Legal Statement

The purpose of the information in this presentation is to guide ICA programs and provide members information to make independent business decisions.

Based on a combination of primary interviews and industry information The Martec Group is the source of forecast data in this presentation.

Antitrust Guidelines

**ANTITRUST GUIDELINES
FOR
COPPER INDUSTRY TRADE ASSOCIATION MEETINGS**

The following guidelines with respect to compliance with antitrust laws of the United States, Japan and European Community[1] are intended to govern the conduct of participants in copper industry trade association meetings, both at the meeting itself and in informal discussions before or after the formal meeting.

Price. Competitors should not discuss future prices (including terms of sale) of their products. There is no blanket prohibition against the mention of or reference to current or past prices but limits must be observed. Such references or mentions should occur only when necessary in connection with the development of association programs. For example, reference to a particular price level in comparing the cost of a copper product to a competing product is permitted. Whenever possible, such references should be discussed in advance with legal counsel.

Competitive Information. Competitors should not discuss the market share of a particular copper producer or copper fabricator's products. Furthermore, nothing should be said at a meeting which could be interpreted as suggesting prearranged market shares for such products or producer production levels. The overall market share of copper products may be discussed with regard to competition with non-copper products and general market acceptance.

New Products. Competitors should not encourage or discourage the introduction of a new product by another competitor or reveal a particular copper company's plans to change the production rate of an existing product or to introduce a new product. No company should disclose to another company whether it is in a position to make or market a new product. New products may be discussed in a technical manner or from the standpoints of competition with non-copper products and general market acceptance. In addition, proposed methods for and results of field and laboratory testing can be considered.

The Role of Legal Counsel. Legal counsel attends association meetings to advise association staff and other meeting attendees regarding the antitrust laws and to see that none of the matters discussed or materials distributed raise even the appearance of antitrust improprieties. During the course of a meeting, if counsel believes that the discussion is turning to a sensitive or inappropriate subject, counsel will express that belief and request that the attendees return the discussion to a less sensitive area.

A paper entitled
"Copper Industry Trade Associations and the Antitrust Laws"
is available upon request.

10/92, 5/93, 10/10

[1] Other foreign competition laws apply to International Copper Association, Ltd. (ICA)'s activities worldwide.

MARTEC

The Reality of Copper Substitution in Automotive Wire Harnesses

1. Survey Base
2. Study Global Indicators
3. Summary of Findings

Automotive Wire Harness - Summary of Interviews

Martec has completed 79 interviews with various key industry respondents:

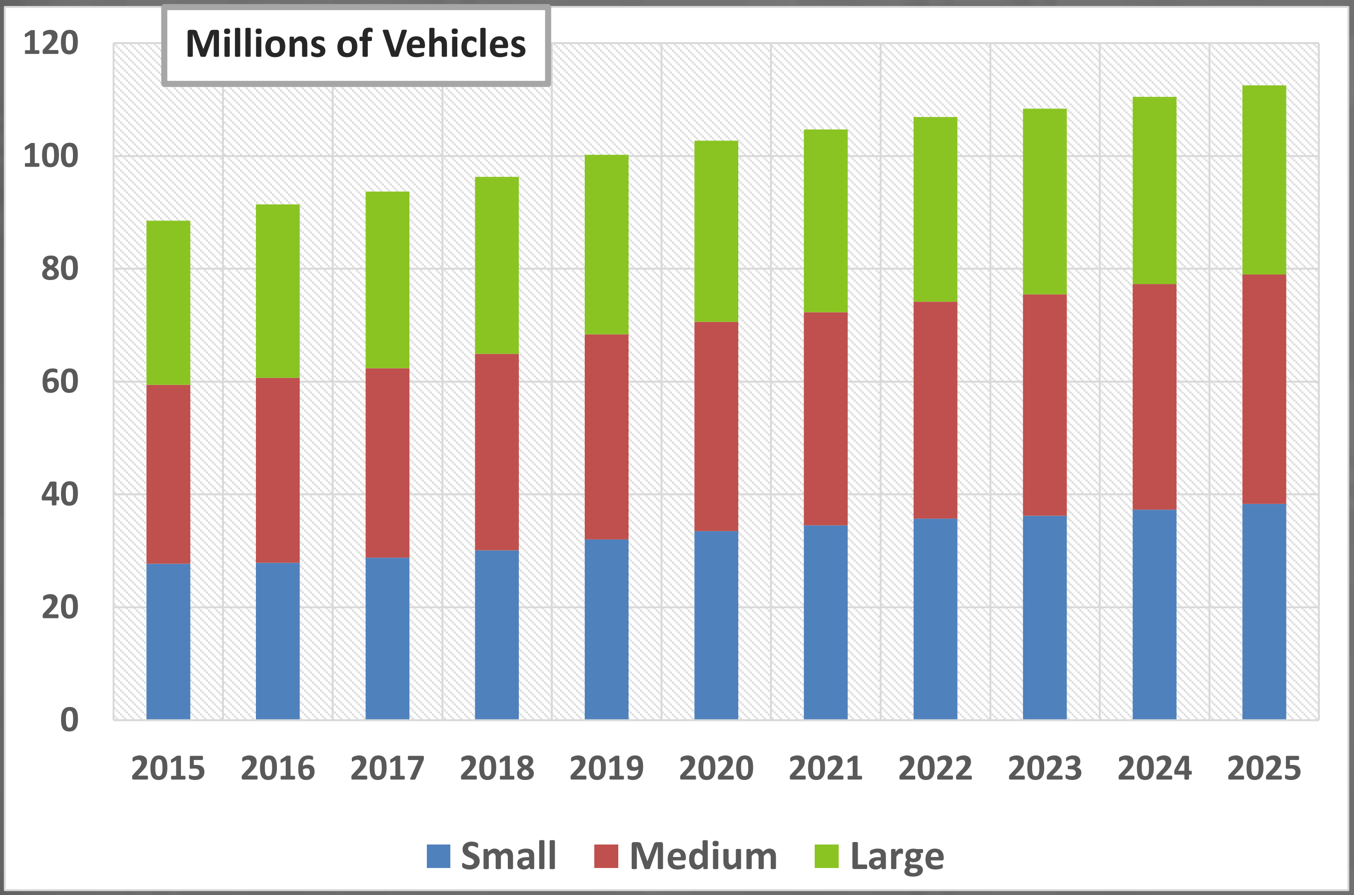
- Leading global OEMs
  - *GM, Toyota, Ford, Mercedes, BMW, VW/Audi, Honda, Nissan, etc.*
- All leading global wire harness suppliers
  - *Sumitomo, Yazaki, Delphi, Leoni, Furukawa, etc.*

	Europe	North America	Asia	ROW
OEM	10	7	11	2
Supplier	8	13	15	-
Other	5	4	4	-
Total	23	24	30	79

MARTEC

Small Vehicles Will Grow At the Fastest Rate Over the Next 10 Years

Global Light Vehicle Production by Segment



2015-2025 Growth

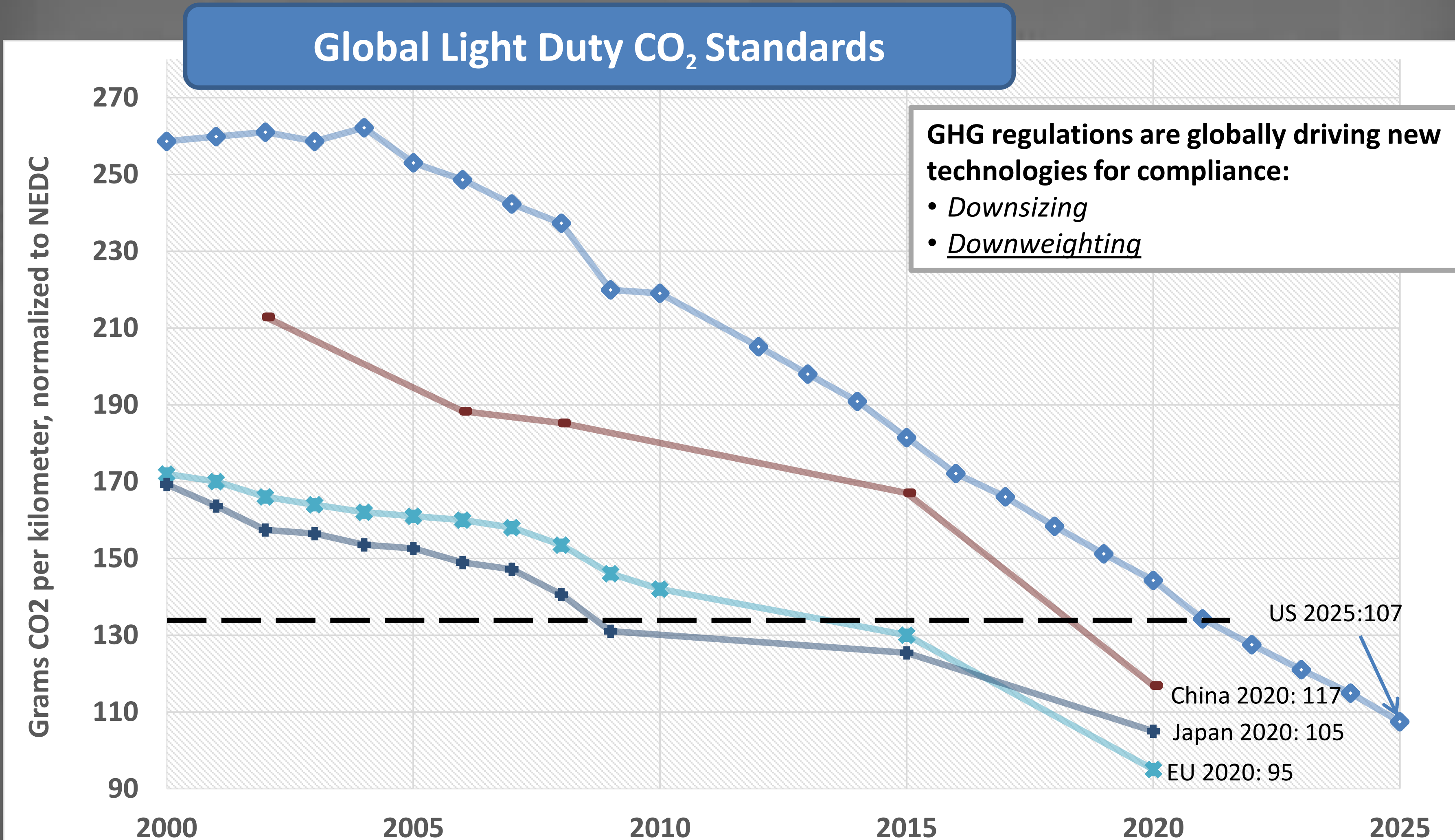
115% Growth

130% Growth

140% Growth

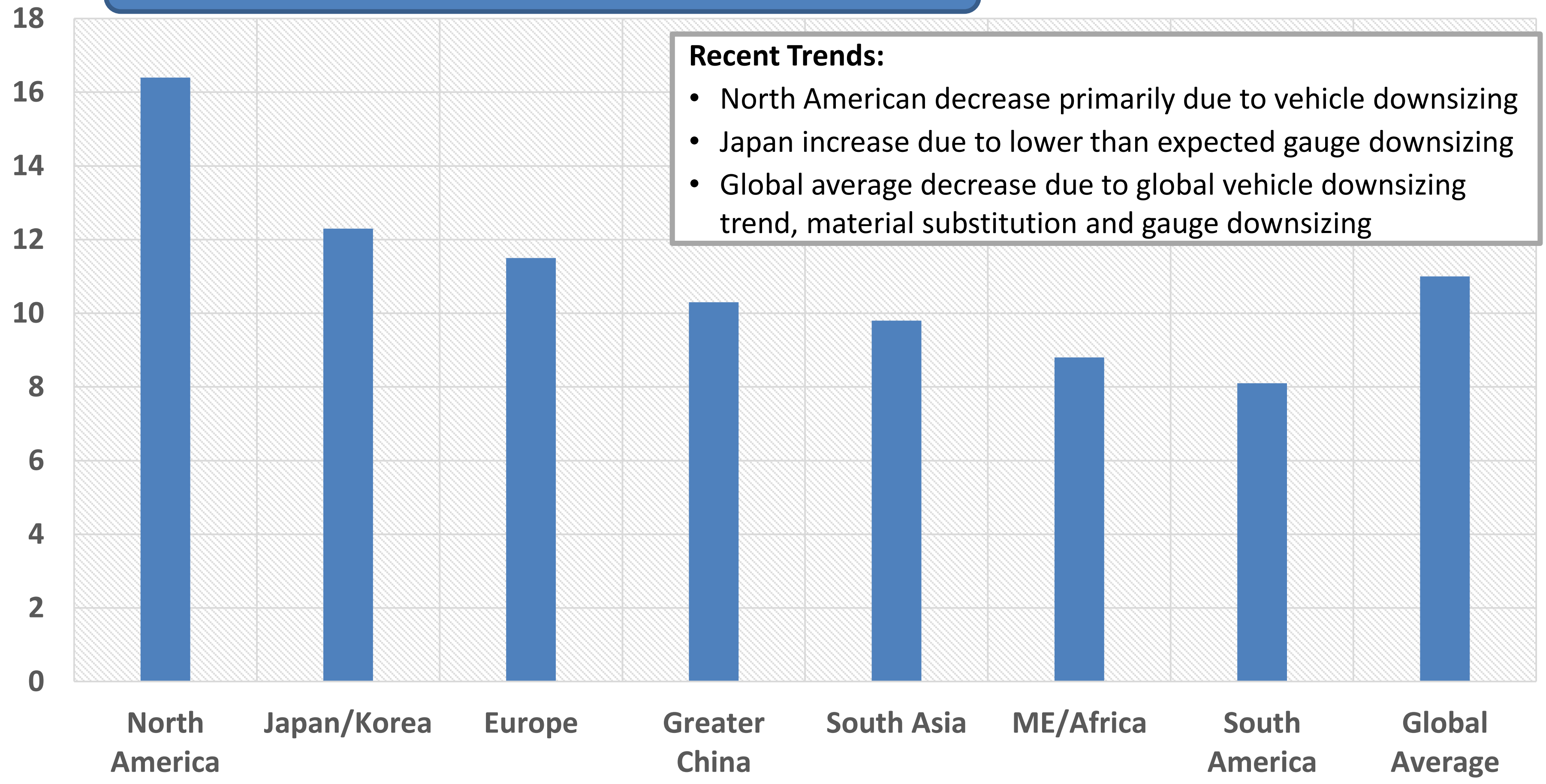
Note: Small vehicles include A and B segment, Medium vehicles include C and compact truck segments, Large vehicles include D, E and full size truck segments

Future CO_2 Legislation Will Continue to Require Greater Advances in Technology



Average Copper Content in Wire Harnesses and Cables Ranges from 8.1 to 16.4 Kilos in Different Regions Globally

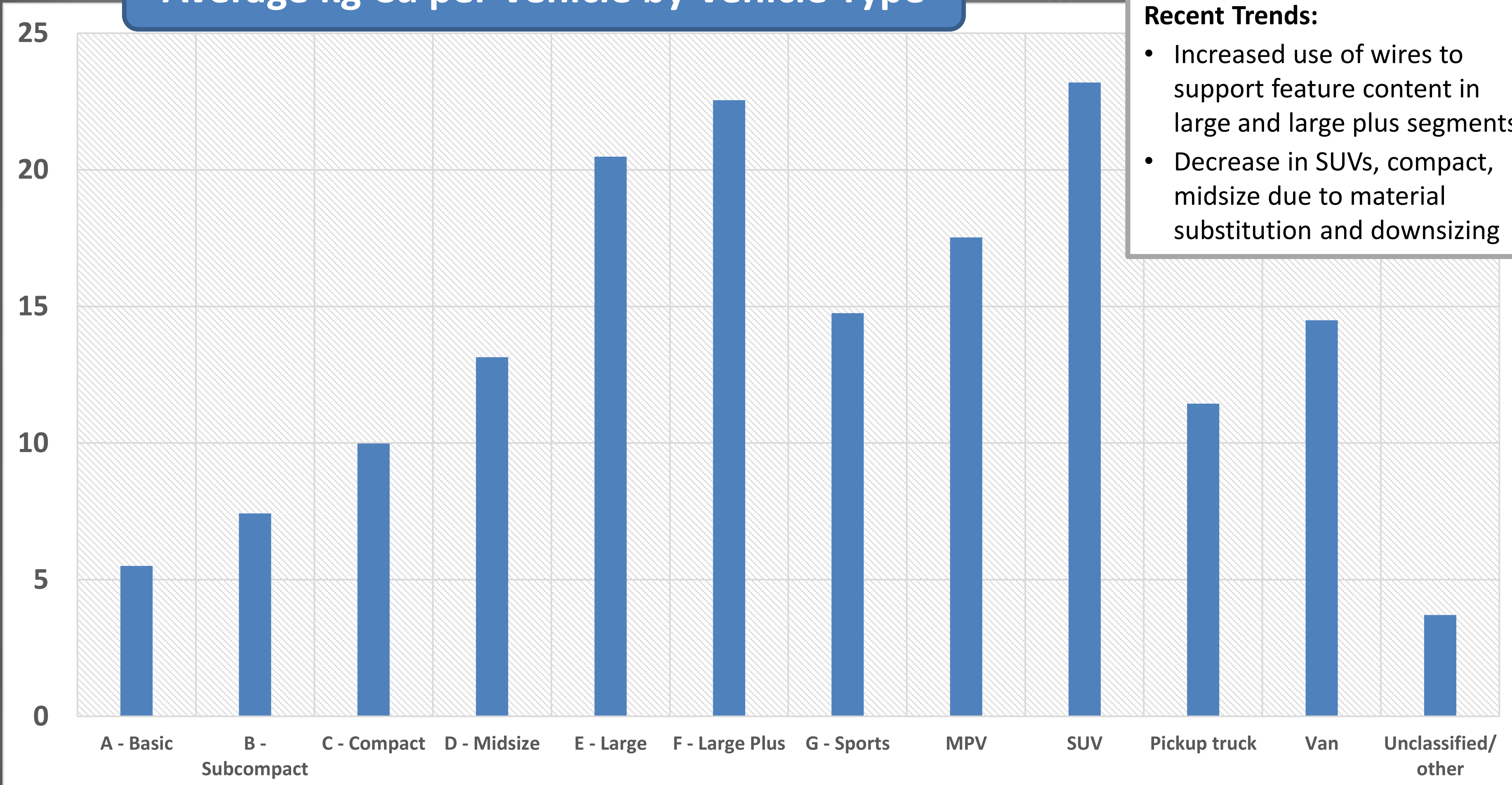
Average kg Cu per Vehicle by Region



Recent Trends:
- North American decrease primarily due to vehicle downsizing
- Japan increase due to lower than expected gauge downsizing
- Global average decrease due to global vehicle downsizing trend, material substitution and gauge downsizing

Average Copper Content Range from 5.5 Kilos in Small (Basic) Vehicles to 23.2 Kilos in SUVs

Average kg Cu per Vehicle by Vehicle Type



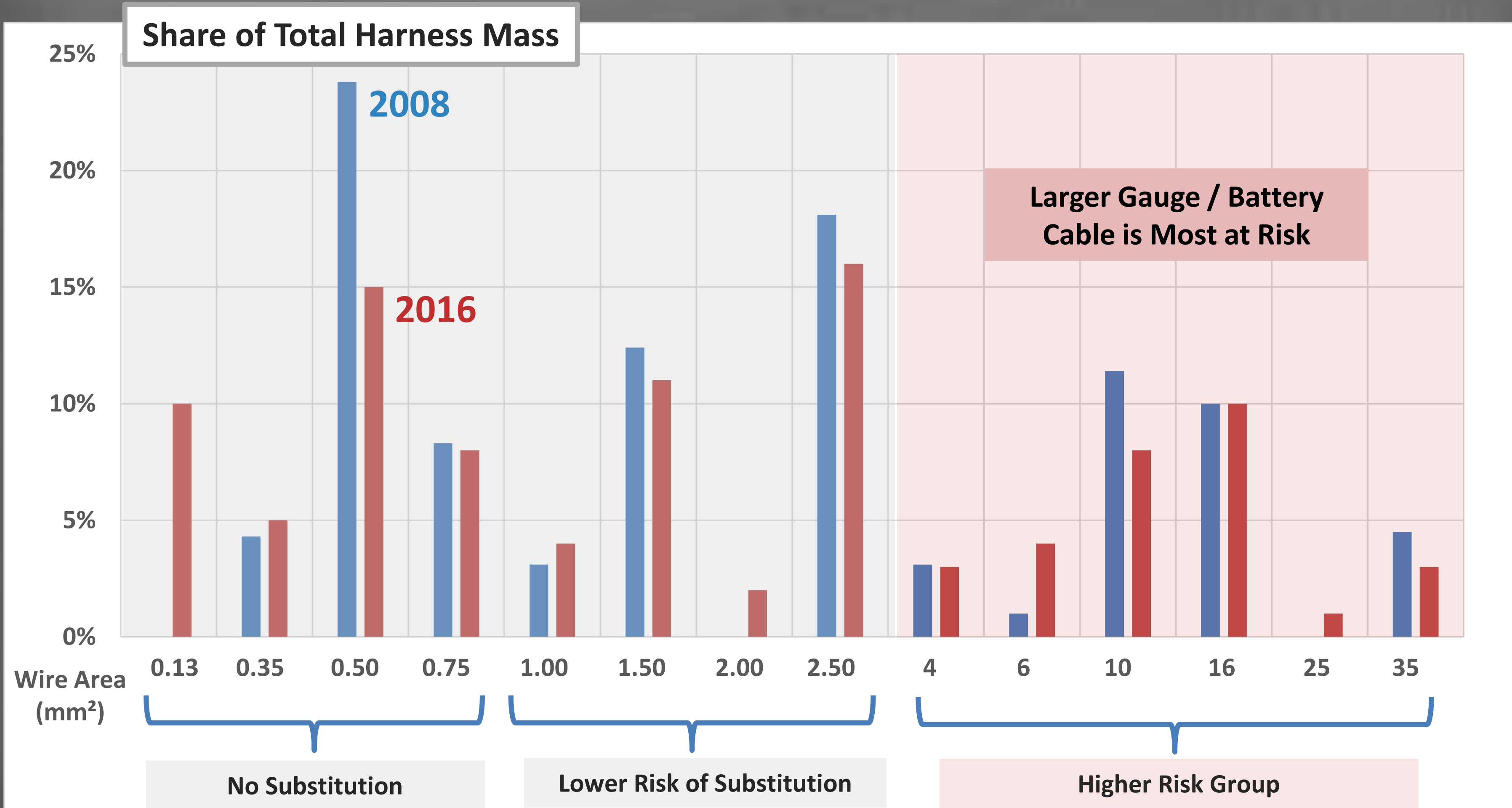
Recent Trends:

- Increased use of wires to support feature content in large and large plus segments
- Decrease in SUVs, compact, midsize due to material substitution and downsizing

MARTEC

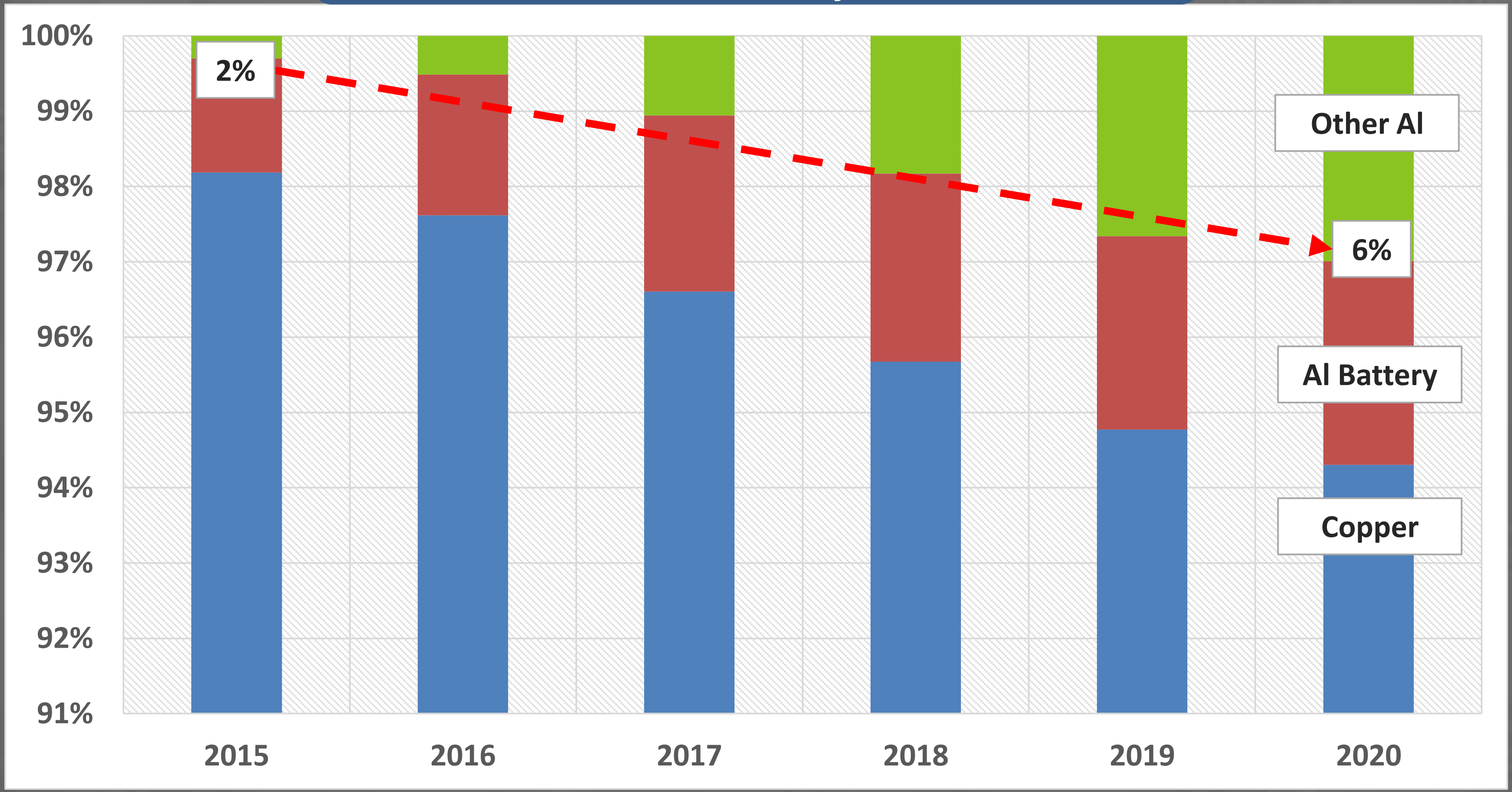
Significant Downsizing Is Evident from 2008 to 2016 … 0.13mm² Introduction Is the Primary Driver

2008 vs. 2016 Average Midsize Sedan



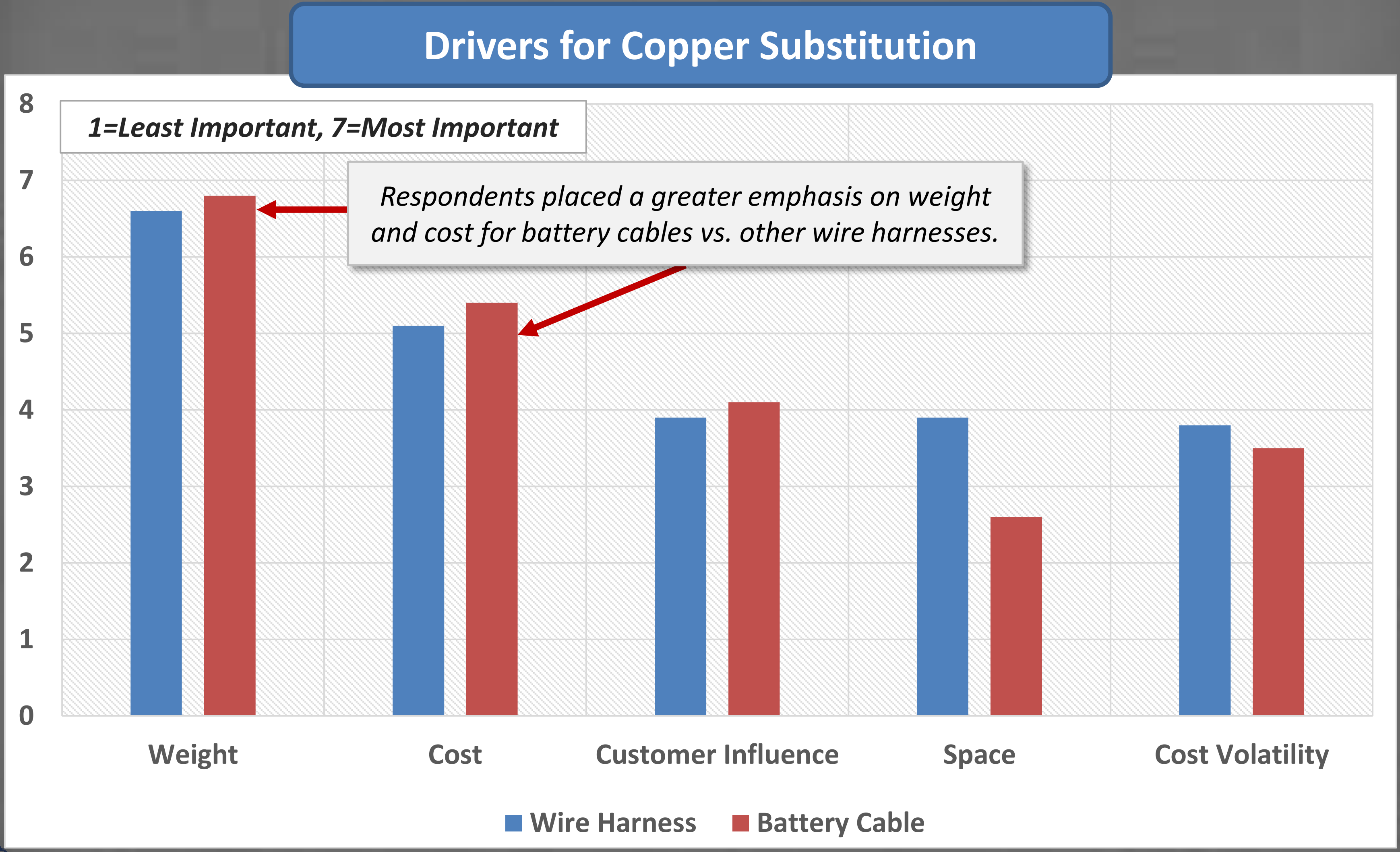
Global Substitution of Copper in Automotive Harnesses (Battery Cable and Other) Will Likely Displace 6% of Total Copper Mass by 2020

Global Material Share in Electrical Distribution System

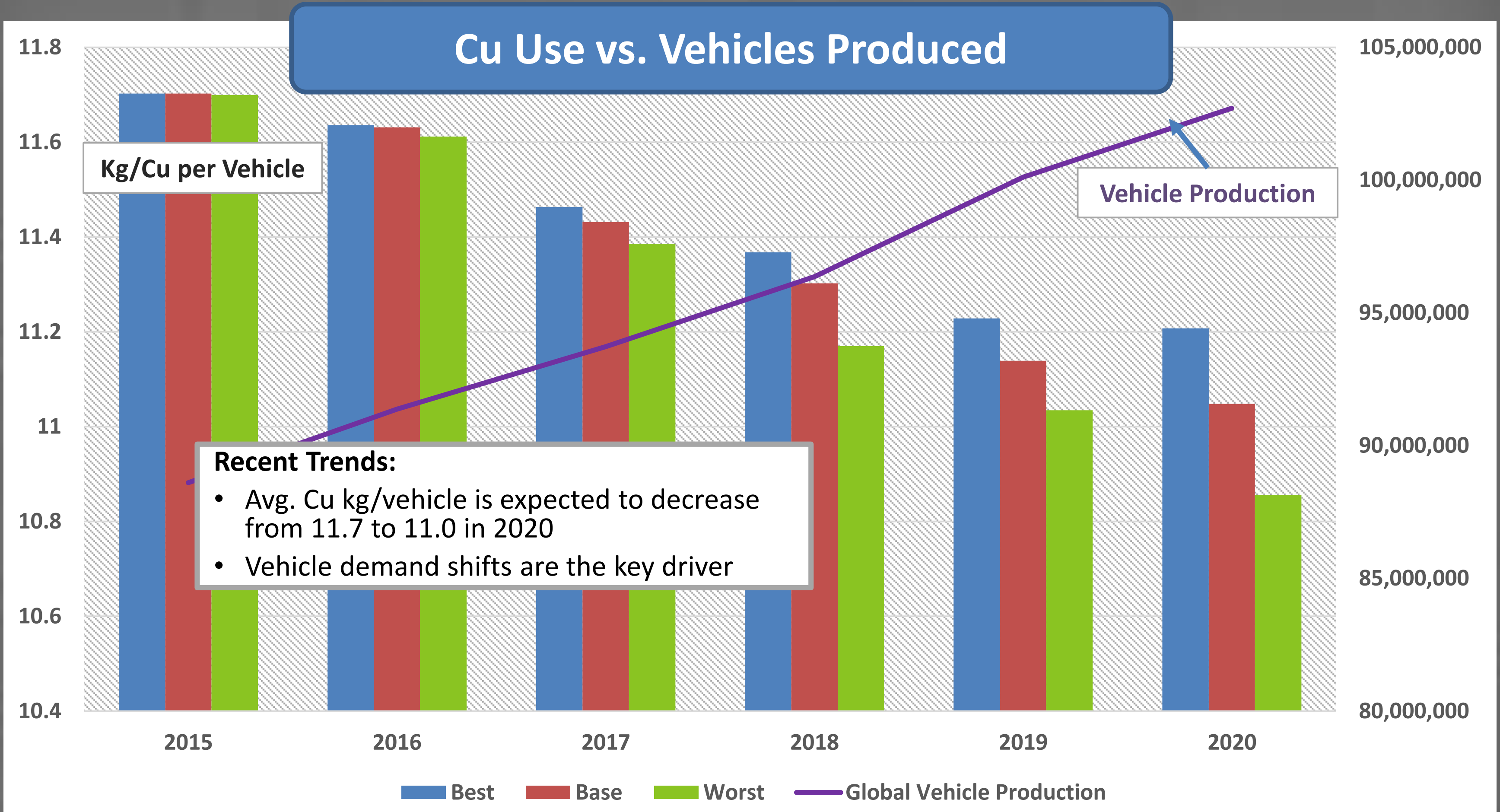


MARTEC

Weight, More Than Cost, Is Agreed Upon as the Strongest Driver to Change



Cu Demand Is Forecast to Continue to Increase Over the Next 5 Years, Mainly Driven by an Increase in Vehicle Production Globally

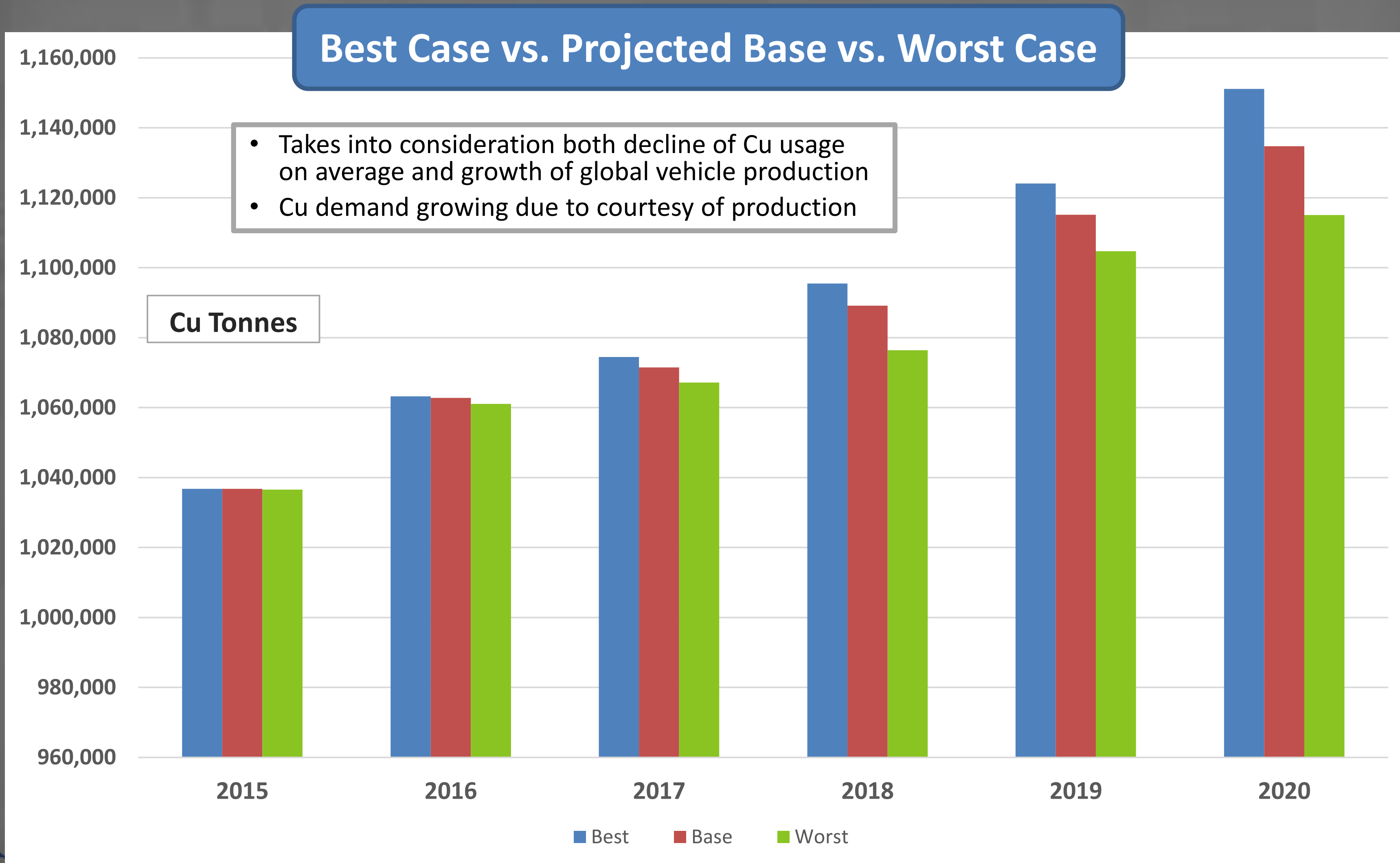


Best Case: Japanese OEMs pursue Al substitution less aggressively, US OEMs maintain Cu battery cables

Baseline Case: Aggregate of Martec interview feedback from global OEMs and suppliers

Worst Case: US downsizes faster, moves quickly on Al battery cables; Technology allows Al substitution to be more feasible for diameters down to 1mm by 2020

The Market Indicates a Small Potential Downside for Cu Even Under Worst Case Scenario



Summary of Key Findings

1. **Copper continues to be the predominant material of choice for wire harnesses in the Automotive industry.**
   - Currently: Copper ~98% and Aluminum ~2% share
   - Weight and cost are the key reasons to material substitution
2. **Substitution is slow due to risk averse organizations.**
   - Copper still holds major advantages over Aluminum, resulting in thin gauge Copper wires being "protected"
     - *Corrosion risk, connectivity issues, packaging and flexibility*
   - Automotive engineers are still more comfortable in using Copper (long standing history)
3. **European and Japanese OEMs lead the charge on substitution.**
   - European OEMs leading the charge with battery cables
   - Japanese OEMs focused on battery cables and body chassis harnesses
4. **American OEMs are focusing more on downsizing of gauges.**
5. **Current market demand for Copper in Automotive wire harnesses is ~1M tonnes globally and is expected to grow to ~1.15M tonnes by 2020.**
   - Increase due to growth of Automotive market and feature content