Armstrong World Industries Investor Presentation

June 2023

Safe Harbor Statement

References to “AWI”, “Armstrong”, “the Company”, “we”, “us”, “our” are to Armstrong World Industries, Inc.

Disclosures in this presentation contain forward-looking statements within the meaning of the Private Securities Litigation Reform Act of 1995, including without limitation, those relating to future financial and operational results, expected savings from cost management initiatives, the performance of our WAVE[1] joint venture, market and broader economic conditions and guidance. Those statements provide our future expectations or forecasts and can be identified by our use of words such as “anticipate,” “estimate,” “expect,” “project,” “intend,” “plan,” “believe,” “outlook,” “target,” “predict,” “may,” “will,” “would,” “could,” “should,” “seek,” and other words or phrases of similar meaning in connection with any discussion of future operating or financial performance. This includes annual guidance. Forward-looking statements, by their nature, address matters that are uncertain and involve risks because they relate to events and depend on circumstances that may or may not occur in the future. As a result, our actual results may differ materially from our expected results and from those expressed in our forward-looking statements. A more detailed discussion of the risks and uncertainties that could cause our actual results to differ materially from those projected, anticipated or implied is included in the “Risk Factors” and “Management’s Discussion and Analysis” sections of our reports on Form 10-K and 10-Q filed with the U.S. Securities and Exchange Commission (“SEC”), including the Form 10-Q for the three months ended March 31, 2023. Forward-looking statements speak only as of the date they are made. We undertake no obligation to update any forward-looking statements beyond what is required under applicable securities law.

In addition, we will be referring to non-Generally Accepted Accounting Principles in the United States (“GAAP”) financial measures within the meaning of SEC Regulation G.

A reconciliation of the differences between these measures with the most directly comparable financial measures calculated in accordance with GAAP are included within this presentation and available on the Investor Relations page of our website at www.armstrongceilings.com.

The guidance in this presentation is only effective as of the date given, April 25, 2023, and will not be updated or affirmed unless and until we publicly announce updated or affirmed guidance.

1. Worthington Armstrong Joint Venture (“WAVE”).

Basis of Presentation Explanation

Results throughout this presentation are presented on a normalized basis.

We remove the impact of certain discrete expenses and income in certain measures including adjusted Earnings Before Interest, Taxes, Depreciation and Amortization (“EBITDA”), adjusted diluted earnings per share (“EPS”) and adjusted free cash flow. The Company excludes certain acquisition related expenses (i.e. – changes in the fair value of contingent consideration, deferred compensation accruals[1], impact of adjustments related to the fair value of inventory) for recent acquisitions. The Company excludes all acquisition-related amortization from adjusted net earnings and in calculations of adjusted diluted EPS. Examples of other excluded items have included plant closures, restructuring charges and related costs, impairments, separation costs and other cost reduction initiatives, environmental site expenses and related insurance recoveries, endowment level charitable contributions, and certain other gains and losses. The Company also excludes income/expense from its U.S. Retirement Income Plan (“RIP”) in the non-GAAP results as it represents the actuarial net periodic benefit credit/cost recorded.

Our tax rate may be adjusted for certain discrete items which are identified in the footnotes.

Investors should not consider non-GAAP measures as a substitute for GAAP measures.

Excluding adjusted diluted EPS, non-GAAP figures are rounded to the nearest million and corresponding percentages are based on unrounded figures.

Operating Segments: “MF”: Mineral Fiber, “AS”: Architectural Specialties, “UC”: Unallocated Corporate

All dollar figures throughout the presentation are in $ millions, expect per share data, and all comparisons are versus prior year unless otherwise noted. Figures may not sum due to rounding.

1. The deferred compensation accruals are for cash and stock awards that will be recorded over each awards’ respective vesting period, as such payments are subject to the sellers’ and employees’ continued employment with the Company.

GAAP & Non-GAAP Financial Results

For the Twelve Months Ending :

AWI Consolidated Company Results	2017	2018	2019	2020	2021	2022	5-Year CAGR ('17 – '22)
Net Sales	$893.6	$975.3	$1,038.1	$936.9	$1,106.6	$1,233.1	6.7%
Net Earnings (Loss)	$119.6	$185.9	$214.5	($99.1)	$183.2	$202.9	11.2%
Operating Income	$243.8	$249.4	$317.4	$254.8	$260.0	$278.7	2.7%
Adj. EBITDA*	$319	$353	$403	$330	$372	$385	3.8%
Operating Income Margin (Operating Income % of Net Sales)	27.3%	25.6%	30.6%	27.2%	23.5%	22.6%	NA
Adj. EBITDA Margin* (Adj. EBITDA % of Net Sales)	35.7%	36.1%	38.8%	35.2%	33.6%	31.2%	NA
Diluted Earnings (Loss) per Share, continuing operations	$4.08	$3.63	$4.88	($1.76)	$3.86	$4.30	1.1%
Adj. Diluted Earnings per Share, continuing operations*	$3.02	$3.66	$4.78	$3.74	$4.36	$4.74	9.4%
Net Cash Provided by Operating & Investing Activities	$116.2	$512.8	$93.6	$77.7	$173.3	$210.6	12.6%
Adj. Free Cash Flow*	$147	$236	$244	$212	$190	$221	8.5%
Net Cash Provided by Operating & Investing Activities % of Net Sales	13.0%	52.6%	9.0%	8.3%	15.7%	17.1%	NA
Adj. Free Cash Flow Margin* (Adj. Free Cash Flow % of Net Sales)	16.4%	24.2%	23.5%	22.7%	17.2%	17.9%	NA
Adjusted Free Cash Flow Conversion*	46%	67%	61%	64%	51%	57%	NA
Net Cash Provided by Operating & Investing Activities % of Operating Income	47.7%	205.6%	29.5%	30.5%	66.7%	75.6%	NA

Segment Results	Full Year 2021			Full Year 2022		
	MF	AS	UC	MF	AS	UC
Net Sales	$818.5	$288.1	-	$887.4	$345.7	-
Operating Income (Loss)	$261.2	$4.2	($5.4)	$260.9	$21.7	($3.9)
Adj. EBITDA*	$331	$40	-	$330	$55	-
Operating Income Margin (Operating Income % of Net Sales)	31.9%	1.5%	NM	29.4%	6.3%	NM
Adj. EBITDA Margin* (Adj. EBITDA % of Net Sales)	40.5%	14.0%	NM	37.2%	15.8%	NM

*Non-GAAP reconciliations are available in the appendix of this presentation. NA: Not applicable. NM: Not meaningful.

Armstrong World Industries, Inc. (NYSE:AWI)

Leader in the design & manufacturing of innovative ceiling & wall solutions in the Americas.

FULL YEAR 2022 CONSOLIDATED RESULTS

NET SALES	ADJUSTED EBITDA*	ADJUSTED DILUTED EPS*	ADJUSTED FREE CASH FLOW*
$1,233M	$385M	$4.74	$221M

SEGMENT 1:
MINERAL FIBER

NET SALES	ADJ. EBITDA*
$887M	$330M

JOINT VENTURE
WAVE
WORTHINGTON ARMSTRONG VENTURE

SEGMENT 2:
ARCHITECTURAL SPECIALTIES

NET SALES	ADJ. EBITDA*
$346M	$55M

VERTICALS WE SERVE & % OF TOTAL AWI NET SALES**

EDUCATION	OFFICE	HEALTHCARE	RETAIL	TRANSPORTATION
30%	30%	20%	10%	10%

*Non-GAAP measure. See slide 4 and appendix for reconciliation to nearest GAAP measure.
**Based on internal company estimates.
1. Excluding WAVE facilities.

For more than 160 years, we have built our business on **trust and integrity.**

Armstrong Headquarters
Manufacturing Facilities

~3,000 EMPLOYEES

16 OPERATING FACILITIES[1]

Our Focus on Purpose-Driven Sustainability

OUR PURPOSE

Redefining the environments where we:

LIVE

WORK

LEARN

HEAL

PLAY

"Through our ambitious sustainability agenda, we are cultivating thriving environments for employees and communities; more actively meeting demands for healthier, circular products; and doing more with less to preserve and protect our planet's resources.

This is important work for us, because we believe sustainability is a commitment that fulfills our corporate purpose to make a positive difference in the spaces where we live, work, learn, heal and play. Further, it is a critical enabler for our strategy to achieve long-term profitable growth."

Vic Grizzle
CEO, Armstrong World Industries

Additional ESG Resources: Sustainability Website 2022 ESG Report

Uniquely Positioned to Win in an Attractive Category

Attractive Category

Ceiling & wall solutions is unique within the building products industry.

Consolidated industry structure with exposure to diverse end markets

Large installed base (est. at ~39 Billion ft^2) generates stable and repeating repair and remodel demand*

Highly specified, high-value products with few cost-effective substitutes

Customers demonstrate brand loyalty; **reward performance, service and innovation**

Ceilings are an integral part of evolving solutions to meet increasing demand for **healthy indoor spaces**

Why We Win

AWI is advantageously positioned to win in this category.

Strongest and most trusted brand

Broadest, most innovative product portfolio

Specification leadership through deep and long-standing relationships with architects and designers

Large manufacturing **scale** with **strong exclusive distribution partners**

Operational excellence supporting **best-in-class** service and quality

A culture that fosters **empowerment, innovation, teamwork and execution** across functional areas

*Based on internal company estimates.

OUR MISSION

At Armstrong, **we imagine and enable new possibilities every day**. We are **redefining how the environments** in which we live, work, learn, heal and play **can become smarter, healthier and more inspiring** for all.

We **transform experiences for customers and occupants** and **elevate the human experience** by assuring that all of our products, processes, and policies support healthy communities and environmental sustainability.

Creating a Differentiated, Focused Buildings Products Company

2016

Separated from Armstrong Flooring to focus on ceiling and wall solutions.

2017

Announced sale of non-Americas business. Completed 1 AS acquisition.

2018

Initiated quarterly cash dividend. Completed 2 AS acquisitions.

2019

$150M accelerated share repurchase using proceeds from sale of non-Americas business. Completed 2 AS acquisitions.

2020

Launched Healthy Spaces portfolio. Completed 3 AS acquisitions.

2021

Launched kanopi™ digital platform. Issued inaugural sustainability report establishing 2030 ESG targets.

2022

Furthered digital initiatives of kanopi and ProjectWorks™. Completed 1 AS acquisition.

2023

Focused on enhancing profitability and resilient cash flow generation while continuing investments in value-adding initiatives. Continue to develop AS acquisition pipeline.

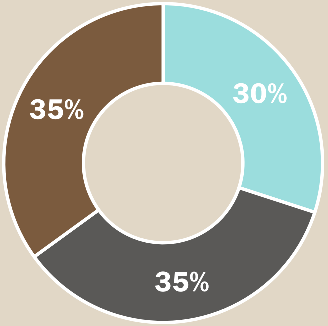
Experience, Above All™

Total Customer Experience Supported by Complementary Segments

A unique value proposition for our customers differentiates AWI in the industry

Mineral Fiber

Net Sales by Project Type**



3%
5-Year Sales CAGR

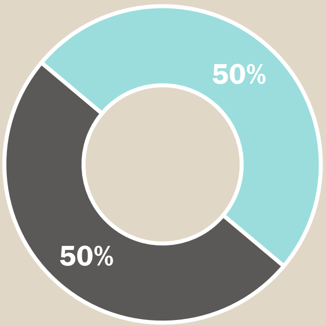
37%
2022 Adj. EBITDA Margin*

Key Attributes

- Consistent AUV improvement
- Targeted manufacturing productivity ~3% annually
- Diverse verticals and project types lessens cyclicality
- Equity Earnings contribution from WAVE JV

Repair: New: Major Reno:

Architectural Specialties



20%
5-Year Sales CAGR

16%
2022 Adj. EBITDA Margin*

- Leveraged to major renovation and new construction
- High design, custom projects for statement spaces
- Lower capital requirements
- Strong growth and margin expansion opportunities

Total Customer Experience

Broad Product Portfolio

Specification Leadership

Best-In-Class Distribution

Brand Strength

Operational Excellence

*Non-GAAP measure. See slide 4 and appendix for reconciliation to nearest GAAP measure.
**Based on internal company estimates.

Successful Joint Venture Provides Important Competitive Advantage

Armstrong World Industries

Go to market expertise

Worthington Industries

Steel procurement and supply chain management expertise

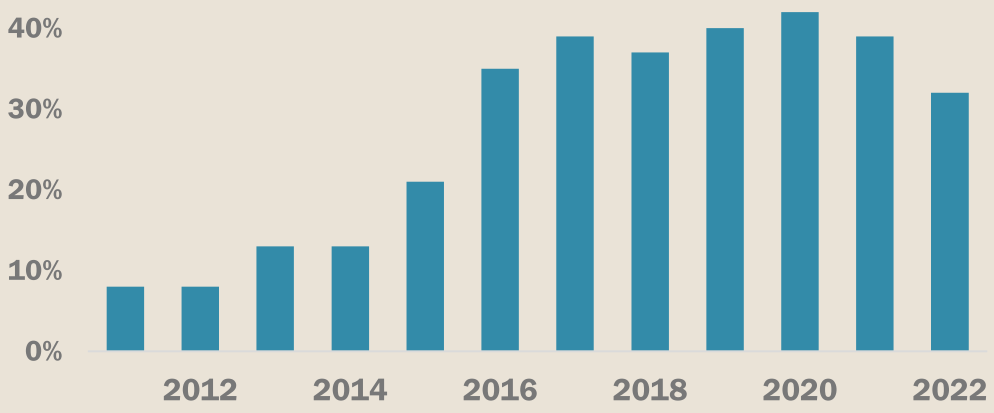
WAVE
WORTHINGTON ARMSTRONG VENTURE

- Established in **1992…50/50** joint venture leveraging expertise of both partners
- **North American market leader** in ceiling suspension system (grid) & integrated solutions
- Innovation mindset
- **$458** million in sales in 2022
- Over **$550 million** of cash dividends to AWI since 2017
- **7 U.S. plants**
- ~500 employees

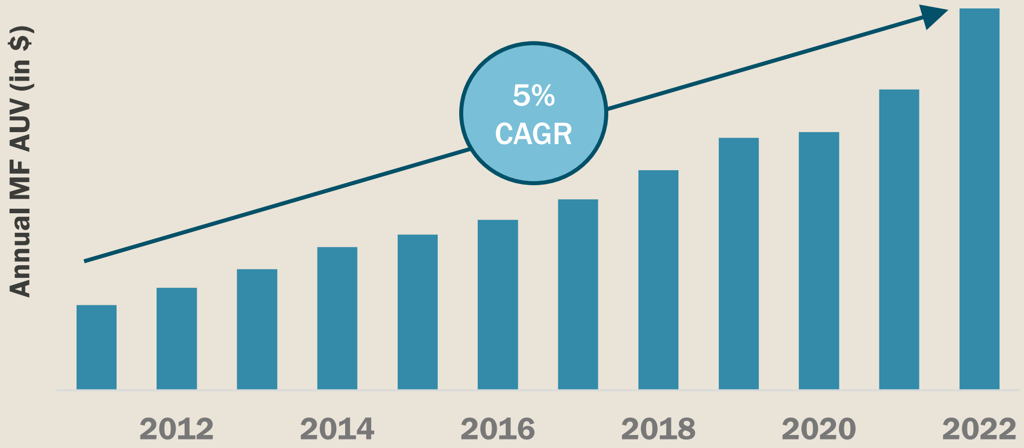
Innovation Supports Consistent Mineral Fiber AUV Growth

New products and features rewarded in the market

Product Vitality Index[1] of >30% Demonstrates the Power of Focus



Robust & Consistent AUV[2] Performance



INNOVATION AT THE CORE OF AWI

Provide new products to **address emerging, market-driven needs** through **efficient process and collaborations**

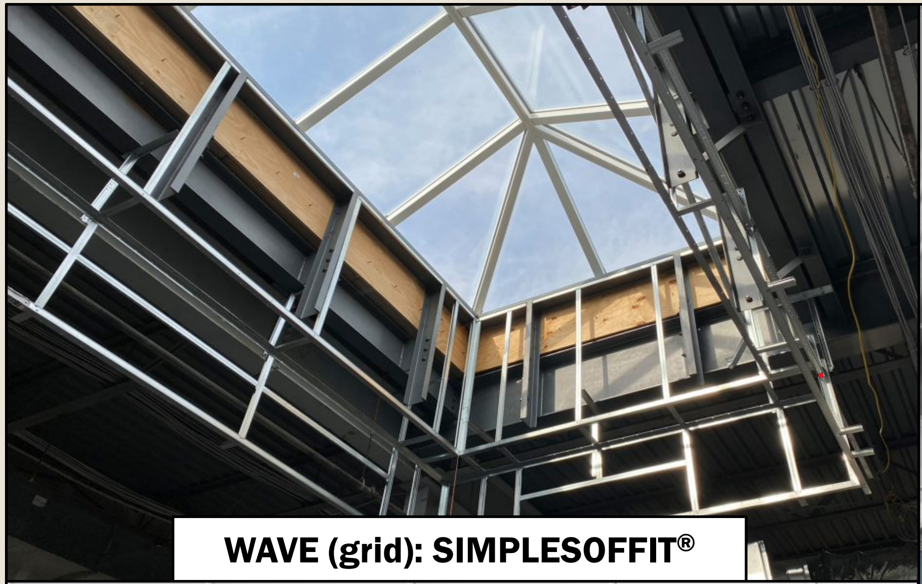
Robust processes with agile mindset

Creating highly specified high-value products

1. Product Vitality Index represents the percent of total sales from products introduced in the last 5 years.
2. US and Canada Mineral Fiber Commercial only.

Comprehensive Range of Innovation Further Differentiates AWI

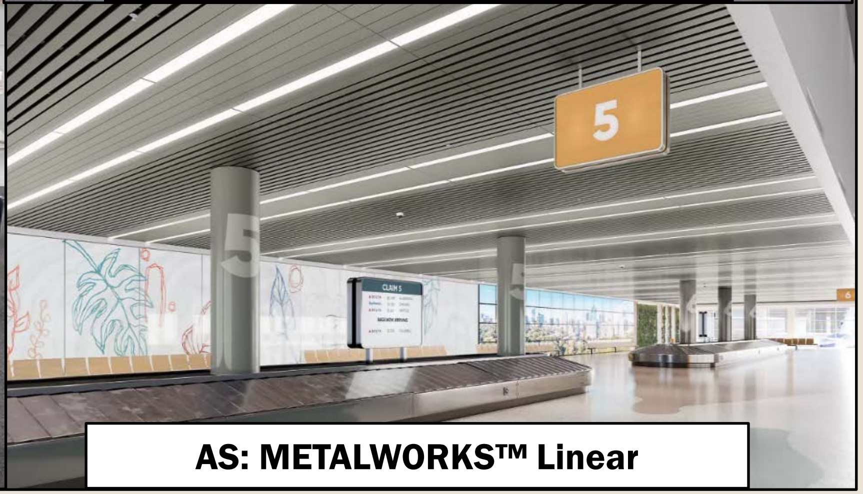
Unrivaled product development to meet customer needs with higher value products


WAVE (grid): SIMPLESOFFIT®


MF: CALLA® HEALTH ZONE


AS: FELTWORKS® Blades

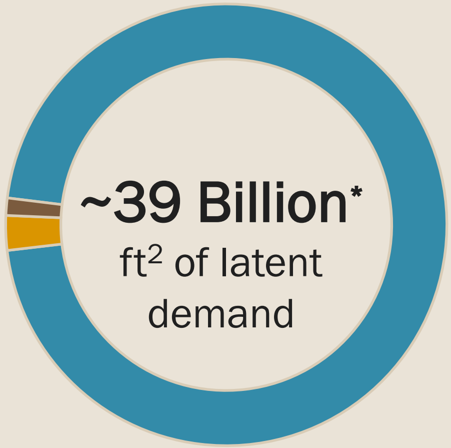

MF: ACOUSTIBUILT® Seamless Acoustical Ceiling System


AS: METALWORKS™ Linear

Growth Initiatives Support Volume and AUV Performance

Projects strengthen both Mineral Fiber and Architectural Specialties segments

Large Installed Base Provides Sizable Opportunity to Influence



- Installed Base
- Annual Market Major Reno and Repair Volume
- Annual Market New Construction

		Growth Impact		
	Overview	**Volume**	**AUV**	**Key stakeholders**
kanopi By Armstrong Ceilings	Digital platform to deliver end-to-end ceiling solutions, accessing untouched demand	Repair and Remodel	Medium	Facility managers, small business owners, DIY
ProjectWorks	Automated design service to deepen customer relationships, strengthen specifications and lower construction costs	New and Major Reno	High	Designers, architects, contractors, owners
Healthy Spaces	Lead in developing sustainable solutions for healthier indoor environmental quality…a secular tailwind for renovation	New and Major Reno	High	Building occupants, designers, architects, owners

*Based on internal company estimates.

Why AWI and Why Now?

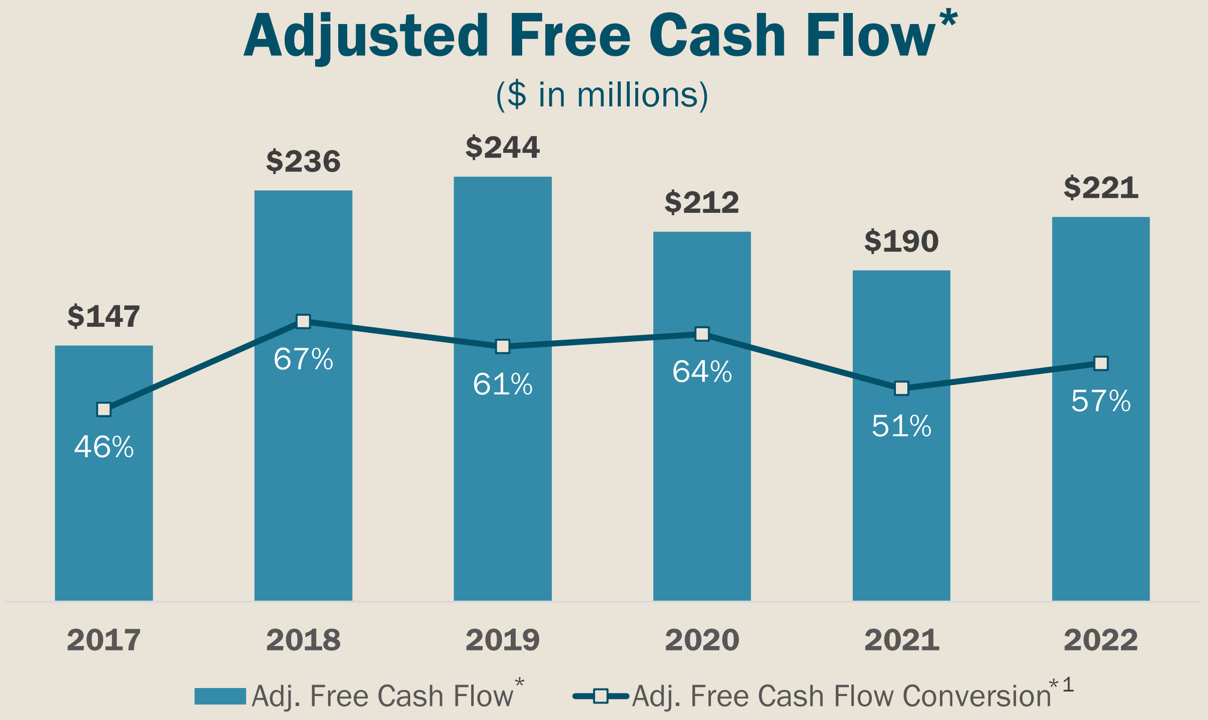
Peer-leading profitability and resilient cash flow differentiate AWI in the building products space

1 Unique industry-leading position with ability to **grow Mineral Fiber sales** despite market headwinds, supported by strong AUV

2 **Strong AS segment organic growth** along with **strategic acquisitions** to expand capabilities and **solidify leadership** in ceiling and wall solutions

3 **Resilient cash flow** generation and **disciplined capital allocation** to drive shareholder value

Strong, Consistent Free Cash Flow Enables Value-Creating Capital Allocation



Cumulative 5-Year Adjusted Free Cash Flow* **+$1.1 Billion**

8% CAGR

1. Adj. Free Cash Flow Conversion = Adjusted Free Cash Flow divided by Adjusted EBITDA.
*Non-GAAP measure. See slide 4 and appendix for reconciliation to nearest GAAP measure

Balanced and Disciplined Capital Allocation Strategy

Strong, consistent cash flow generation allows commitment to all three priorities

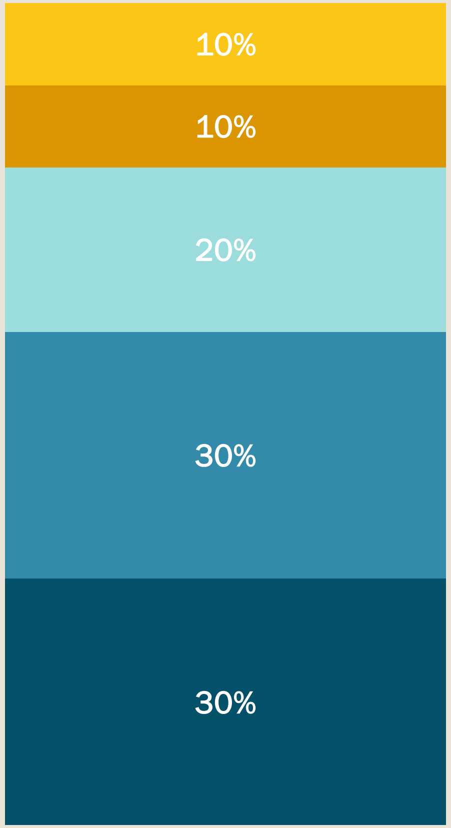
3 Year Highlights (2020-2022)

		3 Year Highlights (2020-2022)
1 Reinvesting into the business	Targeting our highest returning investments. Plenty of opportunity to grow in the Americas.	**$210M** in capital expenditures
2 Strategic acquisitions & partnerships	Consolidating AS categories via new partners and avenues of growth.	4 AS acquisitions totaling **$168M**
3 Return cash to shareholders	Rewarding shareholders with both a stable, increasing dividend and share repurchases[1].	**$400M+** of share repurchases and dividends

1. Future dividend payments and share repurchase authorizations are subject to approval from the Board of Directors.

End Market Vertical Outlook*

Diverse end market exposure provides portfolio effect on sales performance



Percent of AWI Sales by Vertical**	Outlook*	Market Insights
Retail	Slightly negative	Continued headwinds from online shopping balanced by population shifts to suburbs and multi-use in urban areas.
Transportation	Positive	Funding infusion from Infrastructure Investment and Jobs Act totaling $15 billion[1] for airports between 2022 – 2026.
Healthcare	Positive	Strength in senior care centers driven by demographic trends and need for more flexible surge capacity.
Office	Negative	Vacancy rates in certain large metros and economic uncertainty limiting discretionary spend; data center growth providing partial offset.
Education	Positive	Demand supported by ESSER[2] funds and robust state government budgets, offset by demographic trends. R&D laboratory growth continues.

*12- to 18-month outlook based on internal company estimates and Dodge data and analytics.
**Based on internal company estimates.

1. According to the Federal Aviation Administration.
2. Elementary and Secondary School Emergency Relief.

Full Year 2023 Guidance[1]

Driving Growth in a Challenging Macroeconomic Environment

Net Sales Growth

$1,260M to $1,310M

2% to 6% YoY

Adjusted EBITDA*

$395M to $420M

3% to 9% YoY

Adjusted Diluted EPS*

$4.80 to $5.05

1% to 7% YoY

Adjusted Free Cash Flow*

$230M to $250M

4% to 13% YoY

Commentary[2]

Expect lower market demand, partially offset by initiatives, to result in mid-single digit MF volume decline

Expect above average MF AUV growth with historical fall-through

Managing investments and working capital to offset weaker macroeconomic conditions

Expect positive WAVE equity earnings VPY, rebounding from 2022 results

*Non-GAAP measure. See slide 4 and appendix for reconciliation to nearest GAAP measure.
1. Guidance as issued on April 25, 2023.
2. Additional assumptions available in the appendix of this presentation.

Appendix

Full Year 2023 Assumptions

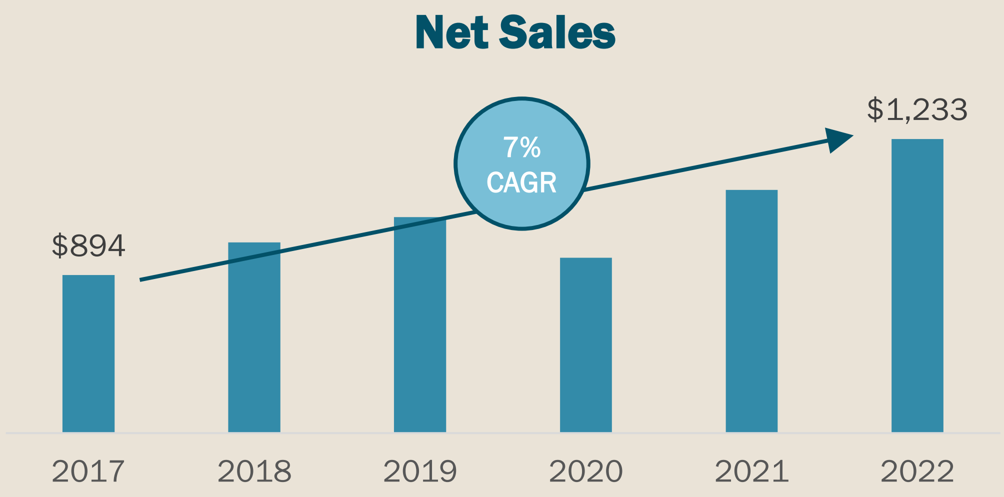
Segment	Net Sales	Adjusted EBITDA Margin*
Mineral Fiber	+1% to +5% growth YoY	>37%
Architectural Specialties**	>6% growth YoY	>18%

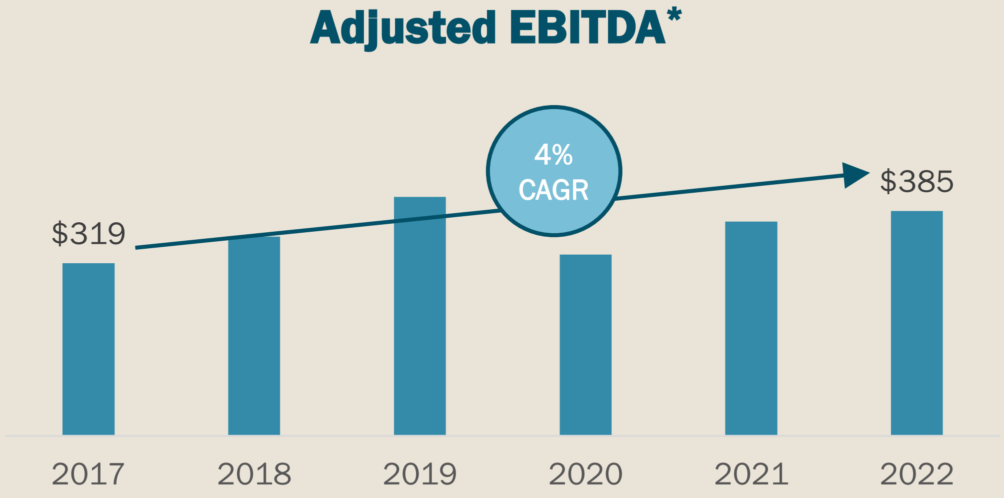
Consolidated Company Metrics	Full Year 2023
Capital expenditures	$75M to $85M
Depreciation and amortization	$83M to $88M
Interest expense	$35M to $37M
Book / cash tax rate	~25% / ~25%
Shares outstanding	~45 million
Return of investment from joint venture	$85M to $95M

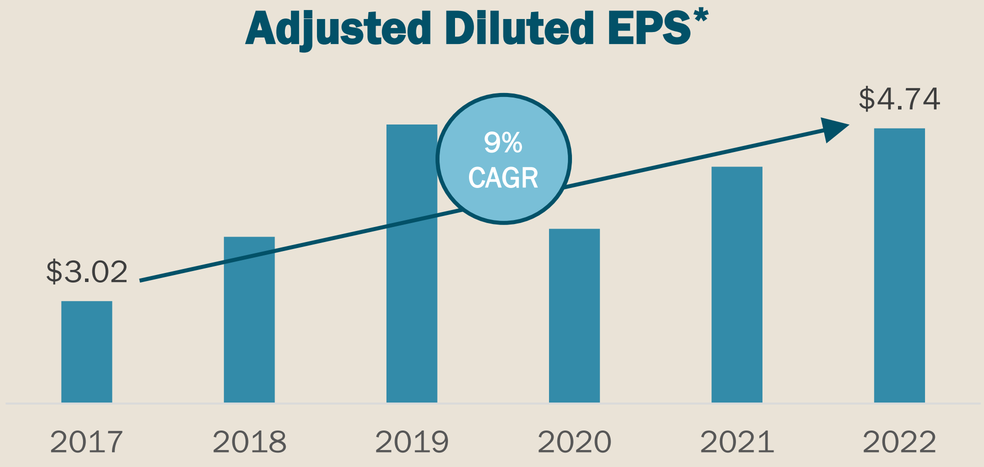
*Non-GAAP Measure. See slide 4 and appendix for reconciliation to nearest GAAP measure.
**Assumes no contribution from future acquisitions.

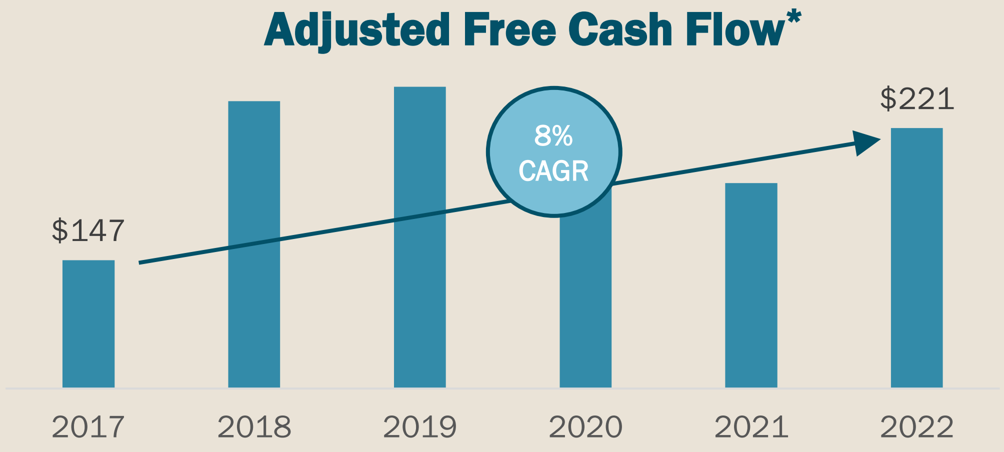
Top and Bottom-Line Growth Creates Value for Shareholders

A history of consistent growth, with accelerators in place for future growth









*Non-GAAP measure. See slide 4 and appendix for reconciliation to nearest GAAP measure.

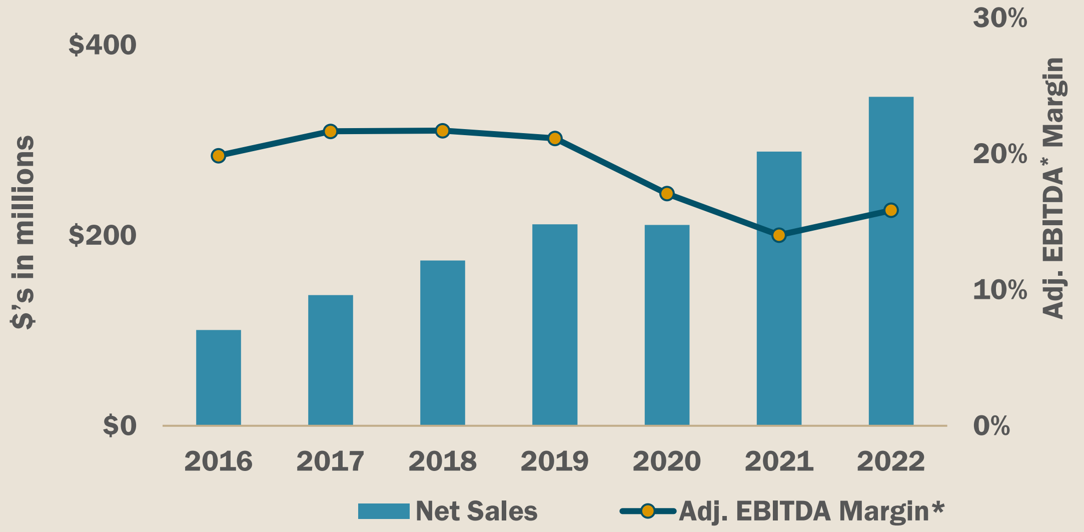
Architectural Specialties - Growing Through Acquisitions

Targeting companies with unique capabilities or competitive advantages

Armstrong World Industries | **Acquisitions**

Business Impacts

- Broadens Portfolio
- Incremental sales & Adj. EBITDA* and strong returns
- Allows one supplier for entire project (MF & AS)
- Provides design and technology leadership
- Complements Mineral Fiber segment



Expanding leadership in specialty ceilings and walls

Acquisition History	
2017	Tectum
2018	Plasterform, Steel Ceilings
2019	ACGI, MRK Industries
2020	Turf, Moz, Arktura
2021	-
2022	GC Products

*Non-GAAP measure. See slide 4 and appendix for reconciliation to nearest GAAP measure.

2017 – 2022 Adjusted EBITDA Reconciliation

	For the Twelve Months Ended December 31,					
	2017	2018	2019	2020	2021	2022
Net earnings (loss)	**$120**	**$186**	**$215**	**($99)**	**$183**	**$203**
Less: Net (loss) earnings from discontinued operations	(101)	(4)	(28)	(15)	(2)	3
Earnings (loss) from continuing operations, Reported	**$221**	**$190**	**$242**	**($84)**	**$185**	**$200**
Add: Income tax expense (benefit), as reported	1	53	57	(43)	57	58
Earnings (loss) from continuing operations before tax, Reported	**$222**	**$243**	**$299**	**($127)**	**$243**	**$258**
Add: Interest/other income and expense, net	22	7	18	382	17	21
Operating Income, Reported	**$244**	**$249**	**$317**	**$255**	**$260**	**$279**
Add: RIP expense[1]	8	6	5	6	5	4
Add: Cost reduction initiatives	7	8	-	-	-	-
Add: Net proforma international allocations[2]	8	6	-	-	-	-
(Less)/Add: Net environmental (recoveries) expenses	(15)	(1)	1	(6)	-	-
Add: Litigation expense[3]	-	7	20	-	-	-
Add: WAVE pension settlement	-	-	1	-	-	-
Add: WAVE FSA[4]	-	-	4	-	-	-
(Less): AWI portion of WAVE's (gain) on sale of international	-	-	(21)	-	-	-
Add: Charitable contribution – AWI Foundation[5]	-	-	-	10	-	-
(Less): (Gain) on sale of idled China facility	-	-	-	(21)	-	-
Add: Acquisition-related impacts[6]	-	-	-	3	10	19
Adjusted Operating Income	**$252**	**$275**	**$328**	**$246**	**$275**	**$301**
Add: Depreciation and amortization	67	78	75	84	97	84
Adjusted EBITDA	**$319**	**$353**	**$403**	**$330**	**$372**	**$385**

1. RIP expense represents only the plan service cost that is recorded within Operating Income. For all periods presented, we were not required to and did not make cash contributions to our RIP.
2. Includes adjustments to corporate costs and geographic allocations of corporate support functions due to the sale of our non-Americas International businesses.
3. Represents Rockfon litigation costs and settlement.
4. WAVE Fresh Start Accounting asset impairment charge due to sale of our non-Americas international businesses.
5. Donation to the AWI Foundation.
6. Represents the impact of acquisition-related adjustments for the fair value of acquired inventory and deferred revenue, changes in fair value of contingent consideration and deferred compensation & restricted stock expenses.

2017 – 2022 Adjusted Diluted Earnings per Share Reconciliation

	For the Twelve Months Ended December 31,					
	2017	2018	2019	2020	2021	2022
Earnings (loss) from continuing operations, Reported	**$221**	**$190**	**$242**	**($84)**	**$185**	**$200**
Add/(less): Income tax expense (benefit), reported	1	53	57	(43)	57	58
Earnings (loss) from continuing operations before income taxes, Reported	**$222**	**$243**	**$299**	**($127)**	**$243**	**$258**
(Less)/Add: RIP (credit) expense[1]	(5)	(26)	(8)	368	-	(1)
(Less)/Add: environmental (recoveries) expenses	(15)	(1)	1	(6)	-	-
Add: Cost reduction initiatives	7	22	-	-	-	-
Add: Net proforma international allocations[2]	8	6	-	-	-	-
Add: Litigation expense	-	7	20	-	-	-
Add: Non-cash hedge expense	-	5	-	-	-	-
Add: WAVE pension settlement	-	-	1	-	-	-
Add: WAVE FSA[3]	-	-	4	-	-	-
(Less): AWI portion of WAVE's (gain) loss on sale of international	-	-	(21)	-	-	-
(Less): Gain on sale of China facility	-	-	-	(21)	-	-
Add: Accelerated depreciation from St. Helen's facility	-	-	-	3	-	-
Add: Charitable contribution – AWI Foundation[4]	-	-	-	10	-	-
Add: Acquisition-related impacts[5]	-	-	-	3	10	19
Add: Acquisition-related amortization[6]	-	-	-	7	21	8
Adjusted earnings from continuing operations before income taxes	**$217**	**$255**	**$297**	**$236**	**$274**	**$283**
(Less): Adjusted income tax expense[7]	(54)	(64)	(61)	(56)	(65)	(63)
Adjusted net income from continuing operations	**$163**	**$191**	**$237**	**$180**	**$209**	**$220**
Diluted Shares Outstanding, as reported[8]	53.9	52.1	49.5	48.2	47.9	46.4
Tax Rate[9]	25%	25%	20%	24%	24%	22%
Diluted earnings (loss) per share, continuing operations, Reported	**$4.08**	**$3.63**	**$4.88**	**($1.76)**	**$3.86**	**$4.30**
Adjusted Diluted Earnings per share, continuing operations	**$3.02**	**$3.66**	**$4.78**	**$3.74**	**$4.36**	**$4.74**

1. RIP (credit) expense represents the entire actuarial net periodic pension (credit) recorded as a component of earnings from continuing operations. For all periods presented, we were not required to and did not make cash contributions to our RIP.
2. Includes adjustments to corporate costs and geographic allocations of corporate support functions due to the sale of our non-Americas International businesses.
3. WAVE Fresh Start Accounting asset impairment charge due to sale of our non-Americas international businesses.
4. Donation to the AWI Foundation.
5. Represents the impact of acquisition-related adjustments for the fair value of acquired inventory and deferred revenue, changes in fair value of contingent consideration and deferred compensation & restricted stock expenses.
6. Represents the intangible amortization related to acquired entities, including customer relationships, developed technology, software, trademarks and brand names, non-compete agreements and other intangibles.
7. Adjusted income tax expense is calculated using the tax rate multiplied by the adjusted earnings from continuing operations before income taxes.
8. 2020 Dilutive shares outstanding include anti-dilutive common stock equivalents which are excluded from U.S. GAAP Accounting.
9. 2017 and 2018 reflect an adjusted tax rate of 25%. All other years presented reflect the effective tax rate as reported.

2017 – 2022 Adjusted Free Cash Flow Reconciliation

	For the Twelve Months Ended December 31:					
	2017	2018	2019	2020	2021	2022
Net cash provided by operating activities	$170	$203	$183	$219	$187	$182
Net cash (used for) provided by investing activities	($54)	$310	($89)	($141)	($14)	$28
Net cash provided by operating and investing activities	$116	$513	$94	$78	$173	$211
Add: Acquisitions, net	31	22	56	165	1	3
(Less)/Add: (Proceeds) Payments related to the sale of international, net[1]	-	(272)	66	(20)	12	-
(Less)/Add: Net environmental (recoveries) expenses	-	(27)	5	(12)	(1)	1
Add: Litigation, net	-	-	23	-	-	-
Add: Net payments to WAVE for portion of proceeds from sale of international business	-	-	-	13		
(Less): Proceeds from sale of idled China plant facility	-	-	-	(22)	-	-
Add: Charitable contribution – AWI Foundation[2]	-	-	-	10	-	-
Add: Arktura deferred compensation[3]	-	-	-	-	5	5
Add: Contingent consideration in excess of acquisition-date fair value[4]	-	-	-	-	-	2
Adjusted Free Cash Flow	$147	$236	$244	$212	$190	$221
Adjusted Free Cash Flow as a % of Net Sales	16.4%	24.2%	23.5%	22.7%	17.2%	17.9%

1. Includes related income tax payments.
2. Donation to the AWI Foundation.
3. Contingent compensation payments related to the acquisition.
4. Contingent compensation payments related to 2020 acquisitions recorded as a component of net cash provided by operating activities.

2016 – 2022 AS Adjusted EBITDA Reconciliation

Architectural Specialties Segment	For the Twelve Months Ended December 31,						
	2016	2017	2018	2019	2020	2021	2022
Net Sales	$101	$137	$174	$212	$211	$288	$346
Operating Income, Reported	$19	$28	$34	$36	$22	$4	$22
Add: Acquisition-related impacts[1]	-	-	-	-	3	10	19
Add: Depreciation and amortization	1	2	4	9	11	27	14
Adjusted EBITDA	$20	$30	$38	$45	$36	$40	$55
Operating Income as a % of Net Sales	19.1%	20.2%	19.7%	17.0%	10.6%	1.5%	6.3%
Adj. EBITDA as a % of Net Sales	20.0%	21.6%	21.7%	21.1%	17.1%	14.0%	15.8%

1. Represents the impact of acquisition-related adjustments for the fair value of acquired inventory and deferred revenue, changes in fair value of contingent consideration and deferred compensation & restricted stock expenses.

2021 and 2022 Segment Adjusted EBITDA Reconciliation

	For the Twelve Months Ended December 31:					
	MF		AS		UC	
	2022	2021	2022	2021	2022	2021
Net Sales	$887	$818	$346	$288	$ —	$ —
Operating income (loss)	$261	$261	$22	$4	($4)	($5)
Add: RIP expense[1]	-	-	-	-	4	5
Add: Acquisition-related impacts[2]	-	-	19	10	-	-
Adjusted Operating Income	$261	$261	$41	$14	$ —	($1)
Add: Depreciation and Amortization	69	70	14	27	-	1
Adjusted EBITDA	$330	$331	$55	$40	$ —	$ —
Operating Income Margin (Operating Income % of Net Sales)	29.4%	31.9%	6.3%	1.5%	NM	NM
Adjusted EBITDA Margin (Adjusted EBITDA % of Net Sales)	37.2%	40.5%	15.8%	14.0%	NM	NM

1. RIP expense represents only the plan service cost related to the RIP that is recorded within Operating Income. For all periods presented, we were not required to and did not make cash contributions to our RIP.
2. Represents the impact of acquisition-related adjustments for the fair value of acquired inventory and deferred revenue, changes in fair value of contingent consideration, deferred compensation and restricted stock expenses.

2023 Adj. EBITDA Guidance Reconciliation

	Full Year 2023	
	Low	High
Net earnings	**$206**	**$217**
Add: Income tax expense	68	73
Earnings before income taxes	**$274**	**$289**
Add: Interest expense	35	37
Add: Other non-operating (income)	(7)	(6)
Operating income	**$302**	**$321**
Add: RIP expense[1]	3	4
Add: Acquisition-related impacts[2]	4	5
Add: Cost reduction initiatives	3	3
Adjusted operating income	**$312**	**$332**
Add: Depreciation and amortization	$83	$88
Adjusted EBITDA	**$395**	**$420**

2023 Segment Adj. EBITDA Guidance Reconciliation

	Full Year 2023 (Supports low-end Adj. EBITDA Margin % assumption)		
	MF	AS	UC
Net sales	**$892**	**$366**	**$ -**
Operating income (loss)	**$258**	**$48**	**($3)**
Add: RIP expense[1]	-	-	3
Add: Acquisition-related impacts[2]	-	4	-
Add: Cost reduction initiatives	3	-	-
Adjusted operating income	**$261**	**$52**	**-**
Add: Depreciation and amortization	69	14	-
Adjusted EBITDA	**$330**	**$66**	**$ -**
Operating income margin (Operating income % of net sales)	**29%**	**13%**	**NA**
Adjusted EBITDA margin (Adjusted EBITDA % of net sales)	**37%**	**18%**	**NA**

Note: Assumes rounding to sum segments to consolidated company figures.
1. RIP expense represents only the plan service cost related to the RIP that is recorded within Operating income. For all periods presented, we were not required to and did not make cash contributions to our RIP.
2. Represents the impact of acquisition-related adjustments for deferred compensation and restricted stock expenses.
"NA": Not applicable.

2023 Adj. Diluted EPS Guidance Reconciliation

	Full Year 2023	
	Low	High
Net earnings	**$206**	**$217**
Add: Income tax expense	68	73
Earnings before income taxes	**$274**	**$289**
Add: RIP (credit)[1]	(1)	(2)
Add: Acquisition-related impacts[2]	4	5
Add: Acquisition-related amortization[3]	5	6
Add: Cost reduction initiatives	3	3
Adjusted earnings before income taxes	**$285**	**$301**
(Less): Adjusted income tax expense[4]	(70)	(74)
Adjusted net earnings	**$215**	**$227**
Diluted shares outstanding	~45M	~45M
Effective tax rate	~25%	~25%
Diluted net earnings per share	**$4.57**	**$4.81**
Adjusted diluted net earnings per share	**$4.80**	**$5.05**

2023 Adj. Free Cash Flow Guidance Reconciliation

	Full Year 2023	
	Low	High
Net cash provided by operating activities	**$220**	**$240**
Add: Return of investment from joint venture	85	95
Adjusted net cash provided by operating activities	**$305**	**$335**
(Less): Capital expenditures	(75)	(85)
Adjusted Free Cash Flow	**$230**	**$250**

1. RIP (credit) represents the entire actuarial net periodic pension (credit) recorded as a component of Net earnings. We do not expect to make cash contributions to our RIP.
2. Represents the impact of acquisition-related adjustments for deferred compensation and restricted stock expenses.
3. Represents the intangible amortization related to acquired entities, including customer relationships, developed technology, software, trademarks and brand names, non-compete agreements and other intangibles.
4. Adjusted income tax expense is based on an adjusted effective tax rate of ~25%, multiplied by adjusted earnings before income tax.