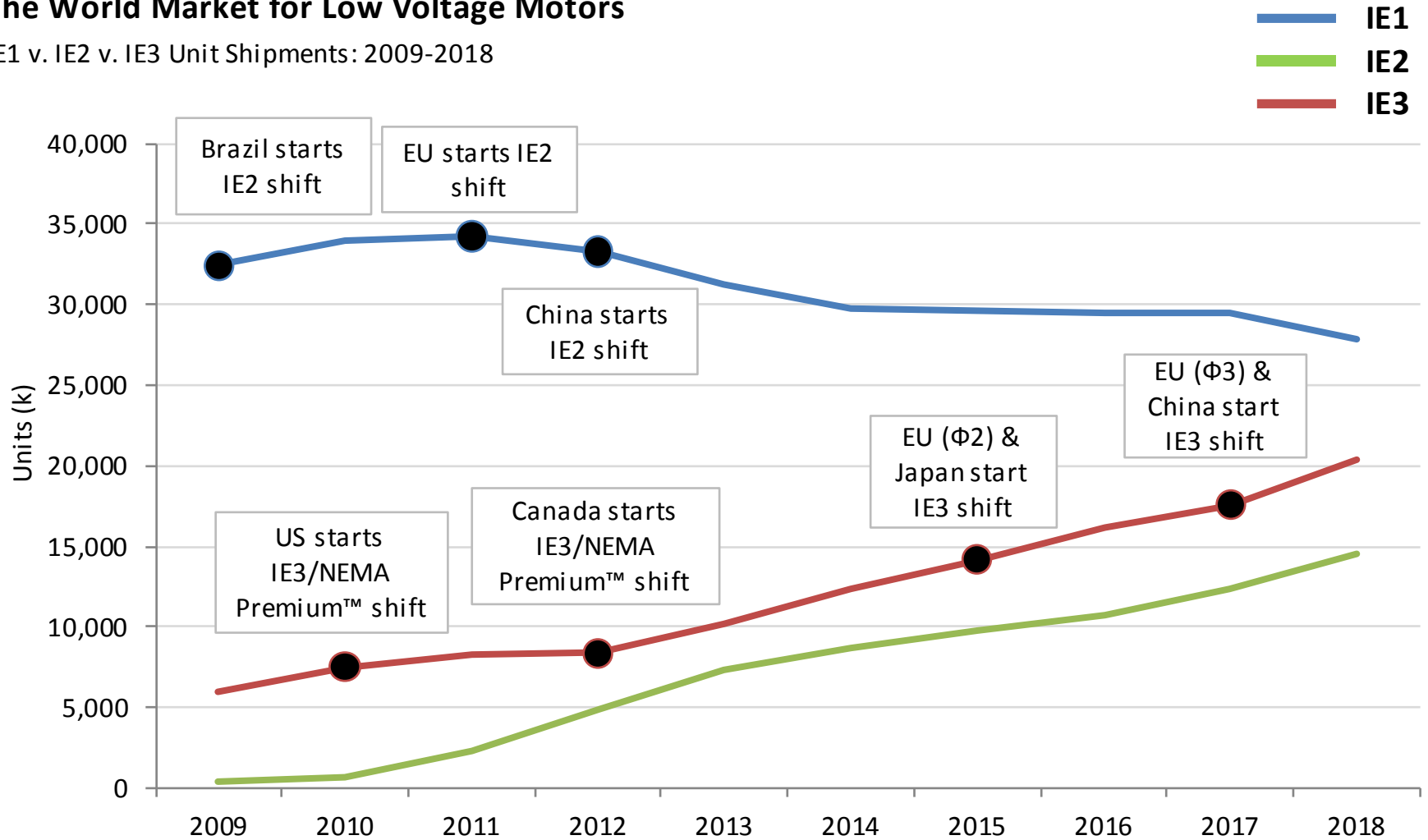
Source: IHS

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MARKET TRANSFORMATION

The World Market for Low Voltage Motors

IE1 v. IE2 v. IE3 Unit Shipments: 2009-2018

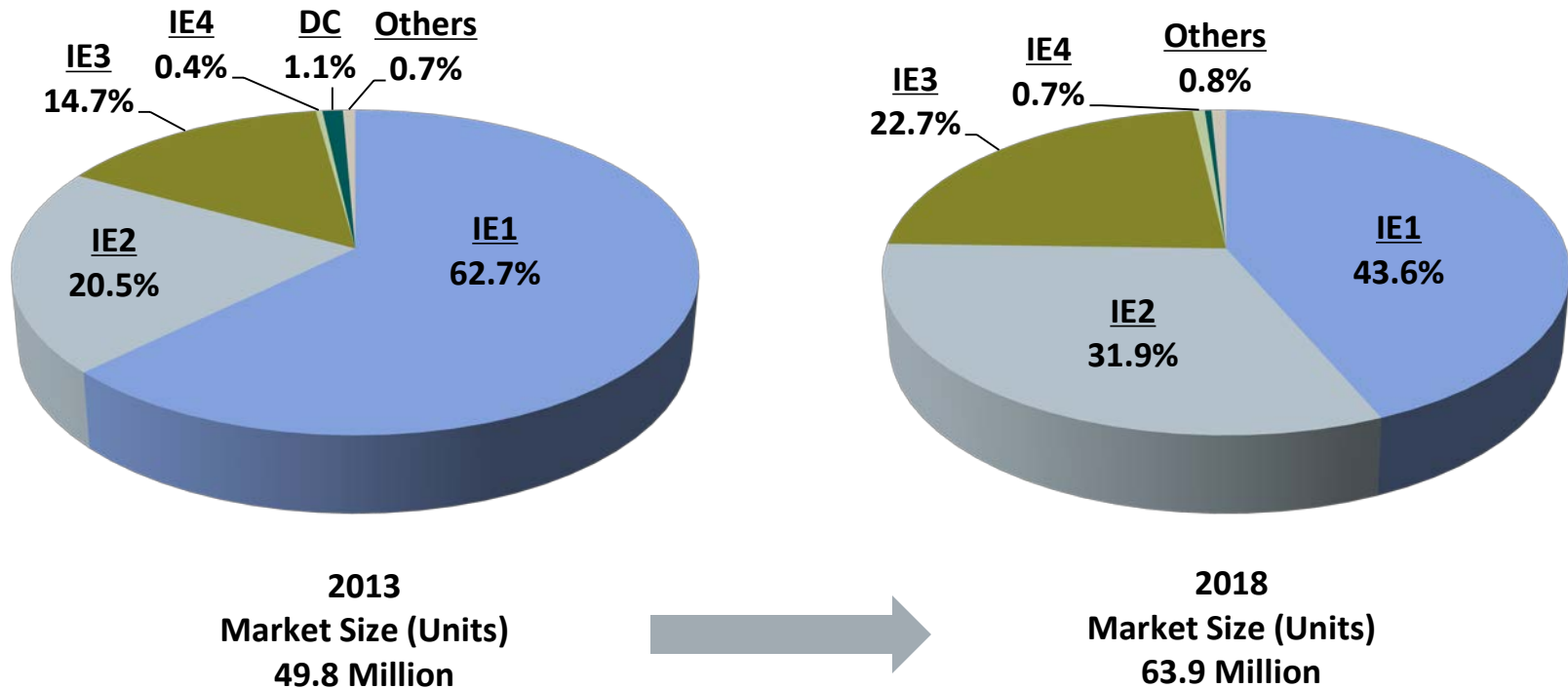


Source: IHS

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EFFICIENCY CLASS TRANSITION (UNITS)

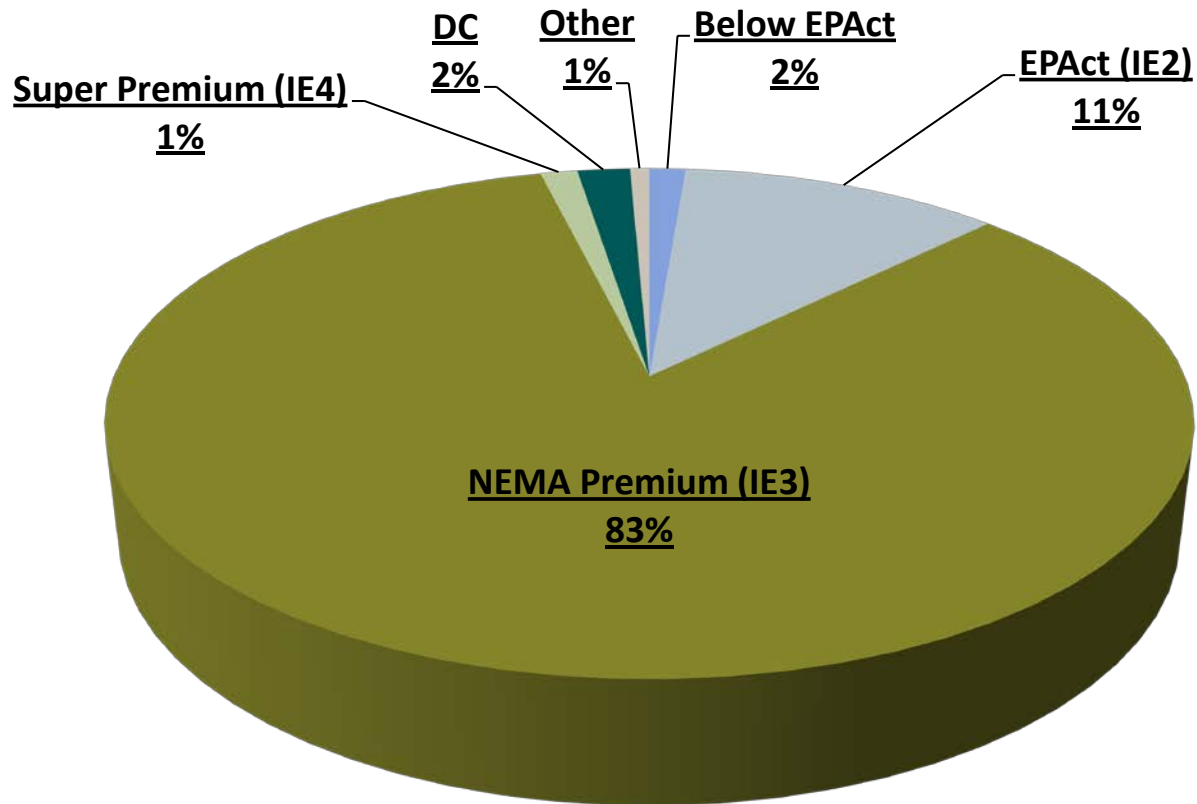
Global Low Voltage Motors - Efficiency Class Transition: 2013 v. 2018



Average Annual Unit Growth ≈ 5%

REGIONAL PERSPECTIVES: US & CANADA

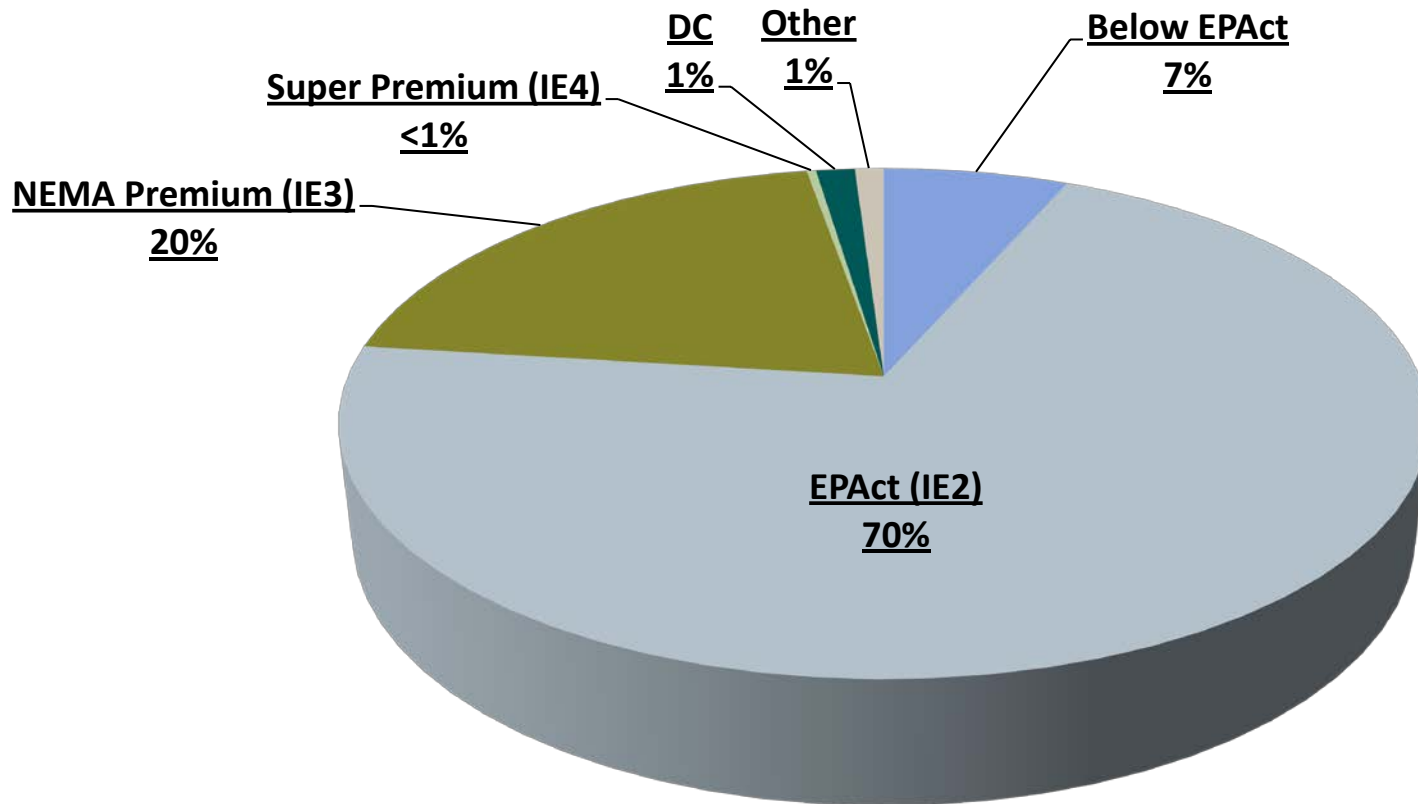
US & Canada 2013 Efficiency Class Breakdown (Units)



Total Unit Volume \approx 7.6 million units shipped

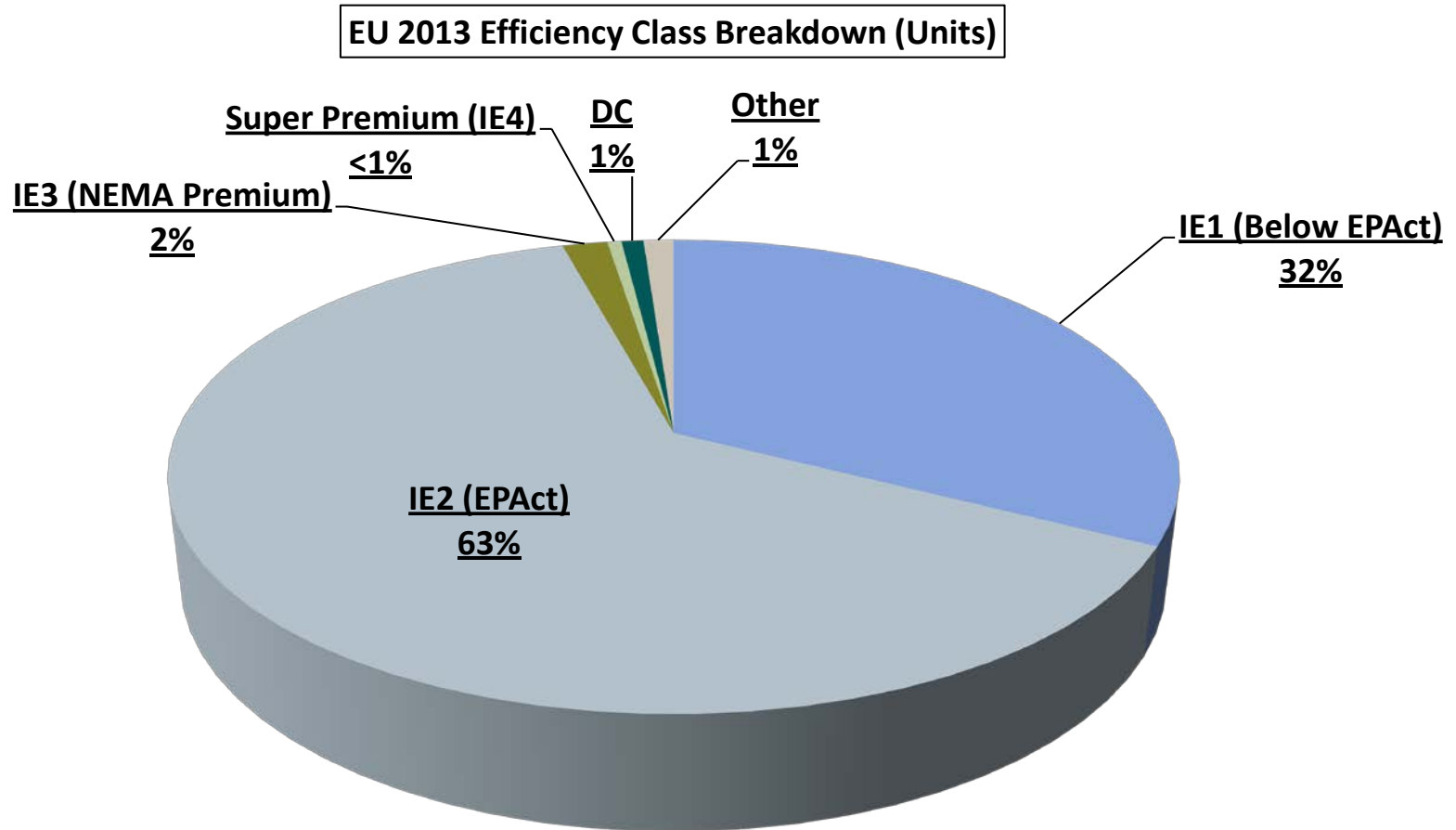
REGIONAL PERSPECTIVES: BRAZIL & MEXICO

Brazil & Mexico 2013 Efficiency Class Breakdown (Units)



Total Unit Volume ≈ 2.6 million units shipped

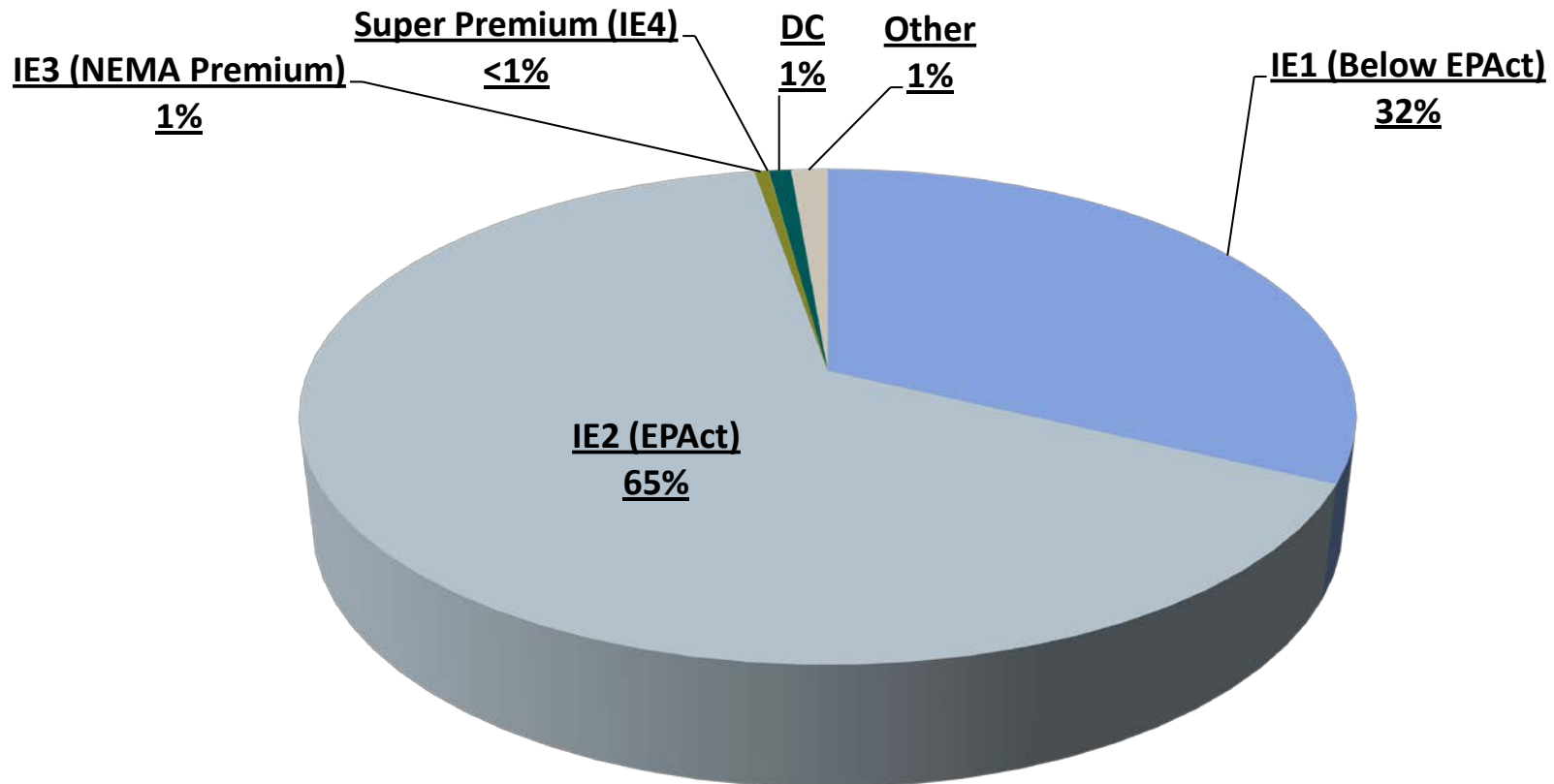
REGIONAL PERSPECTIVES: EU



Total Unit Volume ≈ 7.8 million units shipped

REGIONAL PERSPECTIVES: AUSTRALIA

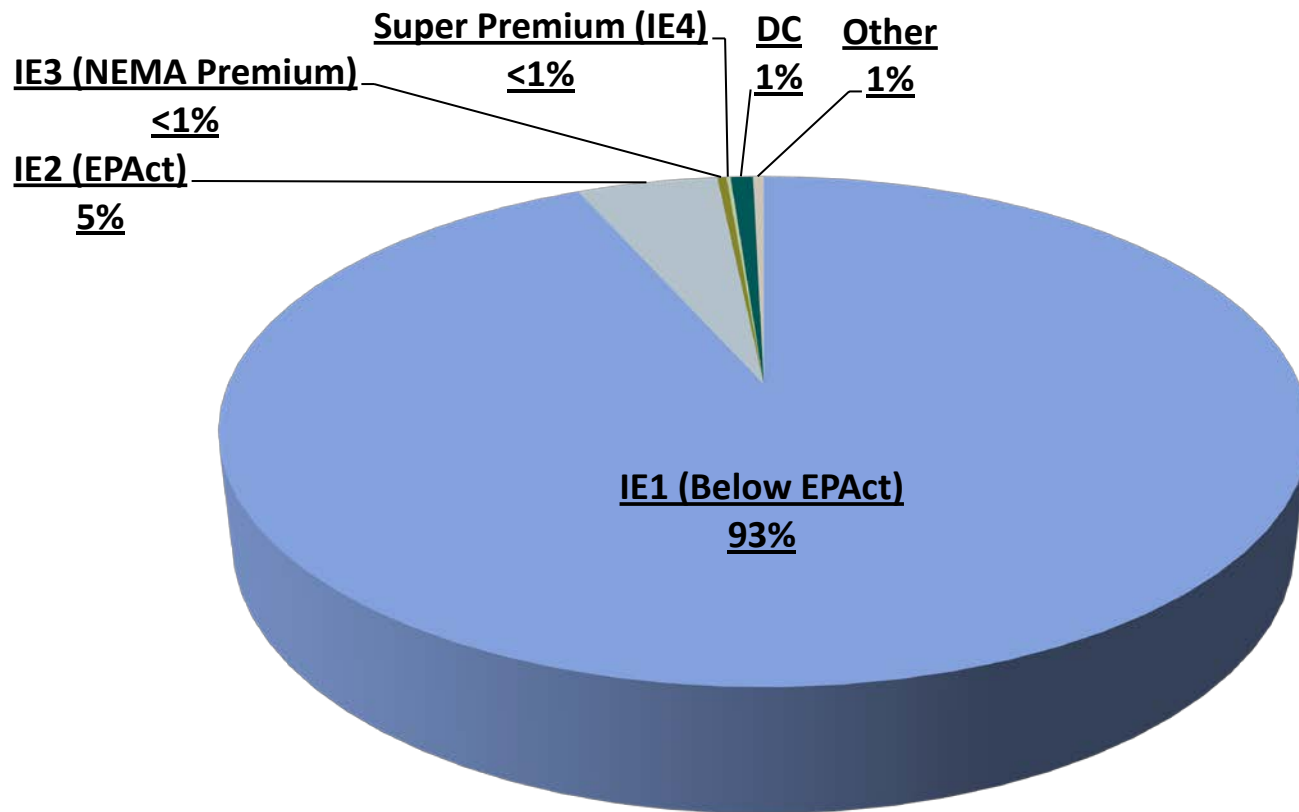
Australia 2013 Efficiency Class Breakdown (Units)



Total Unit Volume ≈ 650 thousand units shipped

REGIONAL PERSPECTIVES: CHINA

China 2013 Efficiency Class Breakdown (Units)



Total Unit Volume ≈ 13.3 million units shipped

EFFICIENCY CLASS REQUIREMENTS ARE NOT CONSISTENT BY REGION

Example: 5HP/15HP NEMA motors; 4kw/11kW IEC motors; 4 Poles

Reference: Regional Efficiency Tables

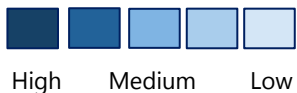
NEMA	<u>IE1</u>	<u>IE2</u>	<u>IE3</u>	<u>IE4</u>
5HP	86.5%	87.5%	89.5%	91.5%
15HP	90.2%	91.0%	92.4%	94.0%
EU	<u>IE1</u>	<u>IE2</u>	<u>IE3</u>	<u>IE4</u>
4kW	83.1%	86.6%	88.6%	91.1%
11kW	87.6%	89.8%	91.4%	93.3%
AUS	<u>IE1</u>	<u>IE2</u>	IE3	<u>IE4</u>
4kW	87.0%	88.7%	90.4%	92.1%
11kW	89.9%	91.3%	92.4%	94.0%

FACTORS AFFECTING PURCHASING DECISIONS

Factors Affecting Purchasing Decisions Ranked in Order of Impact

Key Factors	OEM	Distributor	End-User
1. Product Quality and Reliability	Medium	High	High
2. Product Price	High	Medium	Medium
3. Service Quality	High	Medium	High
4. Brand Reputation	Medium	High	High
5. Energy Efficiency	Low	Medium	High
6. Government Policy	Medium	Medium	Medium
7. Stock / Lead times	High	High	High

Level of Impact



Source: IHS, 2014



The Impact of 3D Printing Technology

The Impact of 3D Printing Technology

A Transformative Manufacturing Process


Although the technology has existed since the 1980s, 3D Printing has really gone mainstream in the last five years. Some industries that the technology has penetrated include:

Consumer Products: Clothing, Shoes, Jewelry, Toys, Home Décor, Electronics

Medical Products: Joint Replacements, Prosthetics, Crowns / Invisalign Braces

Industrial Products: Tools, Molds, Fuel Injection Nozzles, Gas Turbine Parts, Pumps

What benefits and drawbacks does 3-D Printing technology have compared to traditional manufacturing techniques?

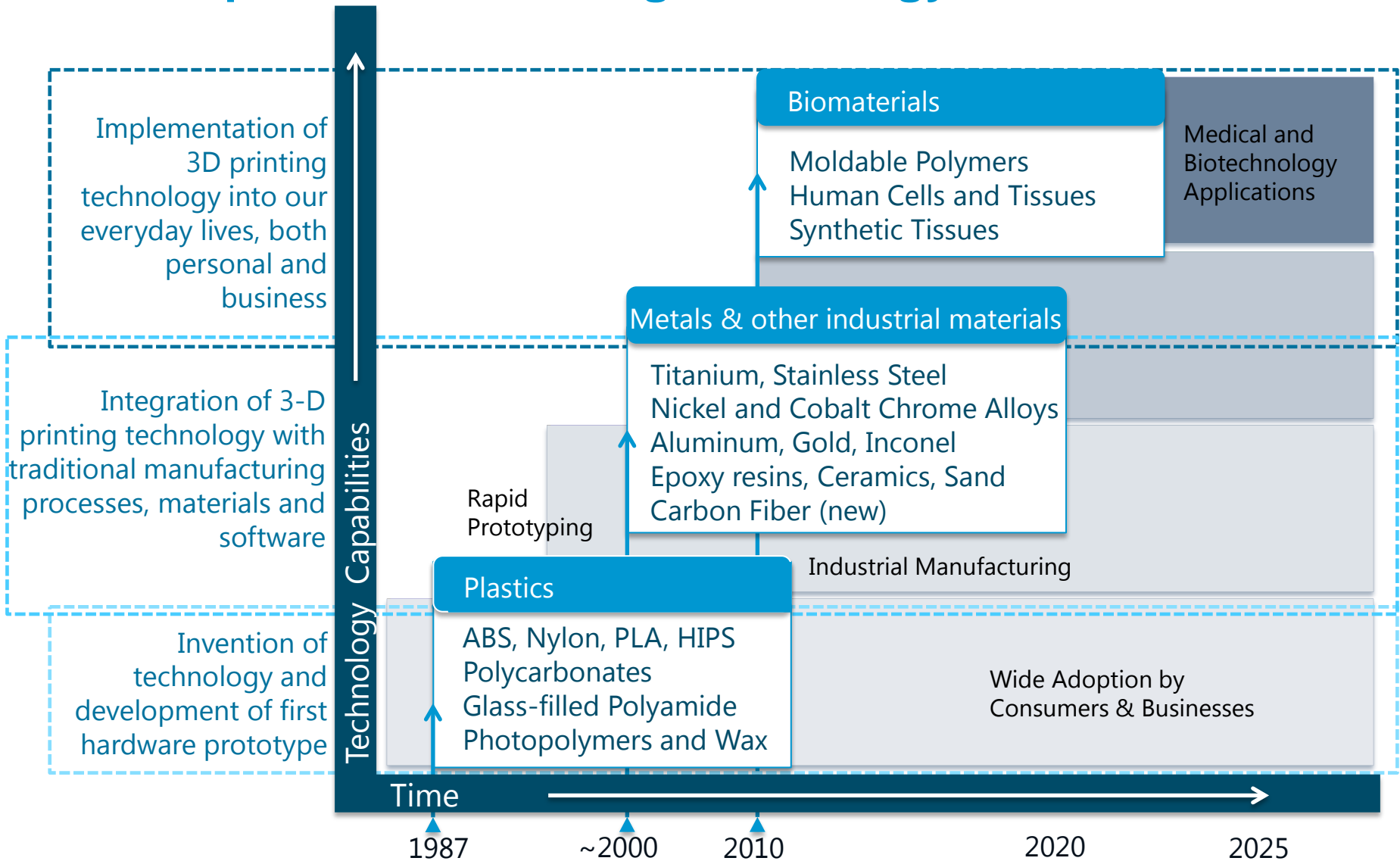


3-D Printing, also called Additive Manufacturing, “adds” materials to create products, rather than “subtracting” them as is typical in traditional manufacturing processes. This presents significant potential cost savings to manufacturers that invest in the technology.

Products are designed using complex computer software platforms and are then printed layer by layer, allowing for features that were not possible with traditional machine or human manufacturing techniques.

Currently, the biggest drawbacks for 3-D Printing are size and speed limitations, which prevent the technology from replacing many assembly line manufacturing processes.

The Impact of 3-D Printing Technology



Thank you very much!



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