

CEMA Statistics Committee Update

CEMA Spring Meeting 2019

Dan Fannin: VP Commercial Excellence @ Regal Beloit

Charter: The statistics committee was established to review the statistics and conveyor equipment market size published by CEMA.



The Information is Widely Used

- Companies Today:
 - Use the Information from CEMA to:
 - Calculate the size of served markets.
 - Justify Capital
 - Invest in R & D
 - Develop Products to Serve New Growth Segments
 - Lead-Time and Customer Proposal Generation
 - Office and Manufacturing Manpower Planning
 - Raw Material and Supply Chain Planning
 - Determine Sales & Budgets for the Future Year.



Current Business Process:



- Complete an Annual Review

- CEMA Staff to calculate a change in factor
- Correlate “New Factor” with Census Data
- Utilize Material Handling Expert Reports to Validate industry size
- Only Print Industry Estimate size in Yearbook
- Meet at Spring meeting and review the Industry Dynamics



- Recalculate the Industry Factor Annually

- Use Government Census Data to Validate industry size
- Third Party Data to Validate industry size
- Restate the industry factor based on gains and loses within CEMA



Recalculate based on Census



2017 Economic Census Planned Data Product Releases



2017 Economic Census Planned Data Product Releases



Publication Series	Report Title	Planned Release Date or Date Range
Core Business Statistics	Economy Wide Business Statistics for the U.S. - First Look	September 2019
	Comparative Statistics for the U.S. (2012 NAICS Basis): 2017 and 2012	December 2021
	Bridge Statistics for the U.S. (2012 NAICS Basis): 2017 and 2012	December 2021
	Franchise	December 2021
Geographic Area Statistics (U.S., States, Metro Areas, Counties, and Places)	Mining: Geographic Area Statistics	January 2020 - November 2020
	Construction: Geographic Area Statistics	
	Manufacturing: Geographic Area Statistics	

CEMA Statistics Committee Update

CEMA Spring Meeting 2019

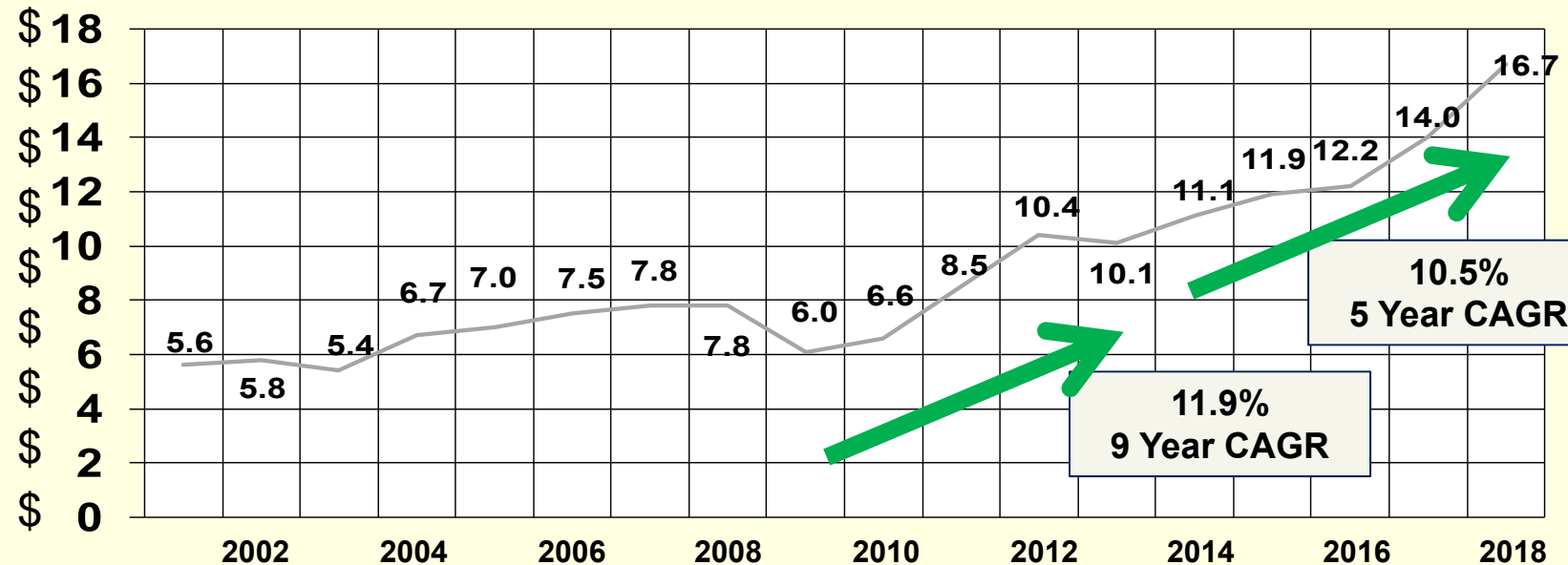
**2018 Industry Actual
2019 Industry Forecast**



CEMA – Sets New Record High in 2018

\$16.7 Billion in Conveyor Equipment shipped up 18.0%

\$ Billion



CEMA 2018 Bookings: “. . . 11.1% increase in Orders.”

CEMA 2018 Shipments: “. . . 18.0% increase in Billings.”

CEMA membership
As % of the market.
2018 = 33.1%



CEMA – Sets New Record High in 2018

\$16.7 Billion in Conveyor Equipment shipped up 18.0%



Conveyor Equipment Manufacturers Association

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**Conveyor Equipment Manufacturers Association (CEMA)
Semi-Annual Press Release**

April 3, 2019

Unit Handling orders were up 12.0% and shipments were up 19.0%. In the Bulk Conveying area, orders were up 8.8% and shipments were up 15.4%.

billion more than 2017, representing an increase of 11.1%.

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CEMA President, Ned Thompson, announced the results at the Association's 86th annual meeting in La Quinta, CA earlier this month.

CEMA tracks new orders and shipped sales volume in nine classes of unit handling equipment and four classes of bulk handling equipment.

The executives representing CEMA member companies who attended the annual meeting expressed continued optimism and forecasted shipments will increase 15.0% for 2019.

Unit Conveyors Shipments Up 19.0%

Bulk Conveyors Shipments up 15.4%



Material Handling Equipment Shipments: Conveyor Equipment up 18.0%

Table 1. Value of Manufacturers' Shipments for Industry Groups¹

[Estimates are shown in millions of dollars and are based on data from the Manufacturers' Shipments, Inventories, and Orders Survey.]

Industry	Seasonally Adjusted						Not Seasonally Adjusted						
	Monthly			Percent Change			Monthly				Year to date		% Change 2018/ 2017
	Dec. 2018 ^P	Nov. 2018 ^F	Oct. 2018	Nov. - Dec.	Oct. - Nov.	Sep. - Oct.	Dec. 2018 ^P	Nov. 2018 ^F	Oct. 2018	Dec. 2017	2018 ^P	2017	
All manufacturing industries.....	504,894	505,772	508,280	-0.2	-0.5	-0.1	490,211	495,901	527,031	470,212	5,999,705	5,604,916	7.0
Excluding transportation.....	413,621	415,893	420,588	-0.5	-1.1	0.2	400,763	406,249	434,786	390,692	4,967,320	4,646,410	6.9
Excluding defense.....	490,632	491,853	494,222	-0.2	-0.5	-0.2	474,053	481,028	513,214	455,197	5,836,389	5,455,135	7.0
With unfilled orders.....	180,264	179,492	177,037	0.4	1.4	-0.7	179,903	174,678	181,221	167,884	2,101,389	1,954,941	7.5
Durable goods industries.....	259,144	257,418	254,964	0.7	1.0	-0.3	252,907	251,463	265,344	236,127	3,017,160	2,813,550	7.2
Wood products.....	9,112	9,096	9,197	0.2	-1.1	-2.1	7,930	8,460	9,766	8,217	111,935	109,094	2.6
Nonmetallic mineral products.....	11,069	10,943	10,989	1.2	-0.4	0.8	9,340	10,710	12,261	9,275	130,881	126,418	3.5
Primary metals.....	21,554	21,852	21,652	-1.4	0.9	-0.5	18,998	20,543	22,145	17,307	255,058	222,128	14.8
Iron and steel mills.....	11,034	11,152	11,051	-1.1	0.9	-0.4	9,716	10,419	11,379	8,361	127,953	108,593	17.8
Aluminum and nonferrous metals.....	9,122	9,283	9,207	-1.7	0.8	-1.2	8,055	8,810	9,351	7,749	110,532	97,530	13.3
Ferrous metal foundries.....	1,398	1,417	1,394	-1.3	1.6	4.3	1,227	1,314	1,415	1,197	16,573	16,005	3.5
Fabricated metal products.....	33,771	33,411	33,102	1.1	0.9	0.6	30,802			28,685	393,156	360,592	9.0
Machinery.....	32,756	32,928	33,037	-0.5	-0.3	1.0					391,386	369,276	6.0
Farm machinery.....	2,685	2,676	2,717	0.3	-1.5	7.3					30,689	25,887	18.5
Construction machinery.....	2,897	2,926	2,966	-1.0	-1.3						35,414	32,224	9.9
Mining, oil field, and gas field machinery.....	1,485	1,486	1,472	-0.1	1.0						18,310	18,425	-0.6
Industrial machinery.....	2,534	2,545	2,666	-0.4	-4.5						11,786	31,293	1.3
Photographic equipment.....	533	540	585	-1.3	-7.7						6,553	6,224	5.3
Ventilation, heating, air-conditioning, and refrigeration equipment.....	3,935	3,863	3,869	1.9	-0.2	0.2	3,874			3,545	46,304	44,157	4.9
Metalworking machinery.....	2,540	2,628	2,622	-3.3	0.2	5.0	2,779	2,632	2,815	3,058	32,377	31,452	3.0
Turbines, generators, and other power transmission equipment.....	4,335	4,460	4,452	-2.8	0.2	-0.9	4,150	4,484	4,578	4,019	50,926	47,138	8.0
Material handling equipment.....	2,852	2,799	2,724	1.9	2.8	0.9	2,920	2,695	2,872	2,629	32,628	30,006	8.7
Computers and electronic products ²	27,864	27,688	27,387	0.6	1.1	1.0	31,664	27,927	27,634	28,920	323,568	303,995	6.4
											9,590	9,967	-3.8

CEMA @ + 18.0%
.GOV @ + 8.7%



According to MHI and MHEA release published Jan 9, 2019; Domestic Demand is expected to rise in 2018 [by 13.7%] to a new record of \$38.1 billion



Material Handling Equipment New Orders: Conveyor Equipment up 11.1%

Table 2. Value of Manufacturers' New Orders for Industry Groups¹

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All manufacturing industries ²	499,876	499,551	502,261	0.1	-0.5	-2.1	494,126	489,476	517,515	481,888	5,994,441	5,579,437	7.4
Excluding transportation ²	409,930	412,403	417,749	-0.6	-1.3	0.2	395,638	400,740	430,230	386,924	4,935,022	4,616,075	6.9
Excluding defense ²	484,838	483,031	488,129	0.4	-1.0	-0.6	474,839	471,933	505,061	465,565	5,811,021	5,432,438	7.0
With unfilled orders ²	179,331	177,404	175,039	1.1	1.4	-6.3	187,530	172,955	176,640	183,017	2,144,461	1,976,686	8.5
Durable goods industries ²	254,126	251,197	248,945	1.2	0.9	-4.3	256,822	245,038	255,828	247,803	3,011,896	2,788,071	8.0
Primary metals.....	21,783	21,778	21,414	0.0	1.7	-2.3	19,443	20,721	21,997	17,874	258,142	224,131	15.2
Iron and steel mills.....	11,366	11,090	10,635	2.5	4.3	-4.6	10,228	10,398	10,819	8,763	130,002	109,957	18.2
Aluminum and nonferrous metals.....	9,002	9,251	9,377	-2.7	-1.3	0.4	7,935	8,979	9,763	7,902	111,276	97,879	13.7
Ferrous metal foundries.....	1,415	1,437	1,402	-1.5	2.5	-0.8	1,280	1,344	1,415	1,209	16,864	16,295	3.5
Fabricated metal products.....	34,080	33,961	33,354	0.4	1.8	1.5	34,401	34,401	34,401	28,530	399,115	366,269	9.0
Machinery.....	32,444	32,760	33,421	-1.0	-2.0	-2.1	32,444	32,760	33,421	32,019	393,763	374,706	5.1
Construction machinery.....	2,735	2,906	2,967	-5.9	-2.1	-2.1	2,735	2,906	2,967	2,874	35,704	33,541	6.4
Mining, oil field, and gas field machinery.....	1,400	1,477	1,449	-5.2	-1.7	-1.7	1,400	1,477	1,449	1,400	17,978	18,458	-2.6
Industrial machinery.....	2,394	2,511	2,744	-4.7	-7.7	-7.7	2,394	2,511	2,744	2,846	31,426	31,269	0.5
Photographic equipment.....	561	533	575	5.3	-7.7	-7.7	561	533	575	561	6,313	6,359	-0.7
Ventilation, heating, air-conditioning, and refrigeration equipment.....	3,933	3,910	4,089	0.6	-4.4	-4.4	3,933	3,910	4,089	3,551	47,363	44,745	5.9
Metalworking machinery.....	2,467	2,427	2,677	1.6	-9.3	-9.3	2,467	2,427	2,677	2,944	31,963	31,363	1.9
Turbines, generators, and other power transmission equipment.....	4,071	4,255	4,345	-4.3	-2.1	-2.9	3,799	4,328	4,430	3,916	49,898	46,897	6.4
Material handling equipment.....	3,005	2,838	2,864	5.9	-0.9	3.5	3,247	2,599	2,777	2,814	34,259	31,452	8.9
Computers and electronic products ²	24,152	24,138	24,119	0.1	0.1	2.9	28,930	23,187	23,064	26,049	279,771	259,757	7.7
Computers.....	792	861	847	-8.0	1.7	-3.5	982	818	812	936	9,907	10,266	-3.5

CEMA @ + 11.1%
.GOV @ + 8.9%

**CEMA Members
had a strong year**



2019 Forecast



Industry Forecast Analysis

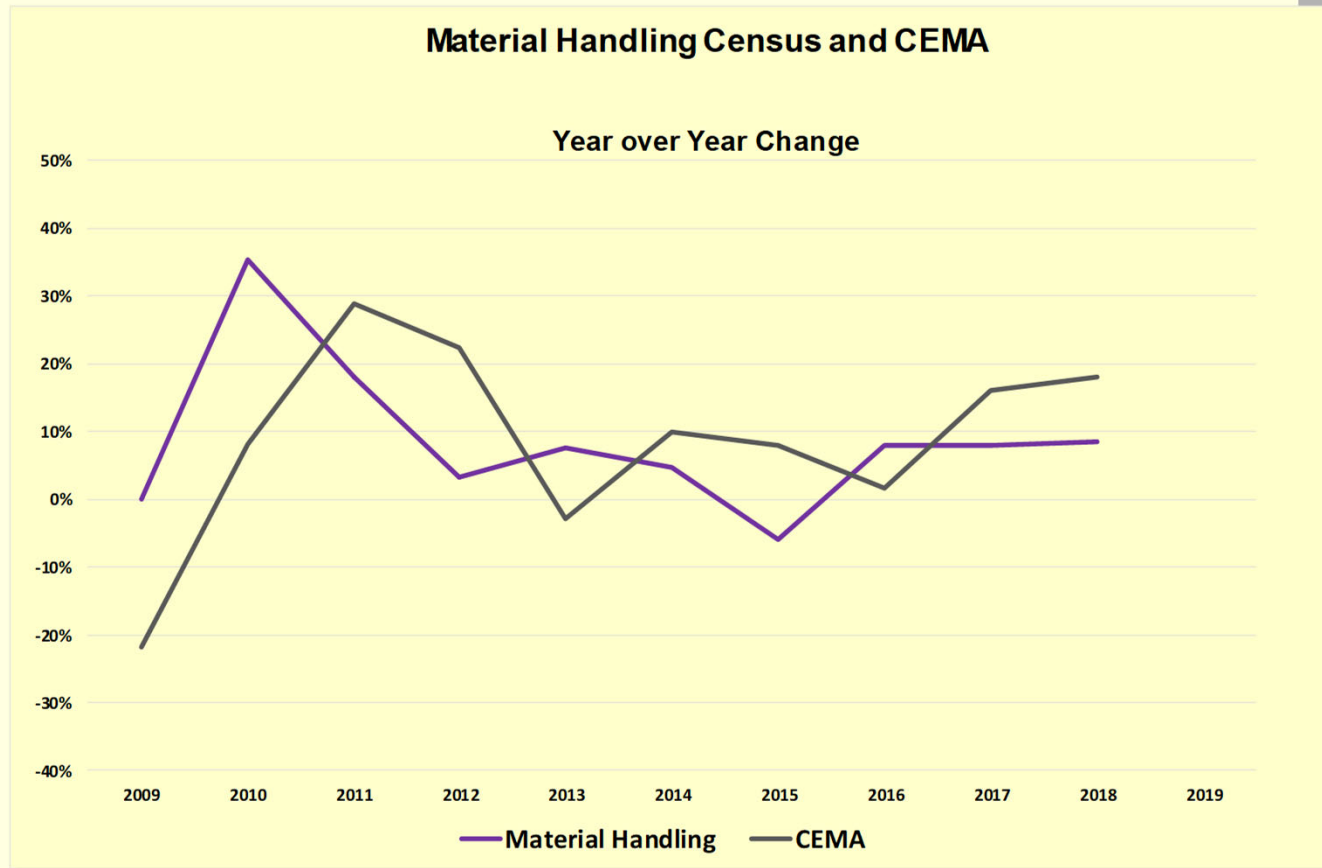
Industry category title (and 6-digit NAICS codes)

33M3: Material Handling Equipment Mfg.

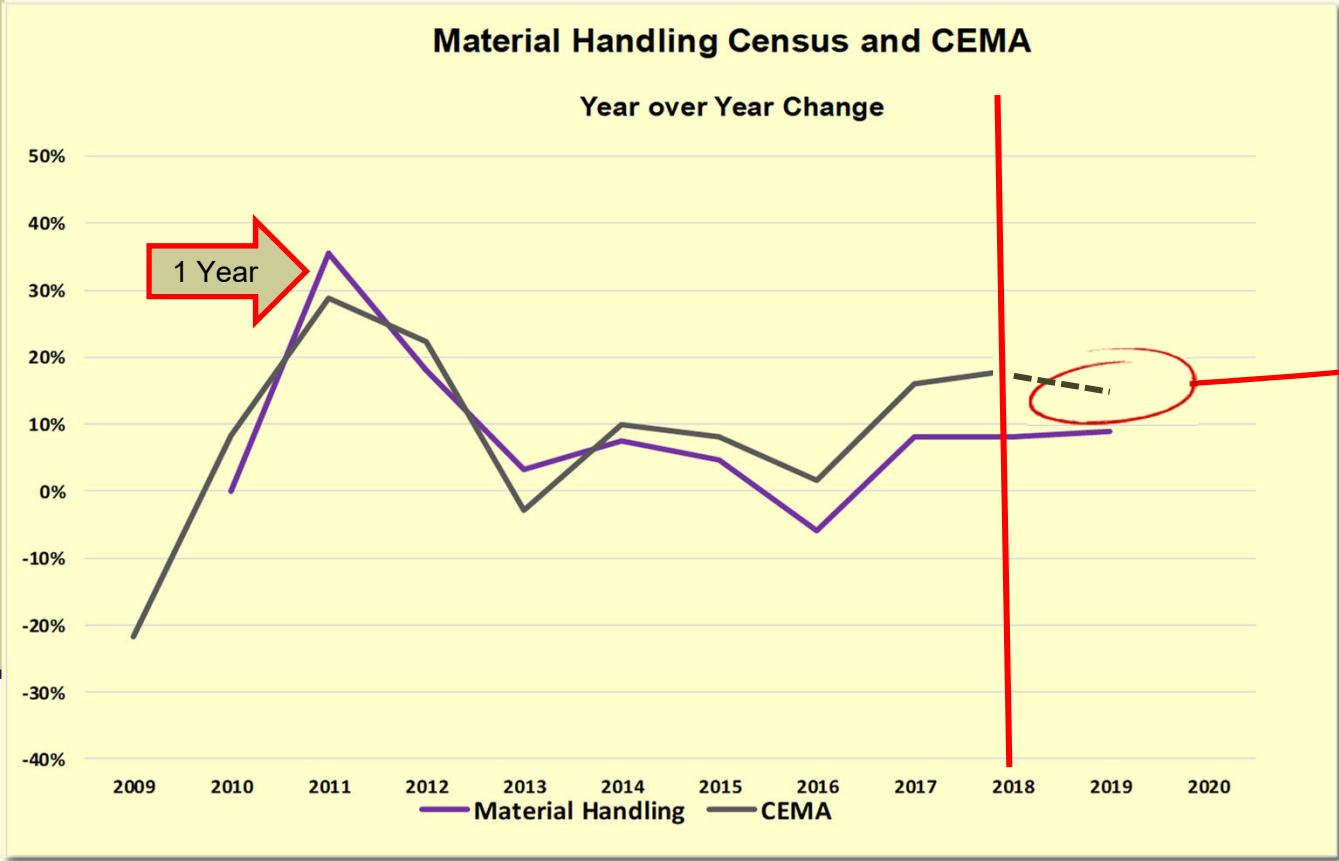
- 333921: Elevator and Moving Stairway Manufacturing
- 333922: Conveyor and Conveying Equipment Manufacturing
- 333923: Overhead Traveling Crane, Hoist, & Monorail System Mfg.
- 333924: Industrial Truck, Tractor, Trailer, and Stacker Mfg.



Industry Forecast Analysis



Industry Forecast Analysis



2019 Forecast:

Shipments
up 15.0%

Orders up 18.5%



Industry Forecast Analysis

2011 Bookings \$9.1B	2011 Shipments \$8.5B
2012 Bookings \$10.6B	2012 Shipments \$10.4B
2013 Bookings \$9.9B	2013 Shipments \$10.1B
2014 Bookings \$10.9B →	2014 Shipments \$11.1B
2015 Bookings \$11.2B →	2015 Shipments \$11.9B
2016 Bookings \$12.3B →	2016 Shipments \$12.2B
2017 Bookings \$14.2B →	2017 Shipments \$14.0B
2018 Bookings \$15.9B →	2018 Shipments \$16.7B
2019 Bookings \$18.8B (Forecast)	2019 Shipments \$19.2B (Forecast)

CEMA Shipments Trail the Orders by 3 to 6 Months

2019 Forecast:

Shipments 15.0%

Orders up 18.5%

Strong Orders will Drive Shipments for 2019

Note: The strong Orders model points out the need to keep a close eye on the trends.... Use your CEMA Monthly Statistics to stay on top of the trends.



Industry Drivers



The Market View: Very Positive

- Market Research Future (MRFR) in Jan 2019 published a research report on the global material handling equipment market that estimates growth for Material Handling at **7.5% CAGR between 2018 and 2023**.
- The automated material handling (AMH) equipment market **in the US** is estimated to see growth at a **CAGR of 8.2% during 2018–2024**.
- A report released from Mordor Intelligence Mar 2018 states the global Automated Material Handling (AMH) market will see **growth at 11.29% CAGR 2018-2023**
- The e-commerce segment is expected to gain prominence over the forecast period with an estimated **CAGR exceeding 10.0%**.



Positive Drivers to Forecast

All the research reports describe the same drivers:

- Growing need for workers safety
- Cannot find people to fill the Jobs
- Reducing labor cost
- Personalized AGVs
- Advanced Robotics
- The rise in the integration of industry 4.0
- Growing e-commerce industry



Growing e-commerce industry

- 90% of warehouses worldwide today are either entirely manual or have implemented only low-level automation into their operations.
- 93% distribution centers using outdated WMS systems
- 79% of logistics managers plan to increase warehouse automation
- 56% of manufacturers find their customers most frequently demand short notice production capabilities....
- 50% define their success by their ability to meet on-time deliveries consistently.

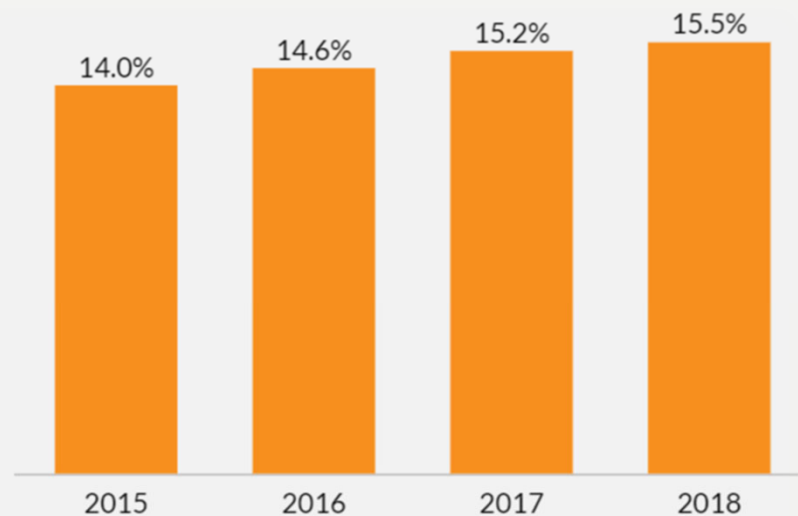
**Solution: Warehouse Automation
Drive Unit Handling System Automation**



Positive Drivers to Unit Forecast

Online shopping is not slowing

Year-over-Year retail e-commerce growth



Source: U.S. Commerce Dept., Internet Retailer

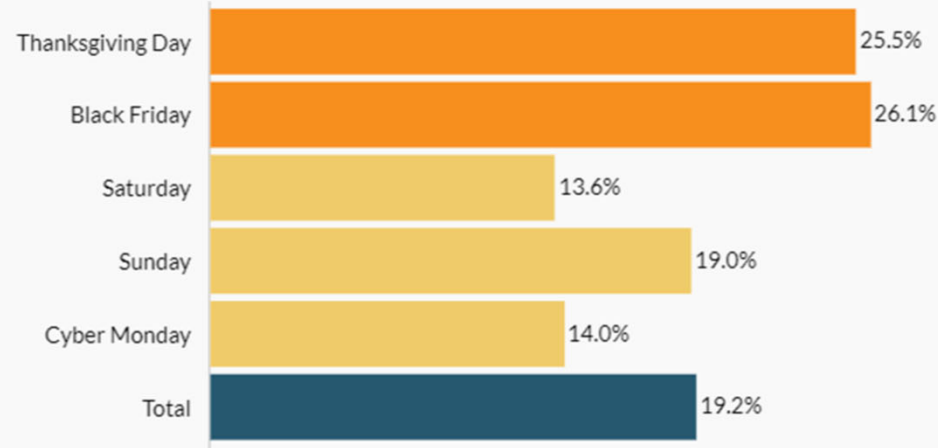
**Strong Online Orders
Drive Unit Handling System Automation**



Positive Drivers to Unit Forecast

Holiday Online shopping is not slowing

- Internet Retailer estimates e-commerce sales during the five-day period from Thanksgiving Day through Cyber Monday **grew 19.20% to \$22.55 billion** in 2018



Source: Internet Retailer estimates

**Strong Online Orders
Drive Unit Handling System Automation**



Positive Drivers to Unit Forecast

B2B E-commerce at an inflection point

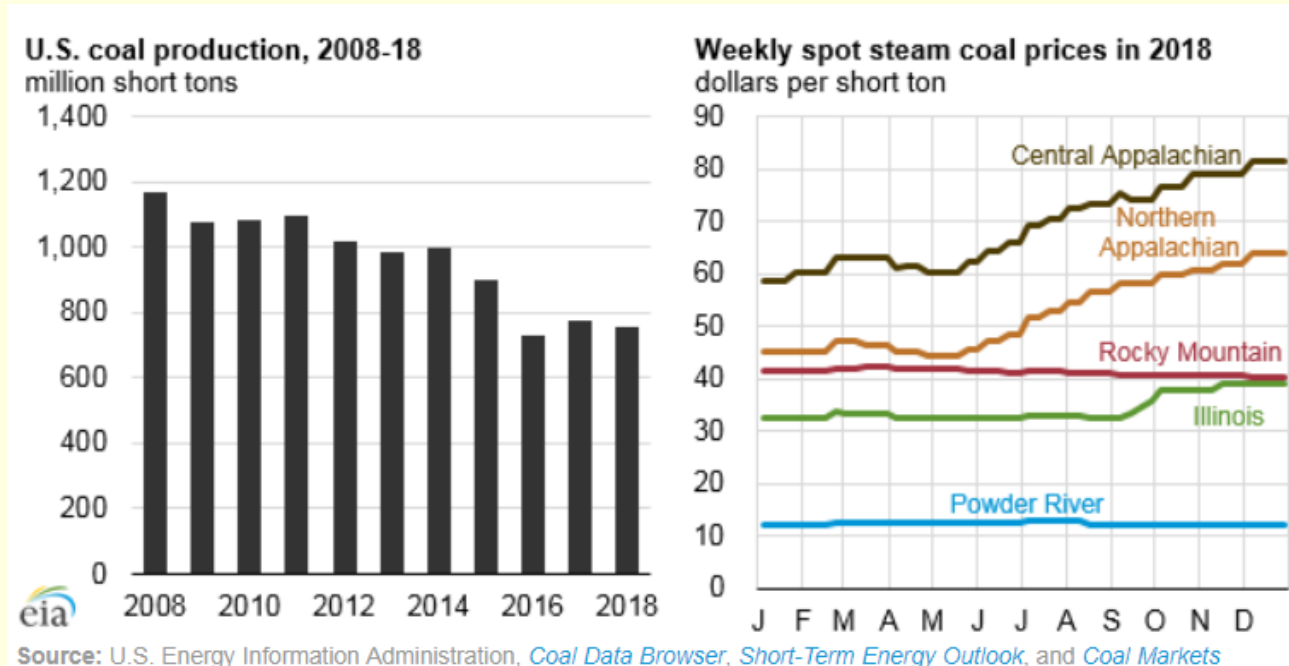
- Forrester predicts in the US by 2020, the B2B e-Commerce market will be **worth \$1.1T compared to the B2C market at \$480B.**
 - Spending on B2B e-commerce platform technologies, systems and services continue at a pace over 2X the B2C e-Commerce market.
 - B2B E-Commerce 2 Times The Size Of B2C
- Forrester estimates that B2B e-Commerce will top \$1.1 trillion and **account for 12.1% of all B2B sales** in the US by 2020.
 - Rapidly changing distribution channel dynamics are redefining wholesaler's business models across a broad spectrum of product and service areas.
 - The firm also predicts a compound annual growth rate of 7.7% in B2B e-commerce over the next five years, resulting from the need by B2B companies to reduce their costs.

**Unit Forecast Driven by spending
on B2B Warehouse Automation**



Positive Driver to Bulk Growth Profit in the Coal Mining Industry

In 2018, coal prices rose in three of the five major coal-producing regions



Resulting in long overdue maintenance and capital spend



Ag Industry: No Rebound Forecast

What is driving forecast in the Agriculture Industry

- 2018 Agriculture Equipment was up 18.5% in 2018
- 2018 Food Products up 1.2%, growth driven by retail
- Trade Woes Sour Economic Forecasts for Agriculture Producers in 2019
- Ongoing trade battles, which have significantly disrupted U.S. agricultural export markets and depressed 2019 commodity futures prices.
- USDA forecasts for 2019 offer little prospect of relief.



Agricultural commodity prices
to fall again in 2019



Closing Thoughts

1. **Inflation:** Models are forecasting increases in commodity prices.
2. **Reduced Exports:** Reduced exports of Grain, Commodities and other goods according to the Bureau of Labor Statistics.
3. **Availability:** The increase in demand creating availability gaps.
4. **Reduced Lead-times:** OEMs and Users are under staffed. Short lead-times is a requirement.
5. **Growth in Unfilled orders:** Census numbers show a 14.3% growth in unfilled orders 2018 over 2017.

14.3% growth in unfilled orders drive 2019
Material Handling Forecast *(census.gov)*



Questions

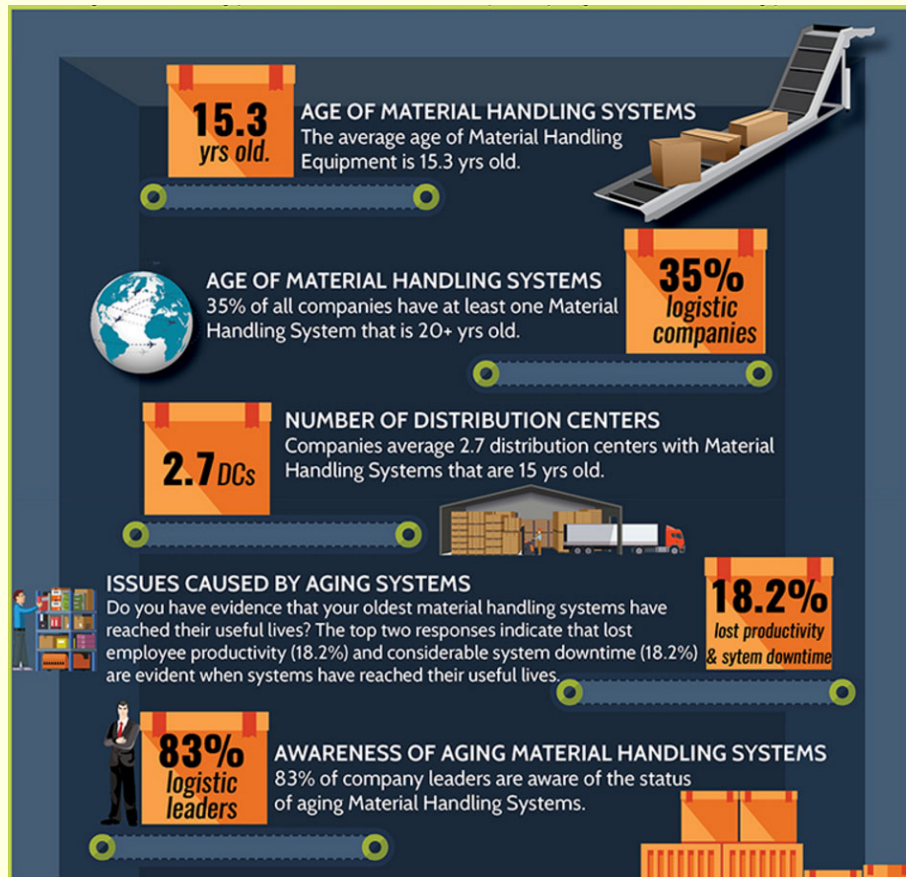


Appendix



Positive Drivers to Unit Forecast

Aging Equipment (Updated)



The factors driving the automated material handling equipment market include the increasing demand for:

- Automated Storage & Retrieval Systems **Forecast 7.2% CAGR thru 2023**
- Technological Developments in AMH Equipment **Forecast 8% CAGR thru 2023**
- Commercial airport baggage handling systems market to **grow at a CAGR 8%** between 2018 and 2023.
- Growing focus of manufacturers toward ensuring safe working environment in warehouses, and reduction in labor cost through advancement in robotics

Unit Forecast 7.9% CAGR between 2018 & 2023.



Positive Driver to Bulk Growth Profit in the Mining Industry

- Top 40 Companies aggregate profits of \$20 billion in 2016
- Compared to a total loss of \$28 billion in 2015.
- Rising commodity prices lifted all boats,



Any new revenues appear to be going towards debt repayment rather than capital expenditures, which are down 41% to a record low of just \$50 billion.

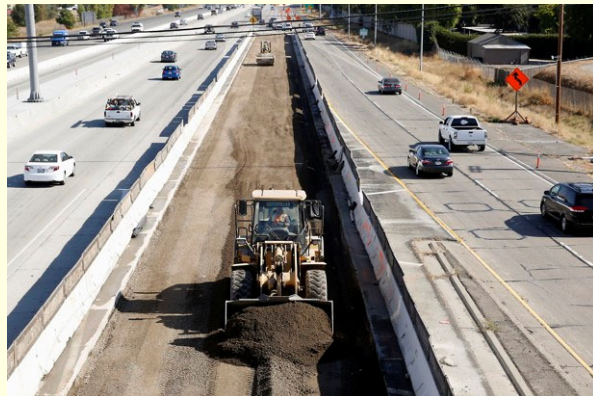
Metal Prices Finally Supportive



Positive Driver to Bulk Growth

Infrastructure build

- Congress . . . passage of a \$305 billion measure to fund roads, bridges, and rail lines.
- The five-year infrastructure bill is the longest reauthorization of federal transportation programs that Congress has approved in more than a decade. *(2016 thru 2020)*
- Senate Democrats Plan - \$1 trillion infrastructure bill
and/or
- Trump Plan - \$1.5 trillion infrastructure plan



Positive Driver to Bulk Growth

Infrastructure build

- Revenue growth is expected to stabilize as the economy grows.
- Profit increased along with demand for sand and gravel.
- Over the next five years to 2022, industry revenue is forecast to rise at an annualized rate of 2.7% to reach \$17.8 billion.

