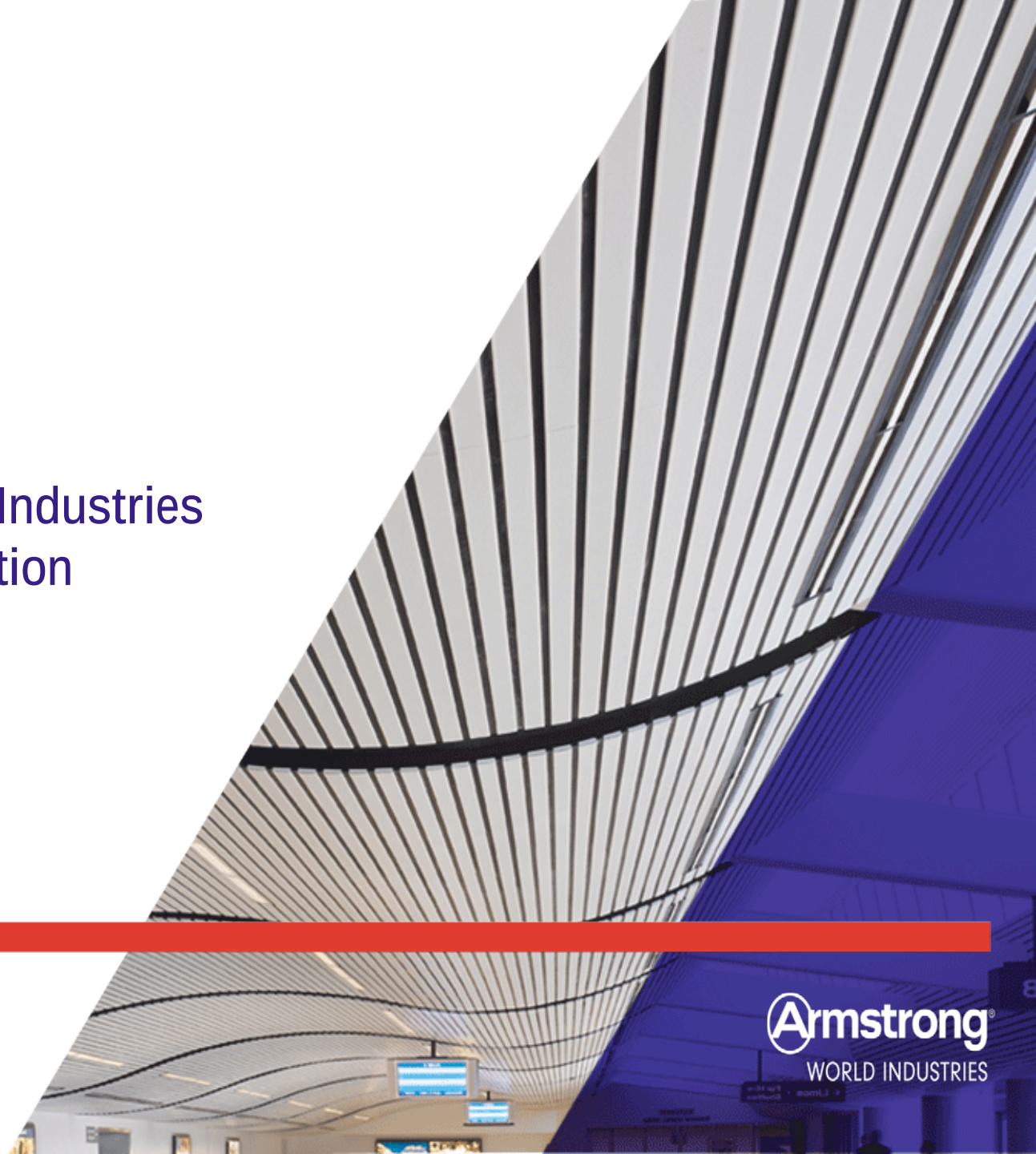
October 2021

Armstrong World Industries Investor Presentation

Inspiring Great Spaces®



Safe Harbor Statement

Our disclosures in this presentation, including without limitation, those relating to future financial results market conditions and guidance, the impacts of COVID-19 on our business, and in our other public documents and comments contain forward-looking statements within the meaning of the Private Securities Litigation Reform Act. 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. 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 may affect our ability to achieve the projected performance 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”). 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-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, October 26, 2021 and will not be updated or affirmed unless and until we publicly announce updated or affirmed guidance.

Basis of Presentation Explanation

When reporting our financial results within this presentation, we make several adjustments. Management uses these non-GAAP measures in managing the business and believes the adjustments provide meaningful comparisons of operating performance between periods. As reported results will be footnoted throughout the presentation on a continuing operations basis (excludes corporate unallocated).

- All figures throughout the presentation are in $ millions, except per share data, and all comparisons are versus prior year unless otherwise noted. Figures may not sum due to rounding.
- 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 net sales, adjusted EBITDA, adjusted 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 and deferred revenue) for recent acquisitions. The Company excludes all acquisition-related amortization from adjusted earnings from continuing operations and in calculations of adjusted diluted earnings per share. Examples of other excluded items include plant closures, restructuring actions and related costs, impairments, separation costs, environmental site expenses and related insurance recoveries, endowment level charitable contributions, and other large unusual items. We also adjust for our U.S. pension plan (credit) expense(2).
- 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.
- Non-GAAP figures are rounded to the nearest million and corresponding percentages are rounded to the nearest percent based on unrounded figures.

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

(2) U.S. pension (credit) expense represents the actuarial net periodic benefit cost expected to be 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 U.S. Retirement Income Plan based on guidelines established by the Pension Benefit Guaranty Corporation.

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Making a positive *difference* in the spaces where we…



live



work



learn



heal



play

It matters to us, and it matters to our customers

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One of the Most Unique Companies in Building Products

- Founded in 1860…One of the most adaptive companies in building products
- Undisputed category leader for more than 50 years
- Unmatched scale in an industry where it matters
- One of the strongest & most trusted brands in the industry
- Strong strategic position…differentiating profitability & cash flow attributes

Ceiling Category Is Unique Within Building Products



- Consolidated structure
- Large installed base with stable repair & remodel demand
- A highly specified high-value product with limited substitutes
- Ceilings are an integral part of creating healthy spaces
- Customers demonstrate brand loyalty, and reward service and innovation

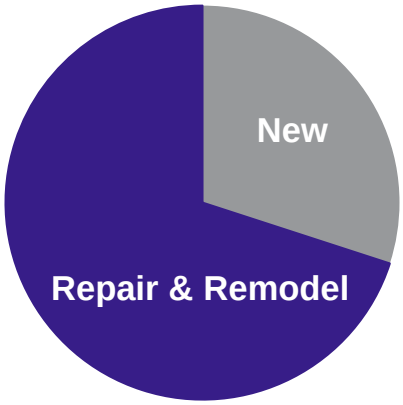
Uniquely positioned in an attractive & stable category

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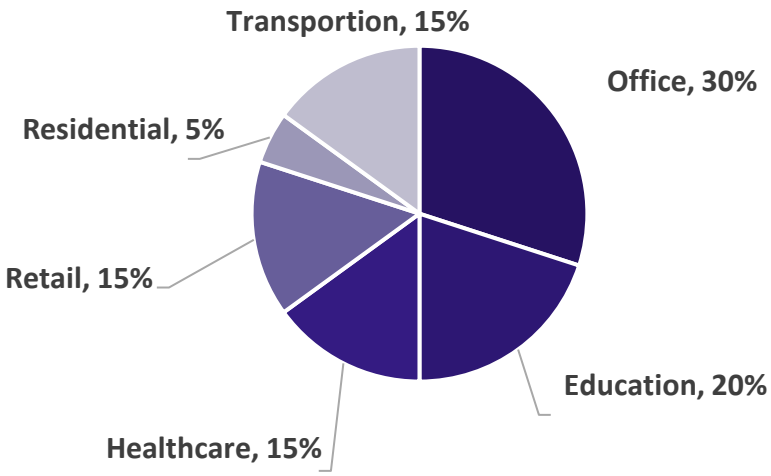
Ceilings Leader with Stable Demand Drivers and Diversified Sectors

Revenue Mix*

By Project



By Sector



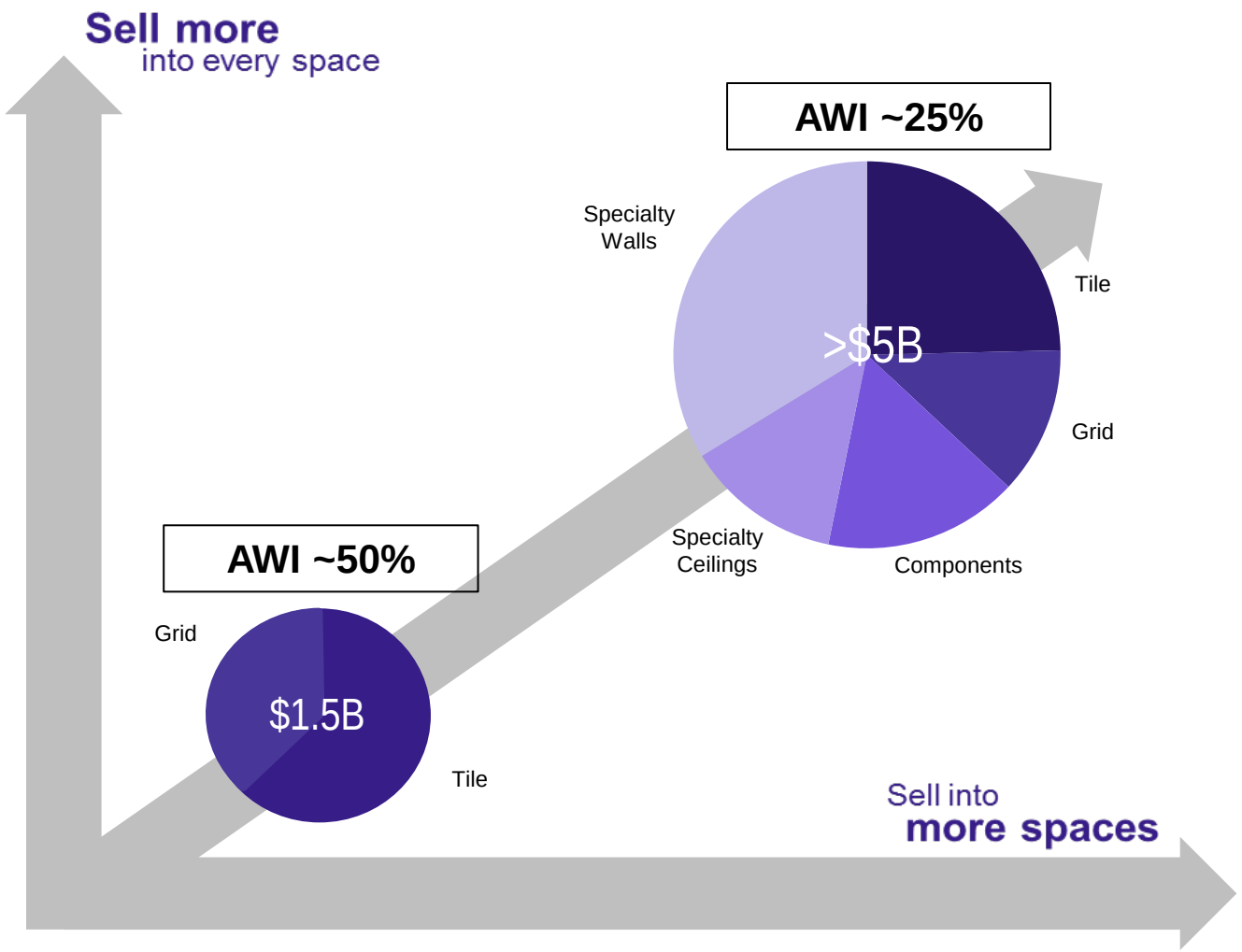
- Sales are weighted towards repair & remodel (R&R) activity
- New vs. R&R split and diversified end-market sectors allows us to perform well in all parts of the cycle
- The large installed base is a highly valuable intangible asset and renovates at a rate of ~3% per year

35 – 40B sq. ft. installed base provides an annuity from R&R activity

*Source AWI internal estimates

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Setting Our Sights on a Larger Opportunity



Driving growth in broader ceiling & wall solutions space

Source: Internal company estimates of North American opportunities and positions; estimated AWI position includes 50% of sales by WAVE JV.

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Our Business Segments & Joint Venture

Mineral Fiber (MF) Driving AUV

Increased AUV by

>50%

Since 2010

Overview

- Innovation leader
- Operational excellence
- Leader of digital transformation
- EBITDA margins >40%

Outlook

- Continue AUV growth
- Leverage Healthy Spaces & Digital Platforms to drive multi-year volume opportunity
- Maintain position & expand margins

Architectural Specialties (AS) Expand Into Adjacencies

In the last 4 years, revenue

2x

Since 2016

Overview

- Leader in on-trend solutions
- Design through construction solutions leveraging digital technologies
- Double digit organic growth

Outlook

- Expand capabilities…Organically & through acquisitions
- Leverage acquisitions to strengthen competitive advantage
- Increase scale to drive margin expansion

WAVE JV Unmatched value

High margin business

44%

Founded in 1992

Overview

- Over $700M in dividends since 2010
- 130% ROIC...29 years of value creation
- Leader in core, specialty grid & integrated solutions

Outlook

- Continue to drive price over inflation
- Leverage innovation to deliver unmatched value propositions
- Seamless Integration with AWI

Complementary

Note: AUV data is for US and Canada commercial channels - mineral fiber only.

Deliver profitable top line growth by growing our core MF business and expanding into adjacencies through AS

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Clear Strategy Driving Value Creation

Strategic Overview

Mineral Fiber Revitalization

- Healthy Spaces to drive renovation “renaissance”
- Product innovation to meet new customer needs and improve product mix
- kanopi e-commerce platform for new demand

Mineral Fiber volume growth of **0% to 2%** and AUV growth of **3% to 6%**

Architectural Specialties Growth

- Continued integration of acquisitions
- Robust pipeline of additional opportunities
- Leverage new design capabilities across platform

>15% Architectural Specialties top-line growth with margin expansion

Digital Transformation

- 10-3-1 path from optimization to disruption
- Digital platforms to reduce friction with customers
- Focus on productivity and scalability

Critical enabler for sales, productivity and efficiency improvements

Disciplined Capital Allocation

- Consistent capex
- Invest for growth and productivity
- Return to shareholders via dividends and buybacks

Declining net debt and **adjusted FCF ~20%** of sales

Value Creation Model*

5% – 10%	>10%	15% – 20%	10% – 15%
Revenue Growth	Adjusted EBITDA Growth	Adjusted EPS Growth	Adjusted FCF Growth

*Current management estimates; reflects medium-to-long term annual growth targets; Adjusted EPS Growth excludes acquisition-related amortization.

Consistent strategic priorities enabling shareholder value creation

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Our Approach

Three Pillars guide our sustainability program, each with specific goals and targets. We have established cross-functional Teams within our company to help us achieve our objectives.

Our Sustainability Strategy



Thriving People and Communities

Our workforce will be safe, diverse, inclusive and fulfilled, and we will actively contribute to our local communities.



Healthy Planet

All our electricity sources will be renewable, and we will dramatically reduce carbon, waste and water impacts of our products and solutions.



Healthy and Circular Products

We are committed to responsible sourcing & to providing transparency in our products. In addition, we will design our products to minimize waste & pollution; support recycling, repurposing or reuse; & contribute to the regeneration of natural systems.

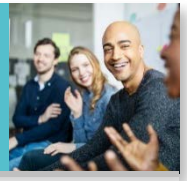
Sustainable Development Goals



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Nine Sustainability Goals

Thriving People and Communities



We aim to cultivate a culture that leads to **safe, healthy and fulfilled employees.**

We aim to develop an **inclusive culture and diverse workforce** at all locations.

We aim to e**ngage in communities** where we operate to make them vibrant places to live & work by strengthening & **supporting local programs** & fostering impactful relationships.

Healthy Planet



We aim to reduce our **greenhouse gas emissions** and increase our reliance on **renewable energy** using climate-science based targets.

We aim to eliminate **waste** through innovative manufacturing processes and by creating **circular systems** from order to delivery.

We aim to optimize our use of **water** and contribute to water management and restoration efforts by reducing our reliance and impact on local water systems.

Healthy and Circular Products



We aim to create products & solutions from healthy**, sustainably sourced materials** by eliminating **chemicals of concern** through sustainable **supply chains.**

We aim to design our products to be **recycled, reused or repurposed** and drive circularity in our operations, with customers, & throughout our value chain.

We aim to make a positive contribution to spaces and the environment by decreasing our products' **carbon & water footprint**, & by creating solutions that actively contribute to health & wellness.

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Our Winning Formula

Unique Position

- *Attractive Industry*
- *Leading Position*
- *Strongest Brand*

Our Winning Formula



Winning through key elements of differentiation

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Revitalize the Mineral Fiber Category

Industry Trends… What the Market Is Looking for

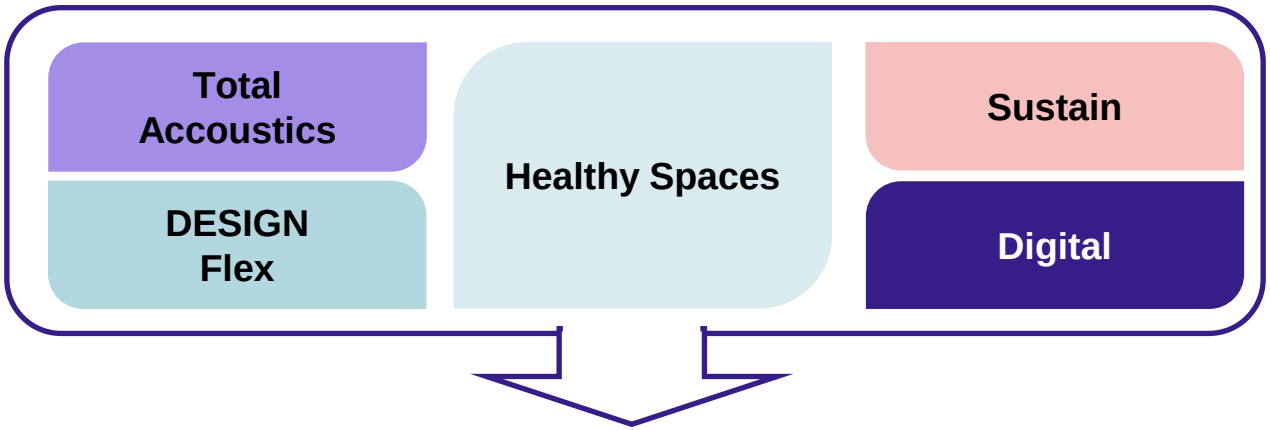
	What the market seeks….		What AWI delivers…
Acoustical Comfort	Acoustical comfort and privacy in every environment	TOTAL ACOUSTICS™	Ideal combination of sound absorption & blocking
Product Transparency	Products without “chemicals of concern”	SUSTAIN™	Innovative solutions free of “red-list chemicals”
Inspirational Flexible Design	Higher end interior finishes with less design constraints	DESIGNFlex™	Custom looks with standard lead times
Digitalization	Simple, centralized, easy to access information	kanopi By Armstrong Ceilings	Digital Platforms offering end to end solutions
Healthy Spaces	Healthier spaces with protection from pathogens; a place to feel safe	24/7 DEFEND™ Solutions for Healthier, Safer Spaces CONTAIN CLEAN PROTECT	Suite of products to contain, clean, and protect

Solutions to address current and future market needs

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Revitalizing Mineral Fiber Category

Innovation Platforms



- Healthy Spaces a catalyst for sizable renovation opportunity
- Suite of products to contain, clean, and protect spaces
- Digital solutions to address frictions and drive volume
- Breaking mineral fiber design paradigms
- Leading portfolio of sustainable products

Key to driving growth in AUV & volume through acceleration of renovation

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Where We Are Going…Revitalizing Mineral Fiber

New Solutions

- Total Acoustics & Sustain
- DesignFlex Ceilings Systems
- Digital Journey
- "AcoustiBuilt" Seamless Mineral Fiber
- Healthy Spaces – 24/7 Defend
- 8,000+ SKU portfolio

Total Acoustics & Sustain



- Class A office standard
- 7-10% growth rate

DesignFlex



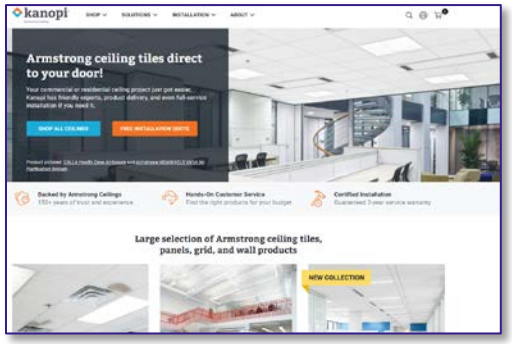
- Custom design w/ standard lead time
- 4x-6x AUV vs 2x2 MF

AcoustiBuilt



- Drywall look with acoustics
- Access to 250 million sq.ft. annual market

Digital Journey



- Path to a frictionless customer experience
- Drive incremental MF volume

Healthy Spaces



- Contain, Clean, and Protect against pathogens
- Substantial mix-up opportunity

Our new solutions get us into more space more of the time

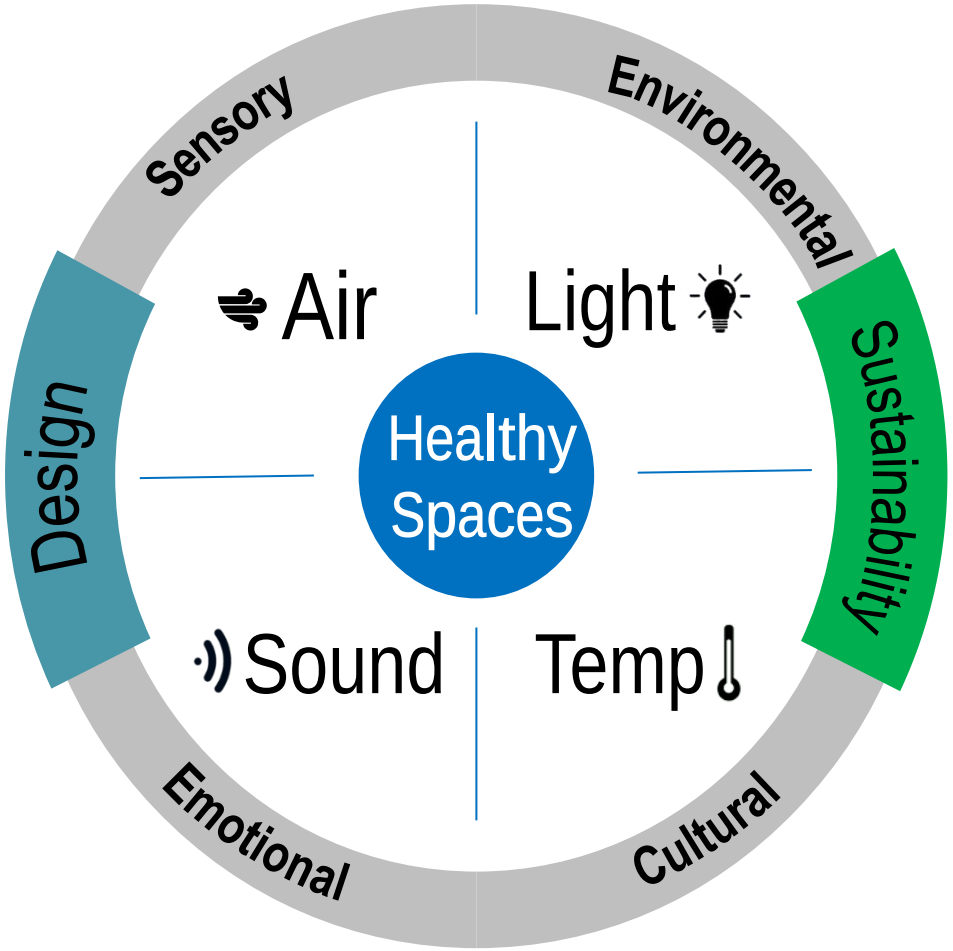
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Healthy Spaces – Ceilings Critical to Indoor Environmental Quality

Air … just as important as outdoor air quality. We have gained a whole new appreciation for proper air circulation, ventilation, filtration and cleaning to eliminate dirt, dust and contagions

Sound & Temperature … no one is comfortable or operating at their best in a space that's too loud or too quiet or too hot or too cold. The noise level and temperature must be just right.

Healthy Spaces Ecosystem



Light … affects our mood, our energy, our cognition, even how well we sleep at night. The best balance and rhythm of natural and supplemental light can optimize how we think and feel.

Design & Sustainability… must be centered on the health and well being of the planet and people … so we feel good and want to be where we are.

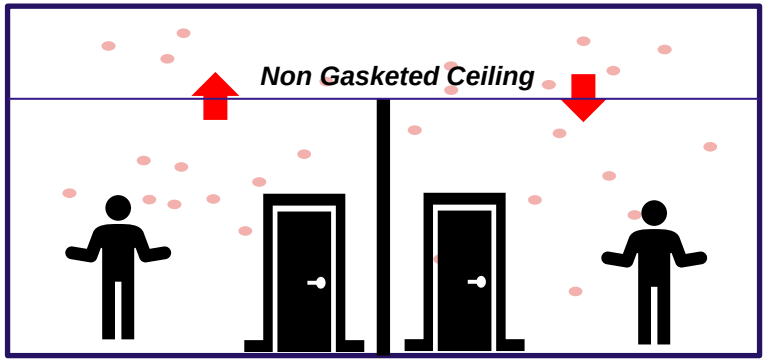
Healthy Spaces will support the planet and well being of people

Ceilings Matter in Creating Healthy Spaces

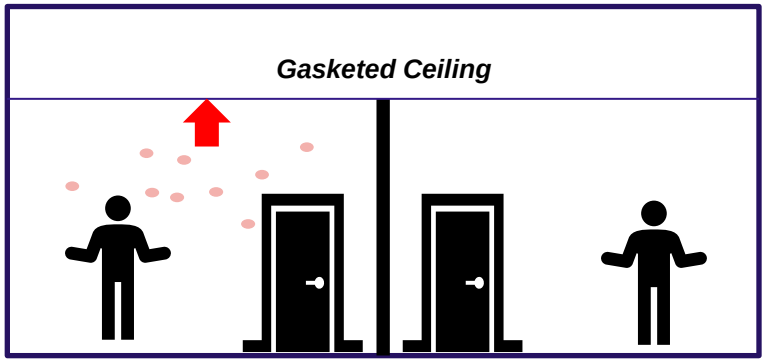
Healthy Space Solution

Objective: Inhibit airflow through the ceiling plane resulting in pathogen containment from room to room

Pathogen Flow High



Pathogen Flow Low



- **Contain**: ceilings can help prevent pathogens from spreading room to room
- **Clean**: ceilings can direct more air to cleaning devices
- **Protect**: ceilings can provide structurally tighter enclosures to maintain proper pressure differential to enhance indoor air quality

Building community looks to **ASHRAE** for guidance around COVID mitigation strategies and reopening spaces…we are designing solutions to align to ASHRAE guidance.

The **WELL** Health-Safety Rating includes more than 20 features across core areas…we are designing solutions to align to WELL standards.

Ceilings help contain, clean, and protect

Note: Gasketed ceiling solution designed to reduce air leaks through ceiling plane by up to four times over standard ceilings.

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Healthy Products Expanding Into All Verticals

24/7 DEFEND™
Solutions for Healthier, Safer Spaces

CONTAIN CLEAN PROTECT

CleanAssure™ Portfolio

Cleanable and disinfectable ceiling, wall and suspension systems based on CDC-recommendations, with foggable, sprayable, and wipeable options



Health Zone AirAssure™

High performance ceilings with sealed edges that inhibit airflow through the ceiling plane for better air filtration, improved air quality and reduced risk of pathogen transfer



VidaShield UV24™ System

Unobtrusive system draws air into a chamber above the ceiling, exposes it to UV light and returns clean air to the room



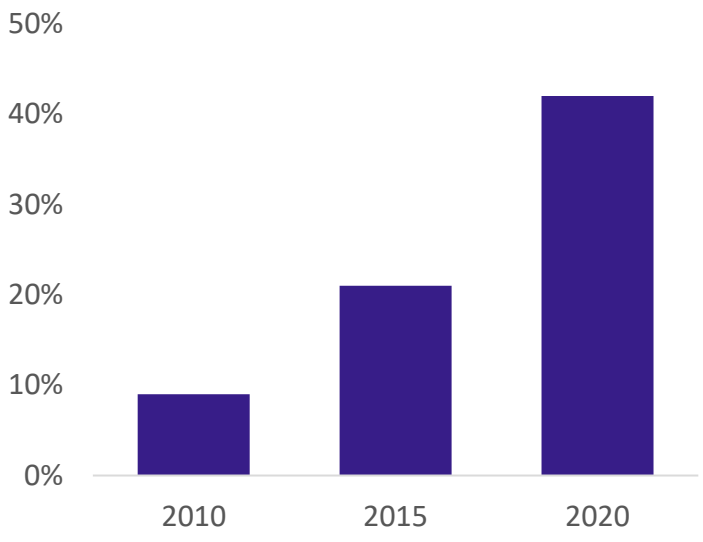
...and more to come...

Making a difference for healthier, safer spaces

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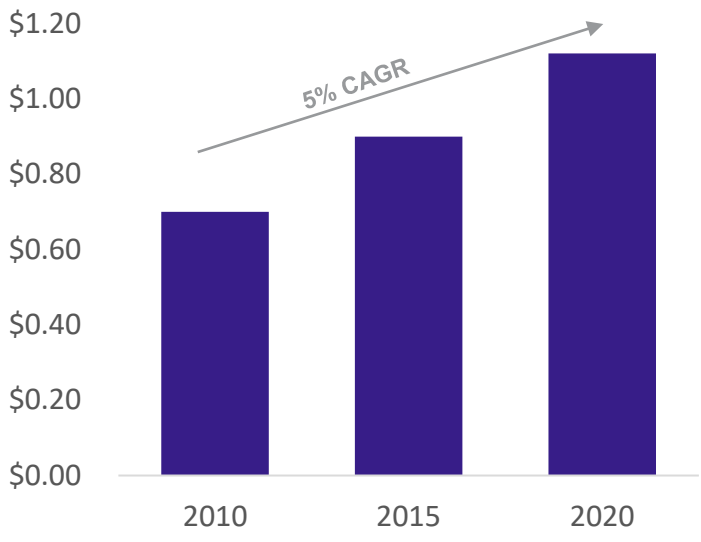
Converting Market Knowledge Into Value Creation

New Product Vitality Index



Note: New product sales as % of total sales

Mineral Fiber AUV*



Note: AUV growth 50/50 split between price & mix

Differentiated innovation driving our results

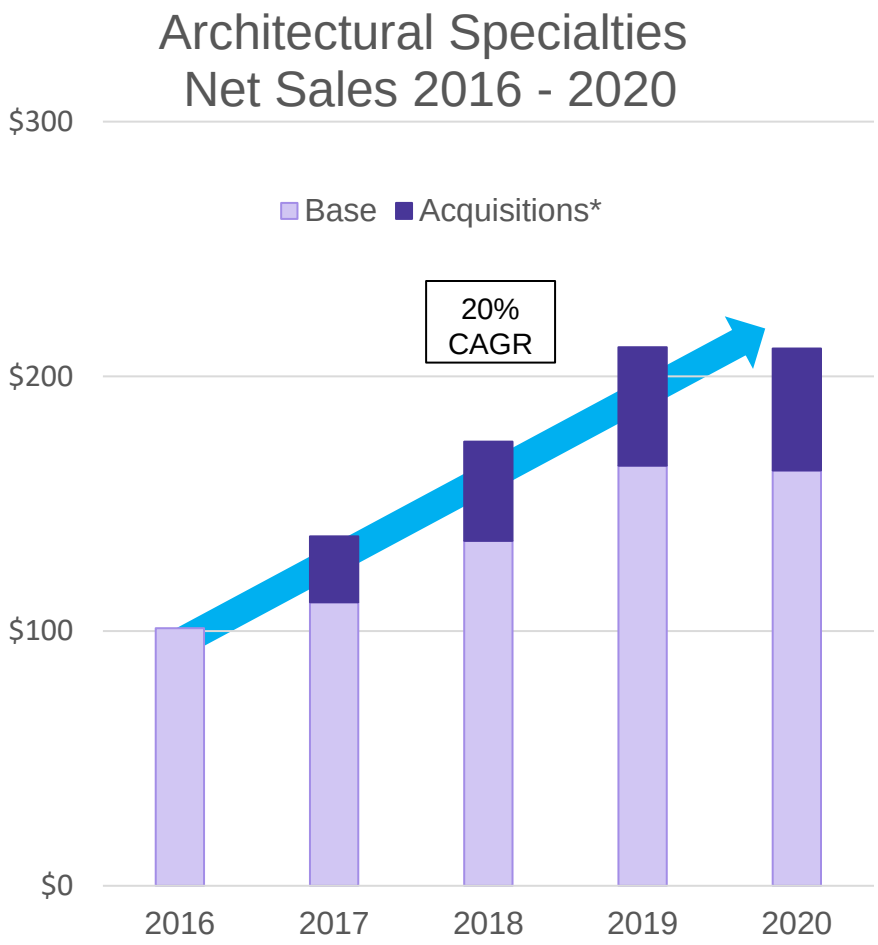
Note: AUV data is for US and Canada commercial channels - mineral fiber only.

*AUV = Average Unit Value

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Accelerate Architectural Specialties

Growing through Share Gains and Acquisitions



- Double digit organic growth (excl. 2020 acquisitions)
- Leveraging new designs & technologies across AWI's scale and distribution
- Manufacturing synergies driven by AWI's proven expertise in Lean
- Target 1-3 acquisitions per year to add unique capabilities for broader participation in commercial spaces

Acquisitions are growth accelerators for Architectural Specialties

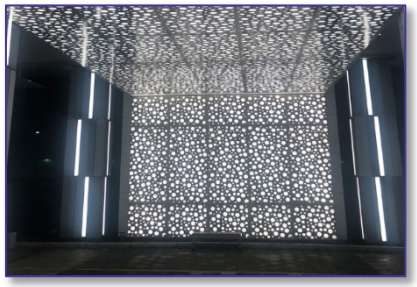
*Acquisitions represent reportable AWI sales $ in the year acquired + next calendar year sales.

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Expanding AS Capabilities with the Right Acquisitions

2017	2018	2019	2020
Tectum High impact wood fiber ceilings, walls & roofdeck *$25M Revenue*	**Plasterform** Glass reinforced gypsum…ultra expressive *$10M Revenue* **Steel Ceilings** Architectural, radiant, security *$10M Revenue*	**ACGI** Custom wood ceilings and walls *$35M Revenue* **MRK** Specialty metal interior and exterior	**Turf Design** Custom felt ceilings and walls *$25M Revenue* **Moz Designs** Custom metal ceilings and walls *$10M Revenue* **Arktura** Specialty metal and felt ceiling and walls *$40M Revenue*







Timing & Financial Impact

- Target 1-3 per year
- ~$50M in total acquisition spend
- Healthy Pipeline, timing often driven by seller's succession planning
- 8 closed transactions since 2017
  - Average purchase price: 10X EBITDA
  - Average annual revenue: $20M+ at time of purchase

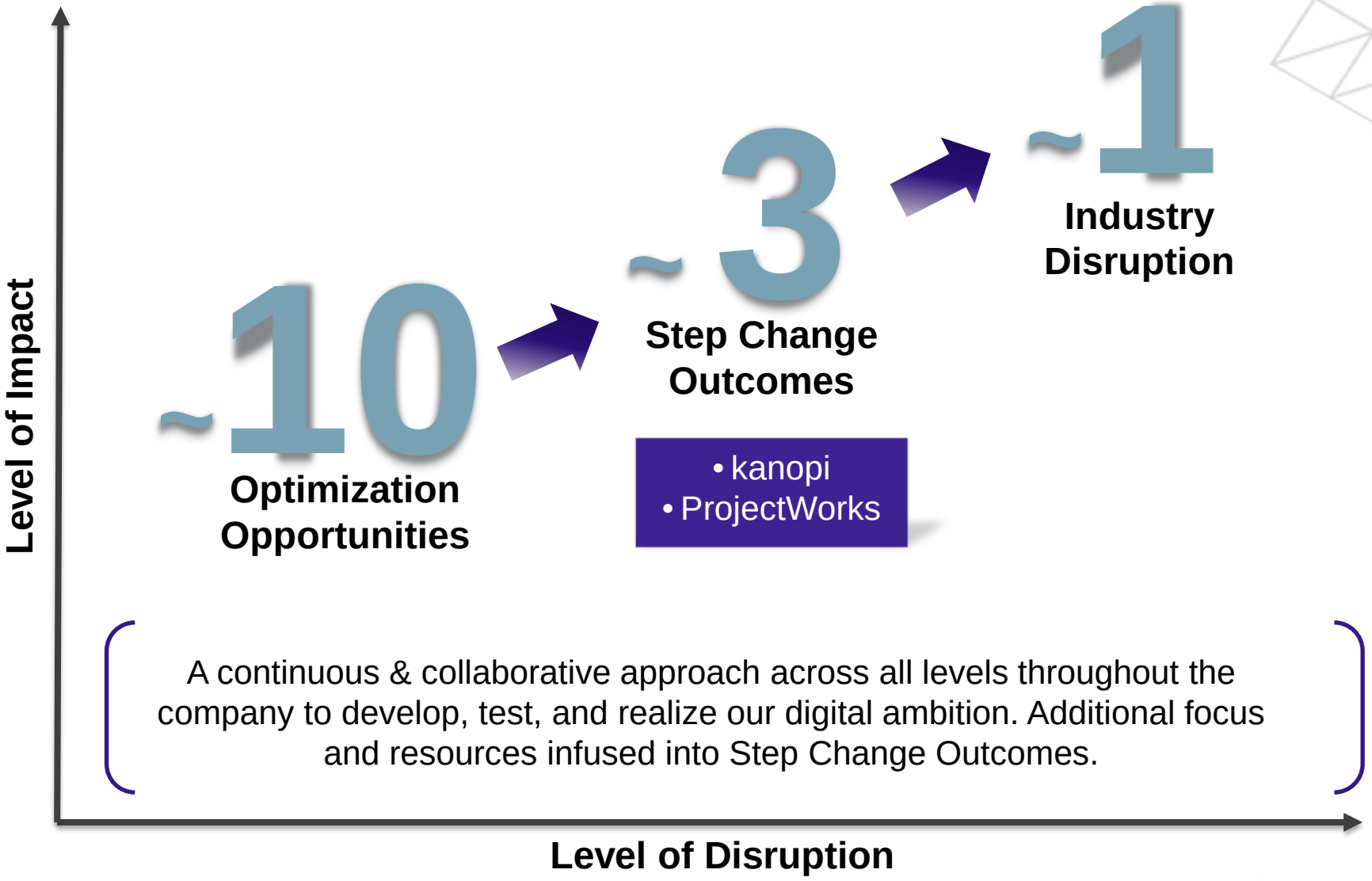
$155M* acquisition-related topline benefit (2017 – 2020)…with post-synergy multiples from 6x-8x EBITDA

*Revenue figures LTM at time of acquisition. Excludes MRK due to prior supplier relationship.

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Accelerate Digital Transformation

Digitalization to Support Growth and Productivity



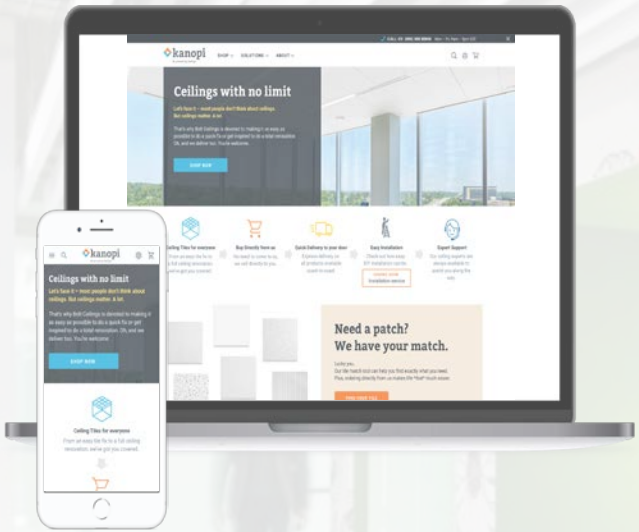
A continuous & collaborative approach across all levels throughout the company to develop, test, and realize our digital ambition. Additional focus and resources infused into Step Change Outcomes.

Focus on step change, continue to work optimization

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kanopi - A New Digital Platform to Accelerate Renovation

kanopi
By Armstrong Ceilings



To inspire & enable healthy spaces via ceiling remodel and renovation

Target Users	Facility Managers & Small Business Owners in light commercial spaces
Friction	**Numerous frictions** impact our customers **along R&R purchase journey from Awareness to Install**; from having aesthetic or acoustical issue, to unawareness of ceiling offerings, to lack of access for easy install
Solution	Digital platform to drive end to end solution from demand generation to installation
Business Model	**Drives revenue by increasing MF volume**
Disengaged Market Opportunity	**400-500MSF;** people unable to be cost effectively reached with sales team, **or don't know how to create a healthy space to drive customers back to stores/offices**
Rollout	Website is live, driving sales in 2021 – Expanding team throughout 2021; Multi-Year opportunity to add incremental MF volume

Check it out! @ www.kanopibyarmstrong.com

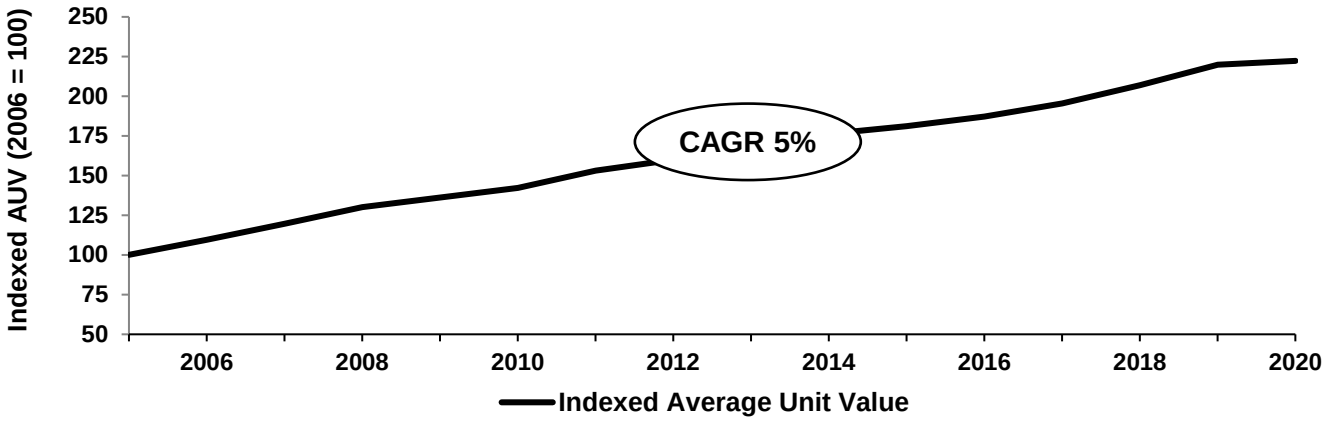
Addressing key customer friction – What to buy & where to buy it

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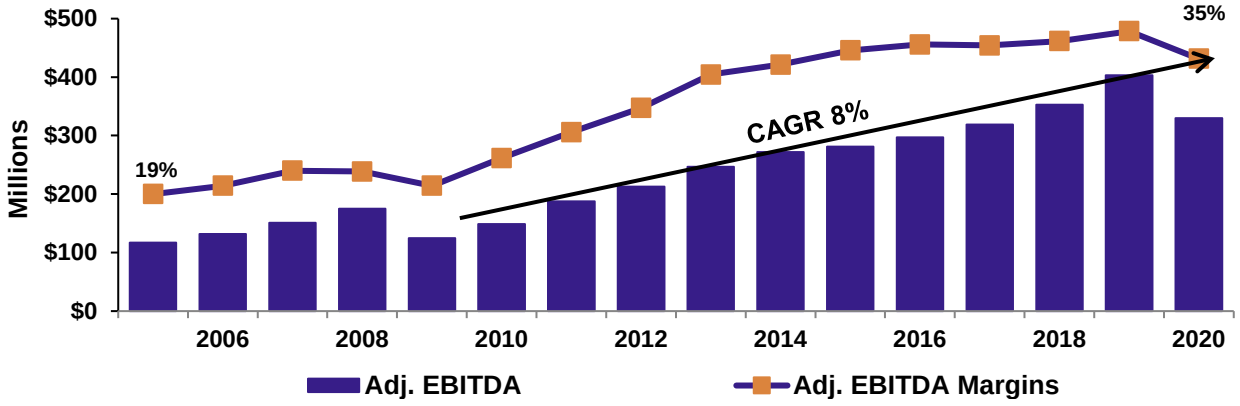
Cash Flow & Capital Allocation

Consistent Ability To Grow AUV & Expand Margins

Increases in Average Unit Value (AUV) Over Time ...



...Yielding Significant Adjusted EBITDA Margin Expansion

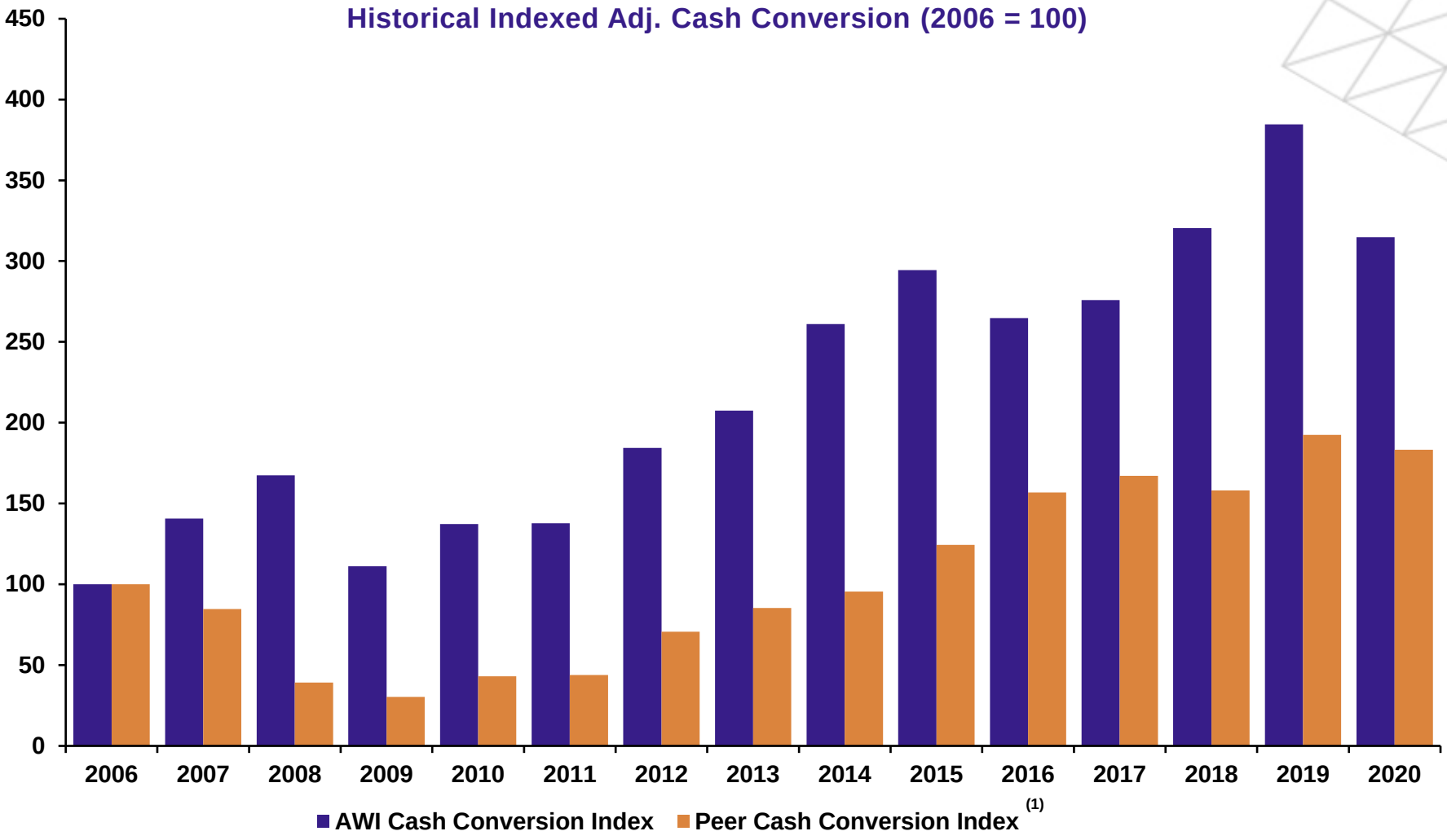


Continuous price/mix & productivity driving margin expansion

Note: AUV data is for US and Canada commercial channels - mineral fiber only. EBITDA Margin data is for total AWI.

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Stability Through the Cycle



Americas cash conversion never fell below 2006 levels … even through the recession

*Peer index includes ALLE, AOS, APOG, AYI, DOOR, FBHS, JHX, LII, MAS, MHK, NCS, OC, SHW, SSD, & TILE. Represents growth in Adjusted Cash Conversion (Adjusted EBITDA – Capex) of peers applied to index value from previous year. Source: Bloomberg.

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2021 Guidance – October Update [1]

	2020 Actual	Prior Guidance	Current Guidance	Updated from prior guide
Revenue	**$937**	**$1,085 – $1,105** *16% – 18% YoY*	**$1,095 – $1,105** *17% – 18% YoY*	▪ MF AUV 9%-11%, positive like-for-like pricing & mix ▪ Growth Initiatives, primarily kanopi & Healthy Spaces, drive MF volume up 1% - 2% ▪ 2020 acquisitions benefit AS ~30% ▪ AS Organic growth of mid-to-high single digits
Adjusted EBITDA*	**$330**	**$370 – $380** *12% – 15% YoY*	**$372 – $378** *13% – 15% YoY*	▪ AUV and volume gains fall through ▪ Manufacturing productivity and improved earnings from WAVE drive MF margin improvement ▪ Includes benefit of 2020 acquisitions ▪ Investment in growth initiatives continues in 2021
Adjusted EPS*	**$3.74**	**$4.20 – $4.40** *12% – 18% YoY*	**$4.25 – $4.35** *14% – 16% YoY*	▪ $23M of interest expense ▪ 25% book tax rate ▪ ~$63M depreciation; ~$35M amortization, of which $21M is excluded related to acquisition amortization ▪ 48 million average diluted shares outstanding
Adjusted Free Cash Flow*	**$212**	**$195 – $210** *(8%) – (1%) YoY* *19% FCF Margin*	**$198 – $208** *(7%) – (2%) YoY* *19% FCF Margin*	▪ $80-$85M of Cap Ex ▪ $23M of cash interest expense ▪ Cash tax rate 23% - 25% ▪ Higher Working Capital due to increased sales

**Non-GAAP measure. See appendix for reconciliation to nearest GAAP measure. Adjusted EPS excludes $0.11 in relation to acquisition-related amortization in 2020.*

[1] Assumes no significant pandemic-related shutdowns or project delays due to supply chain disruptions.

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Value Creation Model

Revenue	**5% – 10% annual growth**	▪ 0% – 2% Mineral Fiber volume growth ▪ 3% – 6% AUV increase ▪ >15% Architectural Specialties volume ▪ 1-3 Acquisitions add 100 – 300 bps
Adjusted EBITDA and Margins	**>10% annual growth** **35% – 40% margin**	▪ ~60% incremental margin in mineral fiber ▪ Continue to price over inflation ▪ Productivity – Manufacturing and SG&A ▪ Architectural Specialties margin expansion ▪ WAVE equity earnings growth
Adjusted EPS	**15% – 20% annual growth**	▪ Declining net debt due to significant cash generation ▪ 25% book tax rate ▪ Excludes impact of acquisition-related amortization
Adjusted Free Cash Flow	**10-15% annual growth** **>50% of Adjusted EBITDA**	▪ 20 - 25% cash tax rate ▪ $25 million cash interest expense ▪ Stable level of capital expenditures ▪ Balanced capital allocation

Significant value creation through free cash flow generation

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Strongest Position & Margins of Any Public Building Products Business

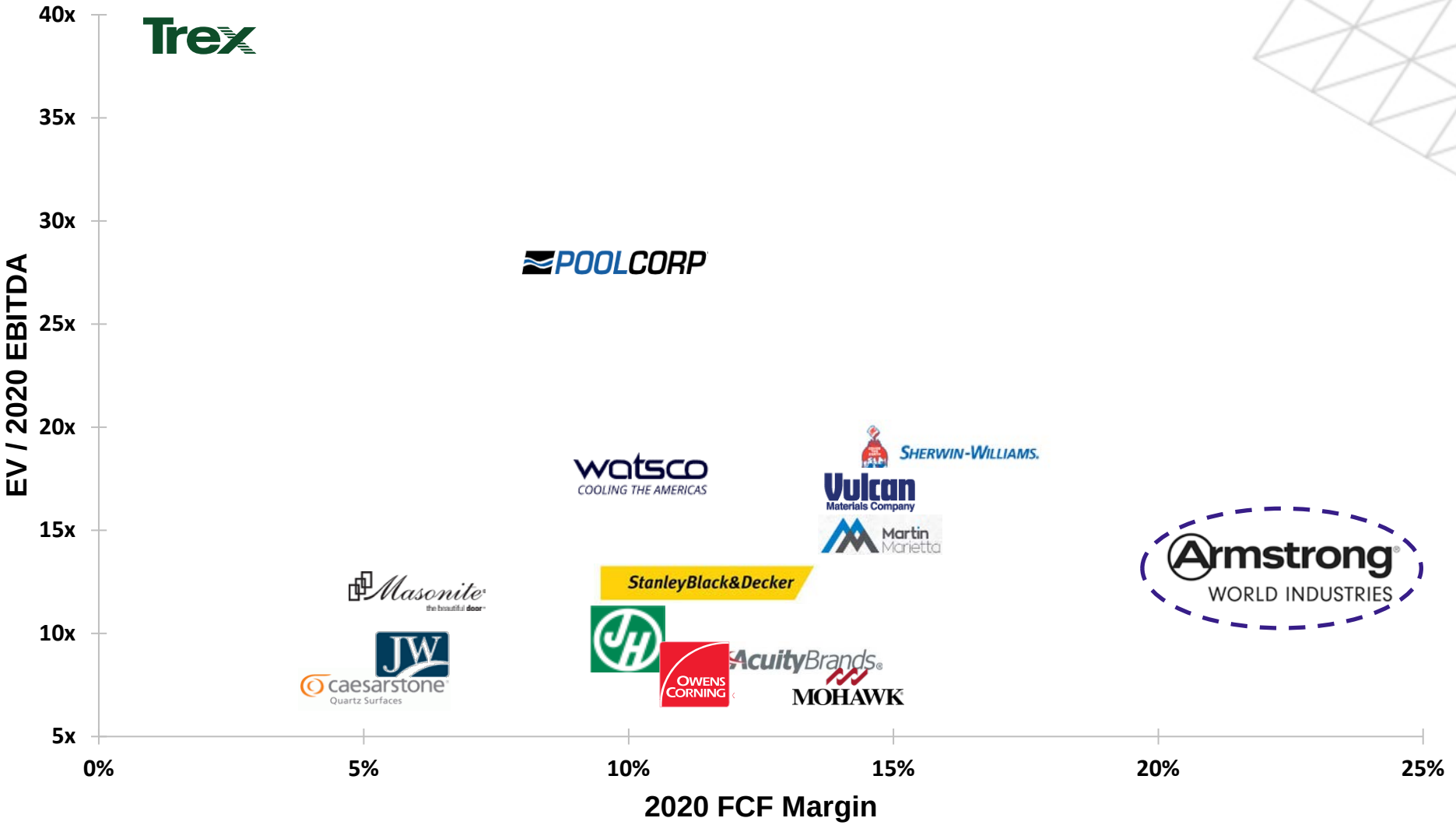


A unique position versus the best businesses in building products

Note: Figures estimates only and based on externally sourced available data. Companies shown represent the following industries (position within industry): Acuity – Lighting (#1); Armstrong – Commercial Ceilings (#1); Azek – Residential Segment (#2); Caesarstone – Quartz Surfaces (#3); James Hardie – Siding (#1); Jeld-Wen – Doors (T-#1); Masonite – Doors (T-#1); Mohawk – Flooring (#1); Owens Corning (Insulation) -- #1; Owens Corning (Roofing) – Roofing (#2); Sherwin Williams – Architectural Paint (#1); Stanley Black & Decker – Power Tools (#1); Trex – Residential Segment (#1).

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Unique Cash Flow Generation Capabilities

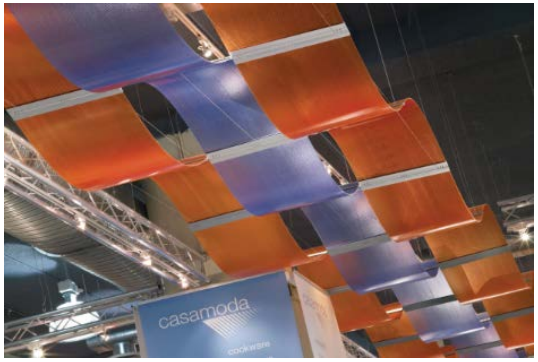


Valuation upside based on best-in-class free cash flow

Note: Valuation multiples and FCF margins reflect parent company values, not the individual segments plotted on the previous page.
*FCF margin defined as (EBITDA – capex) / sales.

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Appendix







Capital Structure & Liquidity
Reconciliations to GAAP
Other

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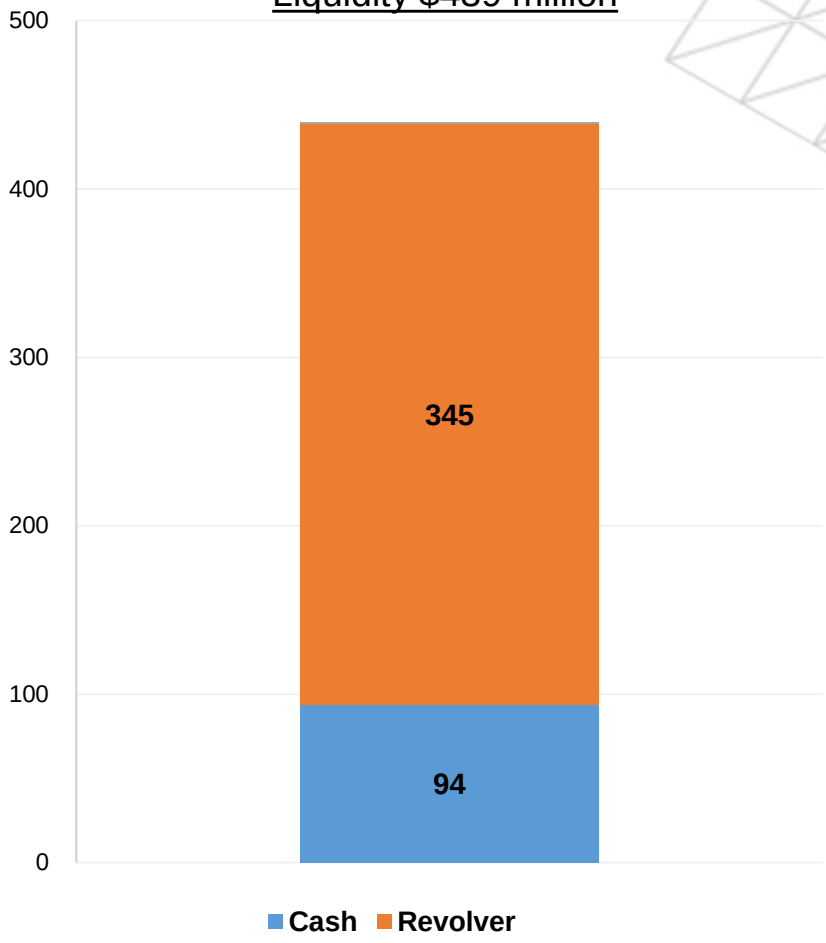
Capital Structure & Liquidity

Capital Structure 9/30/2021

	Amount	Rate	Maturity
Cash	94		
Revolver ($500M)	155	L+150	Sept-24
Term Loan A	475	L+150	Sept-24
Total Debt	627		
Net Debt	533		
Net Leverage*	1.5x		

- Retirement income plan (RIP) fully funded as of year-end 2020
  - No cash contributions in over 30 years

Liquidity $439 million



Strong balance sheet and liquidity position to support growth and capital allocation priorities

*As defined in credit agreement

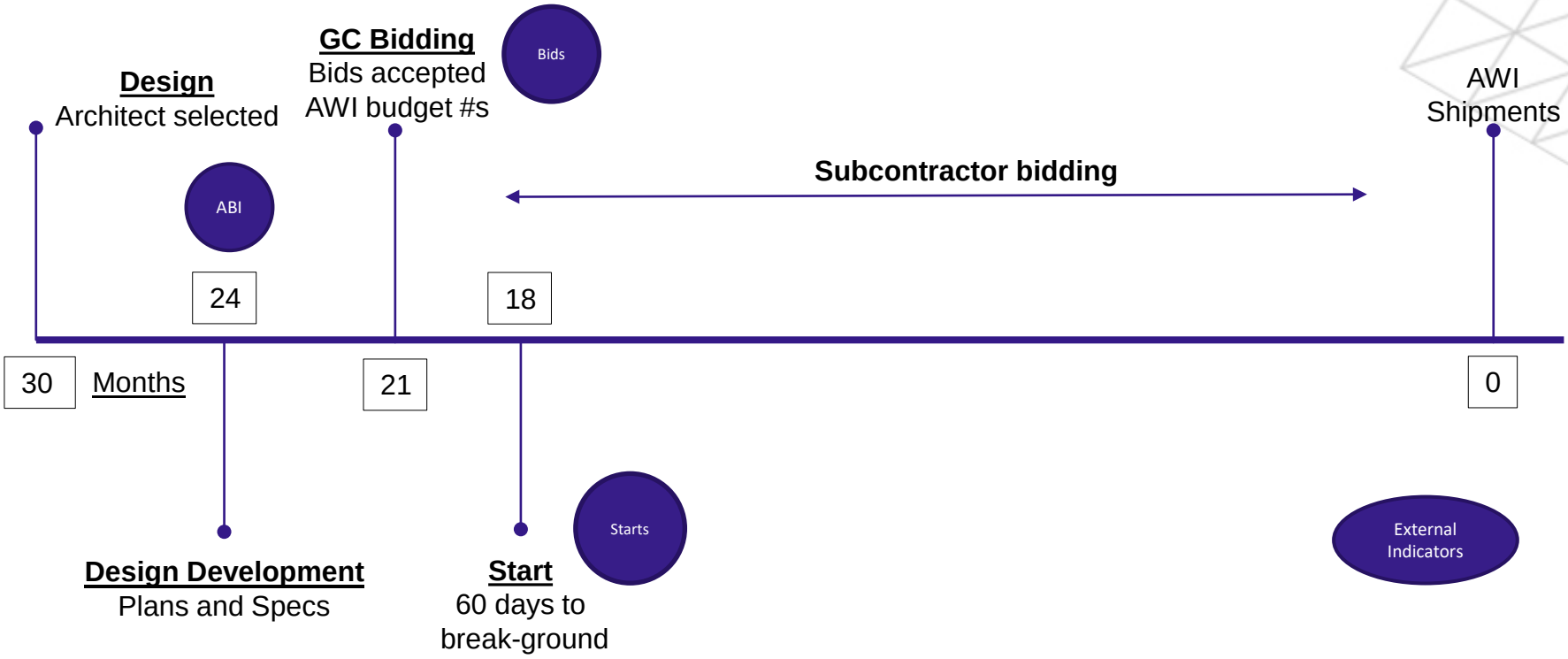
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Market Drivers

Sector	Indicators	10 Year Avg
General	GDP (Real-Blue Chip)	2.2%
General	Measure of CEO Confidence	54
General	Kastle Back to Work (Index)	95%
Activity	Architecture Billings Index (ABI)	50
Activity	Dodge First Bidding series	2.8%
Activity	Dodge Starts -- New unlagged	0.0%
Activity	Dodge Starts -- New lagged	1.3%
Office	Office Employment	1.6%
Office	Corporate Profits	2.3%
Office	Office Vacancy Rates (Reis)	16.8%
Retail	Retail Sales	3.5%
Retail	Personal Income	4.7%
Retail	Housing Start (Moody's)	9.2%
Education	State Local Gov't Spend (Real)	0.3%
Education	State Local Gov't Spend (Real)-Structure	-0.1%
Education	Age 5-24 Cohort	-0.2%
Education	Bond Buyer Index	3.1%
Healthcare	Spending on Medical Services	1.3%
Healthcare	Age 65+ Cohort	3.3%

Broad array of sector drivers that impact demand; Recovery underway

Non-Residential Activity Timeline (New and Major Reno)

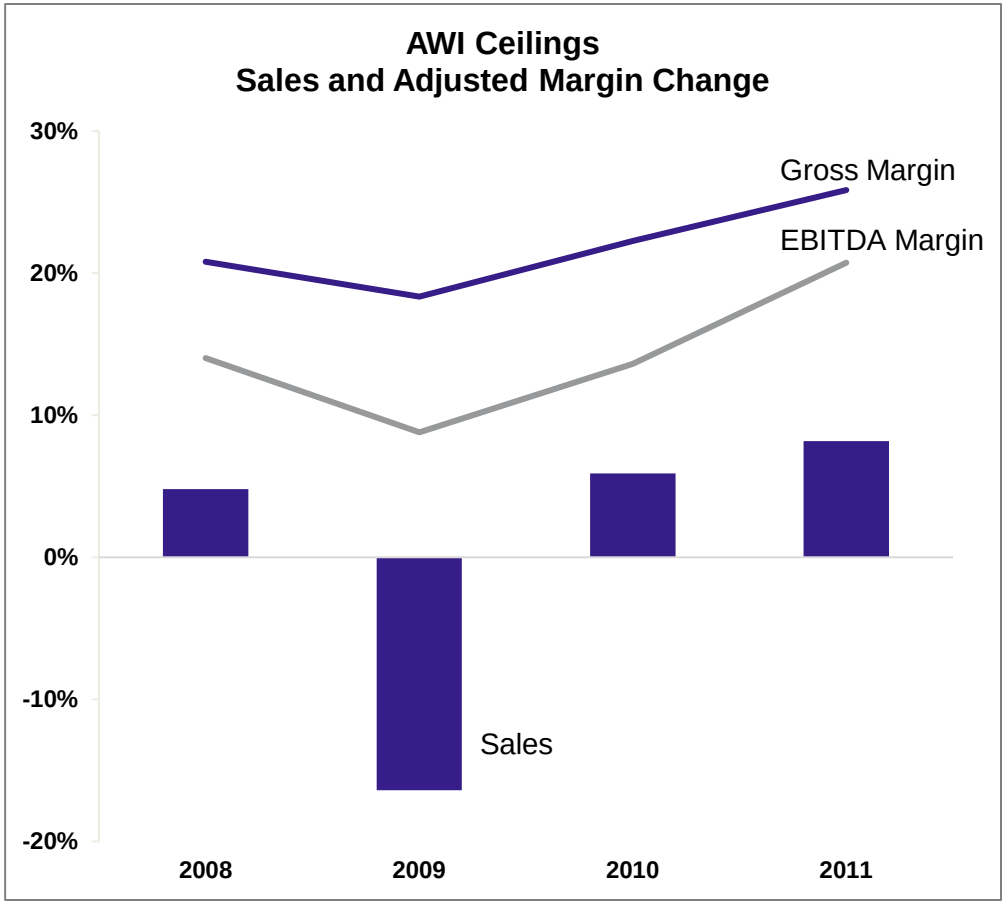


	Elapsed Time, start to AWI (months)		Distribution of SFT by Value Tiers					
Sector	Median (all sizes)	>=$10M Lags	>=$10M	$5M - $10M	$3M - $5M	$1M - $3M	$.25M - $1M	< $.25M
Office	16	20	63%	10%	8%	11%	7%	2%
Retail	10	16	24%	17%	13%	25%	20%	1%
Education	19	21	78%	11%	4%	5%	1%	0%
Healthcare	19	22	68%	17%	6%	6%	2%	0%
Transportation	18	20	80%	7%	4%	6%	4%	0%

Extended nature of projects reduce variation in demand

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Performance Through the Downturn (2008-2011)



- Volume declined 20% in 2009
- AUV increased every year
- Price exceeded inflation every year
- Manufacturing footprint restructured
- SG&A was right-sized
- Capital spending was tightened
- Margins were restored by 2010
- 2011 adjusted EBITDA 40% above 2009

Resilience through economic cycles

Note: Margin data is adjusted for standard exclusions as well as for stranded overhead costs associate with the separation from flooring and the sale of our international businesses. This provides consistent year to year comparability.

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Adjusted EBITDA Reconciliation

	For the Three Months Ended September 30,			For the Nine Months Ended September 30,		
	2021	2020	V	2021	2020	V
Earnings (Loss) from continuing operations, Reported	**$51**	**$54**	**($3)**	**$143**	**($119)**	**$262**
Add: Income tax expense (benefit), as reported	17	15	1	48	(51)	99
Earnings (Loss) before tax, Reported	**$67**	**$69**	**($2)**	**$191**	**($170)**	**$361**
Add: Interest/other income and expense, net	5	3	2	13	381	(367)
Operating Income, Reported	**$72**	**$72**	**($0)**	**$205**	**$211**	**($6)**
Add: RIP expense (1)	1	1	-	4	4	-
(Less): Acquisition-related impacts (2)	3	-	3	1	-	1
(Less)/Add: Net environmental expenses	-	-	-	-	1	(1)
(Less): Gain on sale of idled China plant facility	-	(7)	7	-	(21)	21
Add: Depreciation	16	19	(3)	46	47	(1)
Add: Amortization	7	6	2	28	15	13
Adjusted EBITDA	**$99**	**$92**	**$8**	**$284**	**$257**	**$27**
Adjusted EBITDA vs Prior Year			*8%*			*10%*
Adjusted EBITDA Margin	34%	37%	(320bps)	35%	37%	(240bps)

(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) 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 accruals.

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Adjusted Diluted Earnings Per Share Reconciliation

	For the Three Months Ended September 30,					For the Nine Months Ended September 30,				
	2021	Per Diluted Share	2020	Per Diluted Share	V	2021	Per Diluted Share	2020	Per Diluted Share	V
Earnings from continuing operations before income taxes, As Reported	**$51**	**$1.06**	**$54**	**$1.13**	**($3)**	**$143**	**$2.98**	**($119)**	**($2.48)**	**$262**
Add/(Less): Income tax expense (benefit), as reported	17		15		1	48		(51)		99
Earnings (Loss) from continuing operations before income taxes, As Reported	**$67**		**$69**		**($2)**	**$191**		**($170)**		**$361**
Add: RIP expense (1)	-		-		-	-		370		(370)
(Less): Acquisition-related impacts (2)	3		-		3	1		-		1
Add: Acquisition related amortization (3)	4		2		2	18		4		13
Add: Net environmental expenses	-		-		-	-		1		(1)
(Less): Gain on sale of idled China plant facility	-		(7)		7	-		(21)		21
Add: Accelerated Depreciation from closed facility	-		3		(3)	-		3		(3)
Adjusted earnings from continuing operations before income taxes	**$74**		**$68**		**$6**	**$210**		**$188**		**$22**
(Less): Adjusted income tax expense (4)	(18)		(17)		(2)	(53)		(46)		(7)
Adjusted net income	**$56**	**$1.17**	**$51**	**$1.07**	**$5**	**$157**	**$3.28**	**$142**	**$2.93**	**$16**
Diluted Shares Outstanding (5)	47.8		48.0			48.0		48.3		
Adjusted Tax Rate (6)	25%		25%			25%		25%		

(1) RIP expense represents the entire actuarial net periodic pension expense (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) 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 accruals.
(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 calculated using the adjusted tax rate multiplied by the adjusted earnings from continuing operations before income taxes.
(5) Dilutive shares are as-reported. 2020 dilutive shares outstanding for the nine months ended September 30, 2020 include anti-dilutive common stock equivalents which are excluded from U.S. GAAP Accounting.
(6) The tax rate for the three and nine months ended September, 2020 excludes the first quarter pension annuitization and the gain on the sale of our idled China facility.

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Adjusted Free Cash[(1)] Flow Reconciliation

	For the Three Months Ended September 30,			For the Nine Months Ended September 30,		
	2021	2020	V	2021	2020	V
Reported net cash provided by operating activities	**$56**	**$70**	**($14)**	**$138**	**$148**	**($10)**
Reported net cash provided by (used for) investing activities	**1**	**(63)**	**64**	**(5)**	**(52)**	**47**
Net cash provided by operating and investing activities	**57**	**7**	**50**	**133**	**96**	**36**
Add: Acquisitions, net	1	74	(73)	1	74	(73)
(Less): Payments related to sale of international, net (1)	-	(20)	20	12	(21)	32
Add: Environmental payments, net	-	-	-	-	1	(1)
Add: Net Payments to WAVE for portion of proceeds from sale of international business	-	3	(3)	-	13	(13)
(Less): Proceeds from sale of idled China plant facility	-	(19)	19	-	(19)	19
Adjusted Free Cash Flow	**$58**	**$46**	**$13**	**$145**	**$145**	**$0**

(1) Adjusted free cash flow is defined as cash from operations and dividends received from the WAVE joint venture, less expenditures for property and equipment, and is adjusted to remove the impact of cash used or proceeds received for acquisitions and divestitures, legacy environmental matters and litigation. The Company believes adjusted free cash flow is useful because it provides insight into the amount of cash that the Company has available for discretionary uses, after expenditures for capital commitments and adjustments for acquisitions and divestitures. Free cash flow includes discontinued international operations.

Segment Reported Operating Income (Loss) to Adjusted EBITDA

	MINERAL FIBER			ARCHITECTURAL SPECIALTIES			UNALLOCATED CORPORATE		
	For the Three Months Ended September 30,								
	2021	2020	V	2021	2020	V	2021	2020	V
Net Sales	**$215**	**$187**	**$27**	**$78**	**$59**	**$19**	**-**	**-**	**-**
Operating Income (Loss) – As Reported	**$69**	**$58**	**$10**	**$5**	**$9**	**($4)**	**($1)**	**$5**	**($7)**
Add: RIP expense (1)	-	-	-	-	-	-	1	1	-
(Less): Acquisition-related impacts (2)	-	-	-	3	-	3	-	-	-
(Less): Gain on sale of idled China plant facility	-	-	-	-	-	-	-	(7)	7
Add: Depreciation and Amortization	18	20	(3)	5	4	1	-	-	-
EBITDA – Adjusted	**$86**	**$79**	**$8**	**$13**	**$13**	**$0**	**-**	**-**	**-**
Adjusted EBITDA vs Prior Year			*10%*			*1%*			
Adjusted EBITDA Margin	40%	42%	(180bps)	17%	22%	(500bps)			

(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 and deferred compensation accruals.

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Adjusted Net Sales Reconciliation

	For the Three Months Ended September 30,			For the Nine Months Ended September 30,		
	2021	2020	V	2021	2020	V
Reported Net Sales	**$292**	**$246**	**$46**	**$824**	**$698**	**$126**
Deferred revenue adjustment (1)	-	-	-	1	-	1
Adjusted Net Sales	**$292**	**$246**	**$46**	**$825**	**$698**	**$127**

(1) Represents the impact of acquisition-related deferred revenue adjustments to fair value.

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2021 Adjusted EBITDA Guidance Reconciliation

	For the Year Ending December 31, 2021		
	Low	to	High
Net Income	**$189**	**to**	**$194**
Add: Interest expense	23		23
(Less): RIP credit (1)	(4)		(4)
Add: Income tax expense	62		63
Operating Income	**$270**	**to**	**$277**
Add: RIP expense (2)	4		4
Add: Depreciation	63		63
Add: Amortization	35		35
Adjusted EBITDA	**$372**	**to**	**$378**

(1) RIP credit represents the actuarial net periodic benefit expected to be recorded as a component of other non-operating income. We do not expect to be and do not plan to make cash contributions to our U.S. Retirement Income Plan based on guidelines established by the Pension Benefit Guaranty Corporation.

(2) RIP expense represents only the service cost related to the U.S. pension plan that is recorded within Operating Income. For all periods presented, we were not required to and did not make cash contributions to our U.S. Retirement Income Plan.

2021 Adjusted EPS Guidance Reconciliation

	For the Year Ending December 31, 2021				
	Low	Per Diluted Share[1]	to	High	Per Diluted Share[1]
Net income	**$189**	**$3.94**	**to**	**$194**	**$4.04**
Add: Interest expense	23			23	
(Less): RIP credit (2)	(4)			(4)	
Add: Income tax expense	62			63	
Operating income	**$270**		**to**	**$277**	
Add: RIP expense (3)	4			4	
(Less): Interest expense	(23)			(23)	
Add: Acquisition related amortization (4)	21			21	
Adjusted earnings before income taxes	**$272**		**to**	**$279**	
(Less): Income tax expense (5)	(68)			(70)	
Adjusted net income	**$204**	**$4.25**	**to**	**$209**	**$4.35**

(1) Adjusted EPS guidance for 2021 is calculated based on an adjusted effective tax rate of 25% and based on ~48 million of diluted shares outstanding.

(2) RIP credit represents the actuarial net periodic benefit expected to be recorded as a component of other non-operating income. We do not expect to be required to make, nor do we plan to make cash contributions to our U.S. Retirement Income Plan based on guidelines established by the Pension Benefit Guaranty Corporation.

(3) RIP expense represents only the service cost related to the U.S. pension plan and is recorded as a component of operating income. We do not expect to be required to make, nor do we plan to make cash contributions to our U.S. Retirement Income Plan based on guidelines established by the Pension Benefit Guaranty Corporation.

(4) Represents the intangible amortization related to acquired entities, including customer relationships, developed technology, software, trademarks and brand names, non-compete agreements and other intangibles.

(5) Adjusted income tax expense is based adjusted earnings before income tax.

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2021 Adjusted Free Cash Flow Guidance Reconciliation

	For the Year Ending December 31, 2021		
	Low	to	High
Net cash provided by operating activities	**$203**	**to**	**$213**
Add: Return of investment from joint venture	75		80
Adjusted net cash provided by operating activities	$278	to	$293
Less: Capital expenditures	(80)		(85)
Adjusted Free Cash Flow	**$198**	**to**	**$208**

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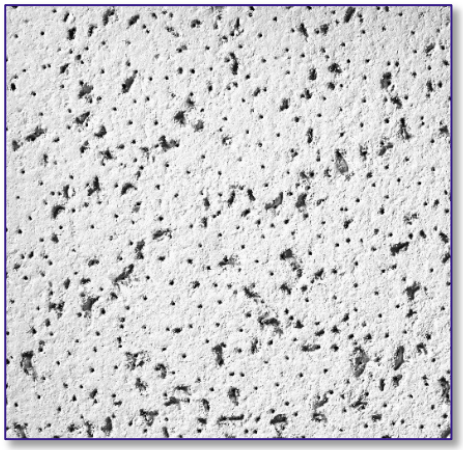
Where We Were…

Key Facts

Products: Fissured Ceilings

AUV: $.40 SF (MF AUV)

Sales: $500M





***Fissured* Ceilings**

Armstrong before the 2000s

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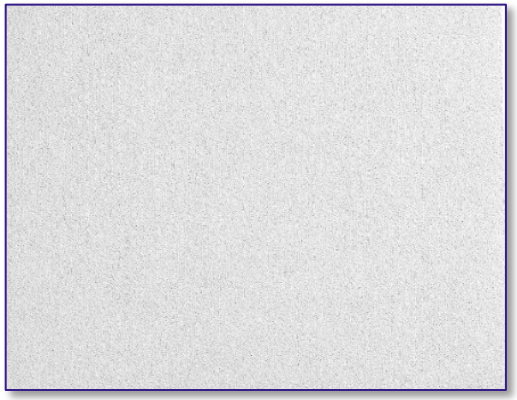
Where We Are Today…

Key Facts

Products: Fissured Ceilings, Smooth White Acoustical Tile, Wood, Metal…

AUV: $1.10 SF (MF AUV)

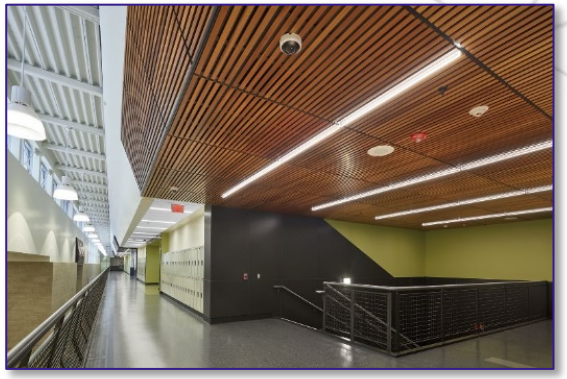
Sales: $1 Billion



Smooth White Acoustical Tile (SWAT)



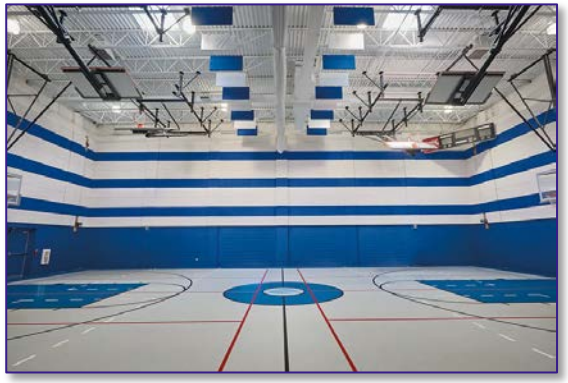
Mineral Fiber Ceilings



Wood Ceilings & Walls



Metal Ceilings & Walls



Tectum Ceilings & Walls

Expanding the portfolio to align with market trends

Note: AUV data is for US and Canada commercial channels - mineral fiber only.

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Ultima Health Zone



Project Profile: Penn Presbyterian

Type of Space: Hospital

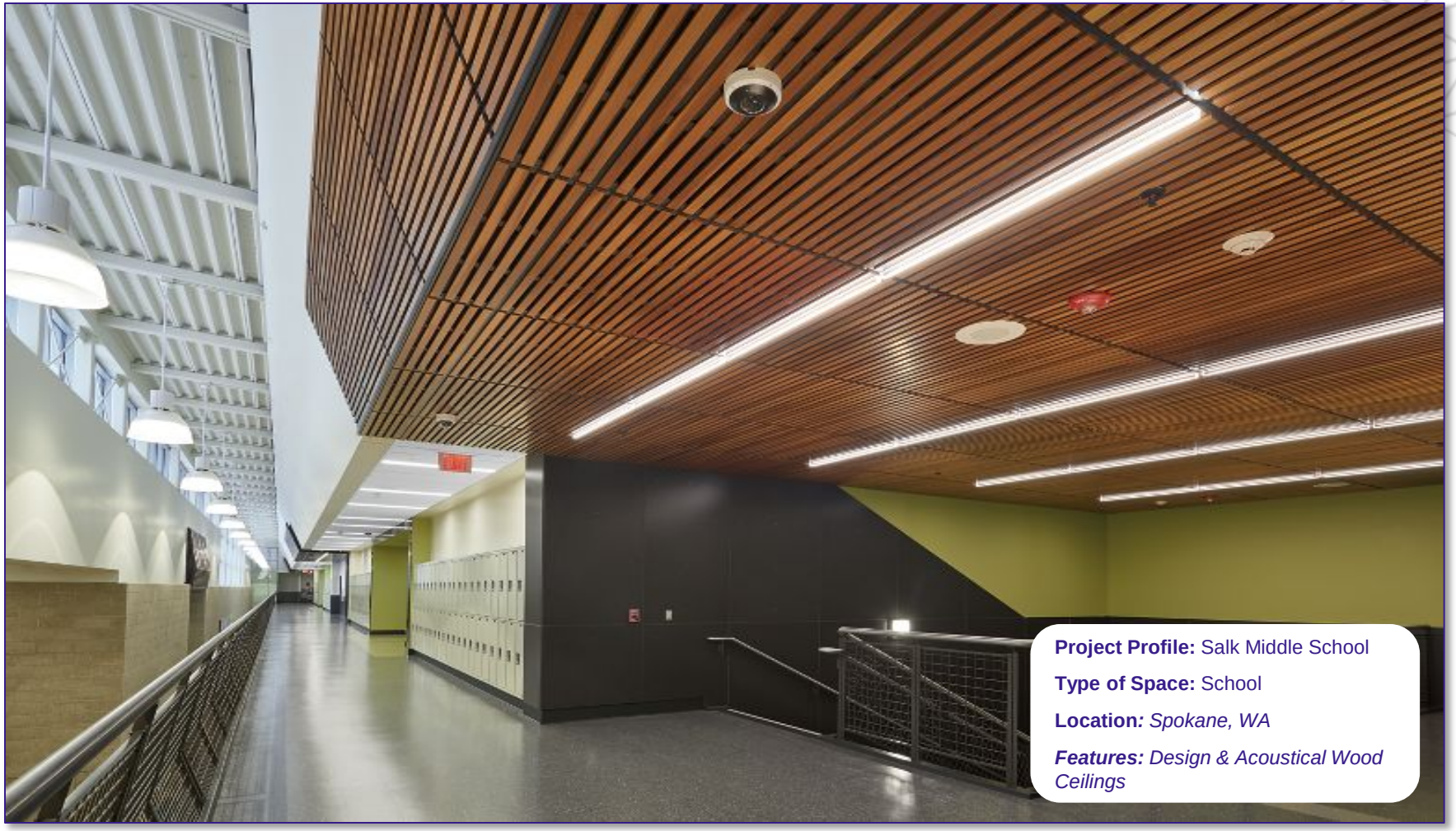
Location: Philadelphia, PA

Features: Total Acoustics & Sustain MF Ceilings (Scrubbable/Washable)

Ultima Average Unit Value 3X fissured mineral fiber ceilings

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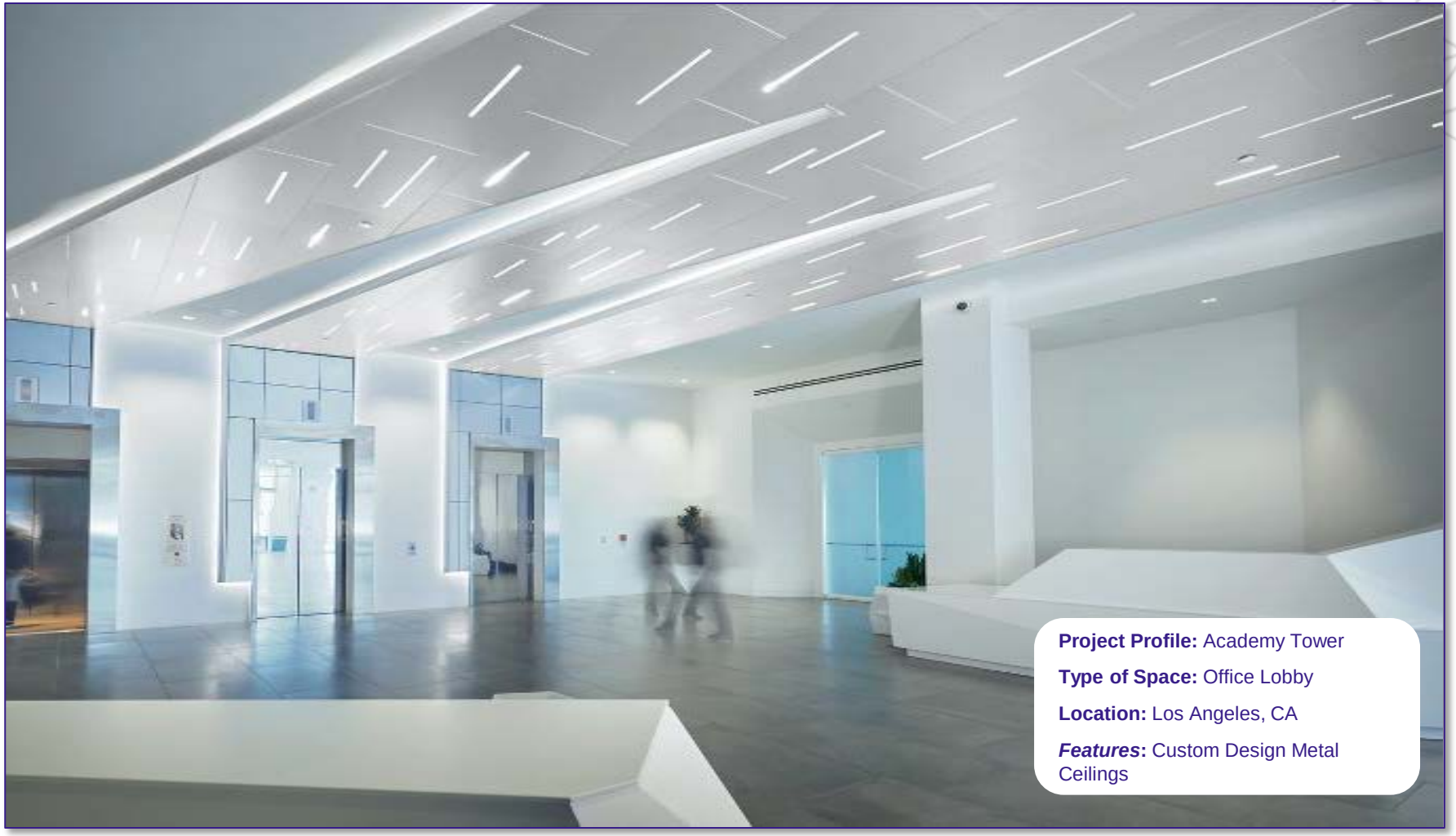
WOODWORKS Grille Ceilings



WOODWORKS Average Unit Value 15X mineral fiber ceilings

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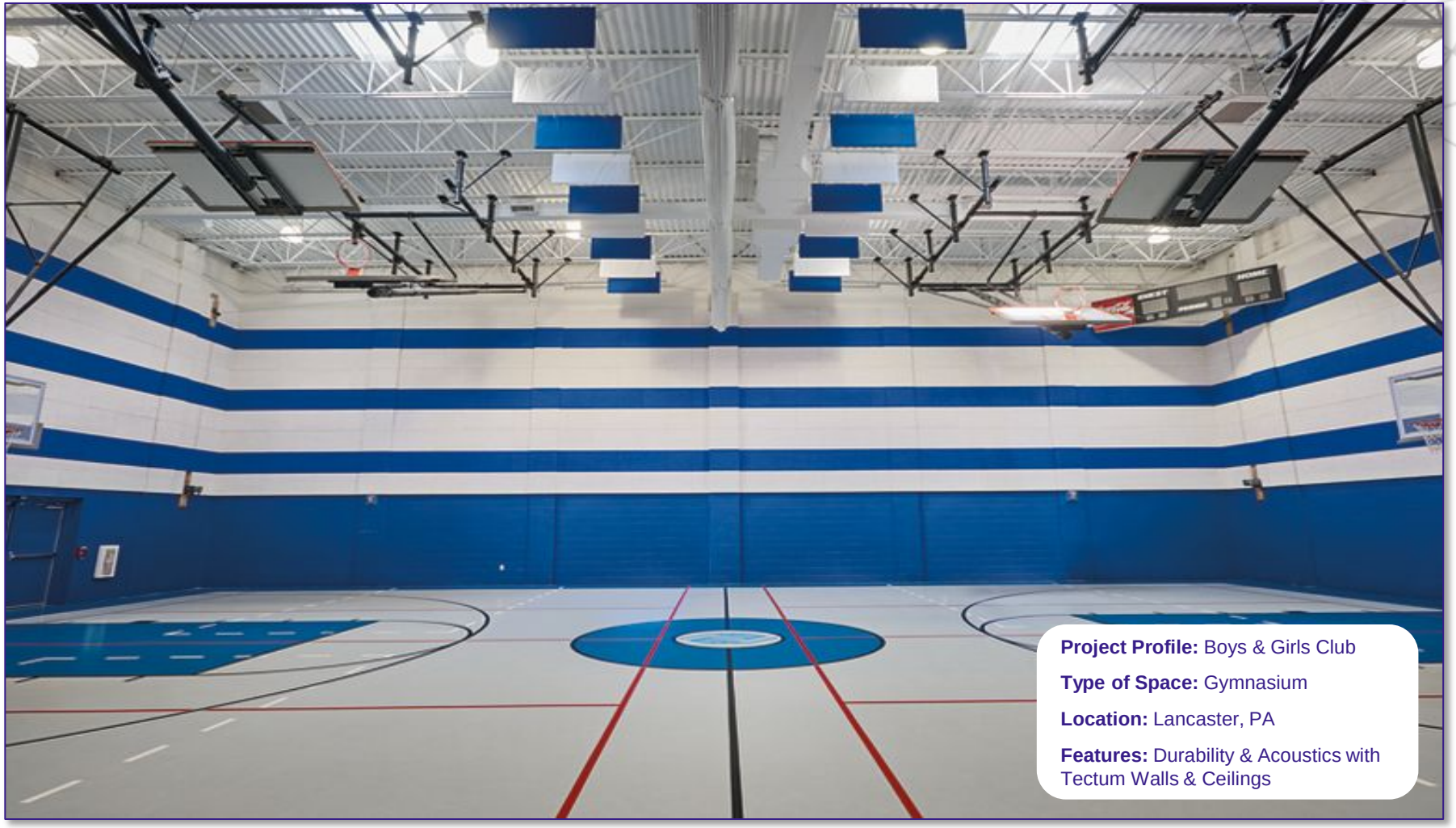
METALWORKS Torsion Spring



Our products are now being specified in statement spaces

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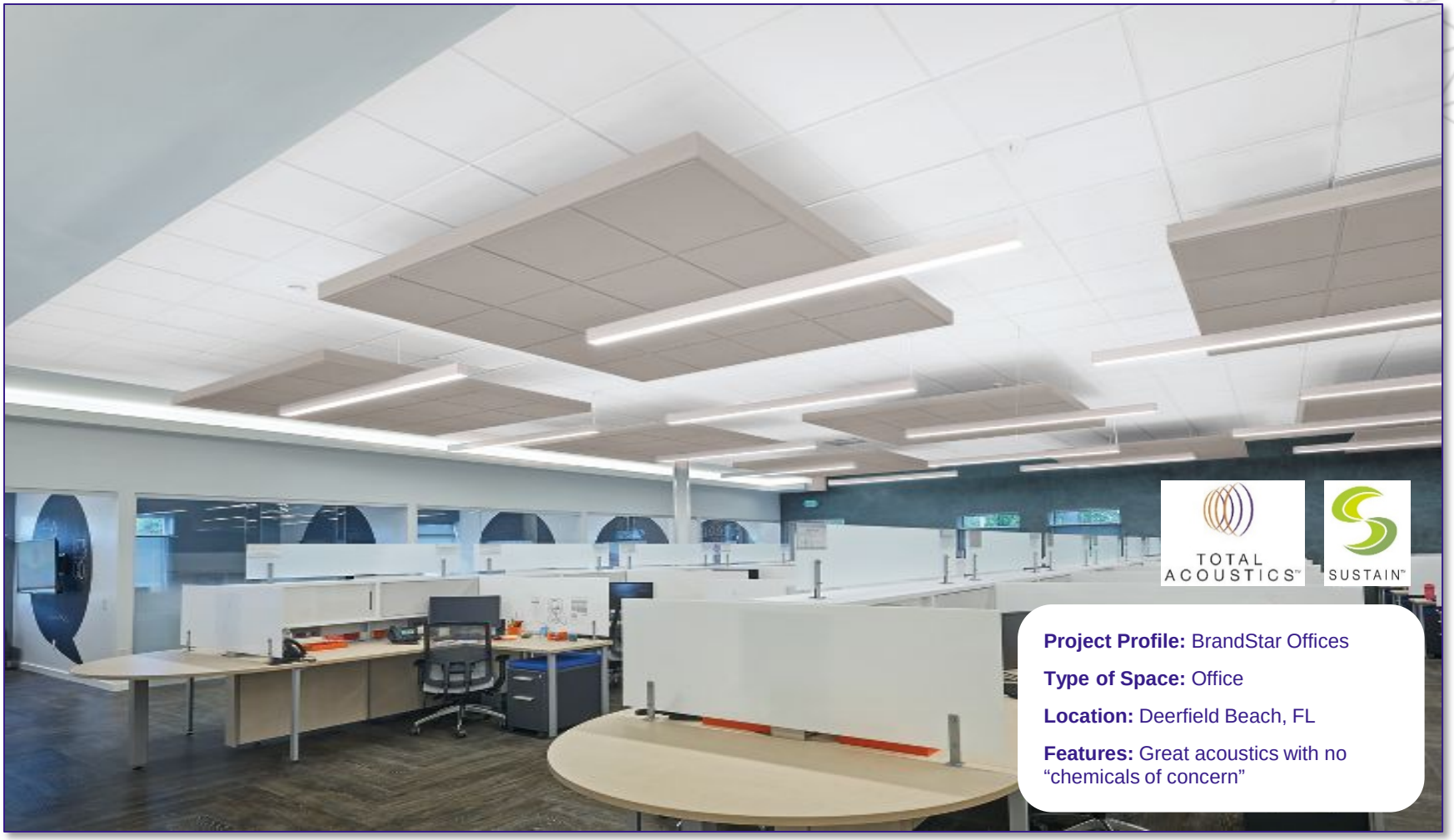
Tectum Walls & Ceilings



More spaces in the same building

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Total Acoustics & Sustain



Total Acoustics & Sustain market penetration continues to grow

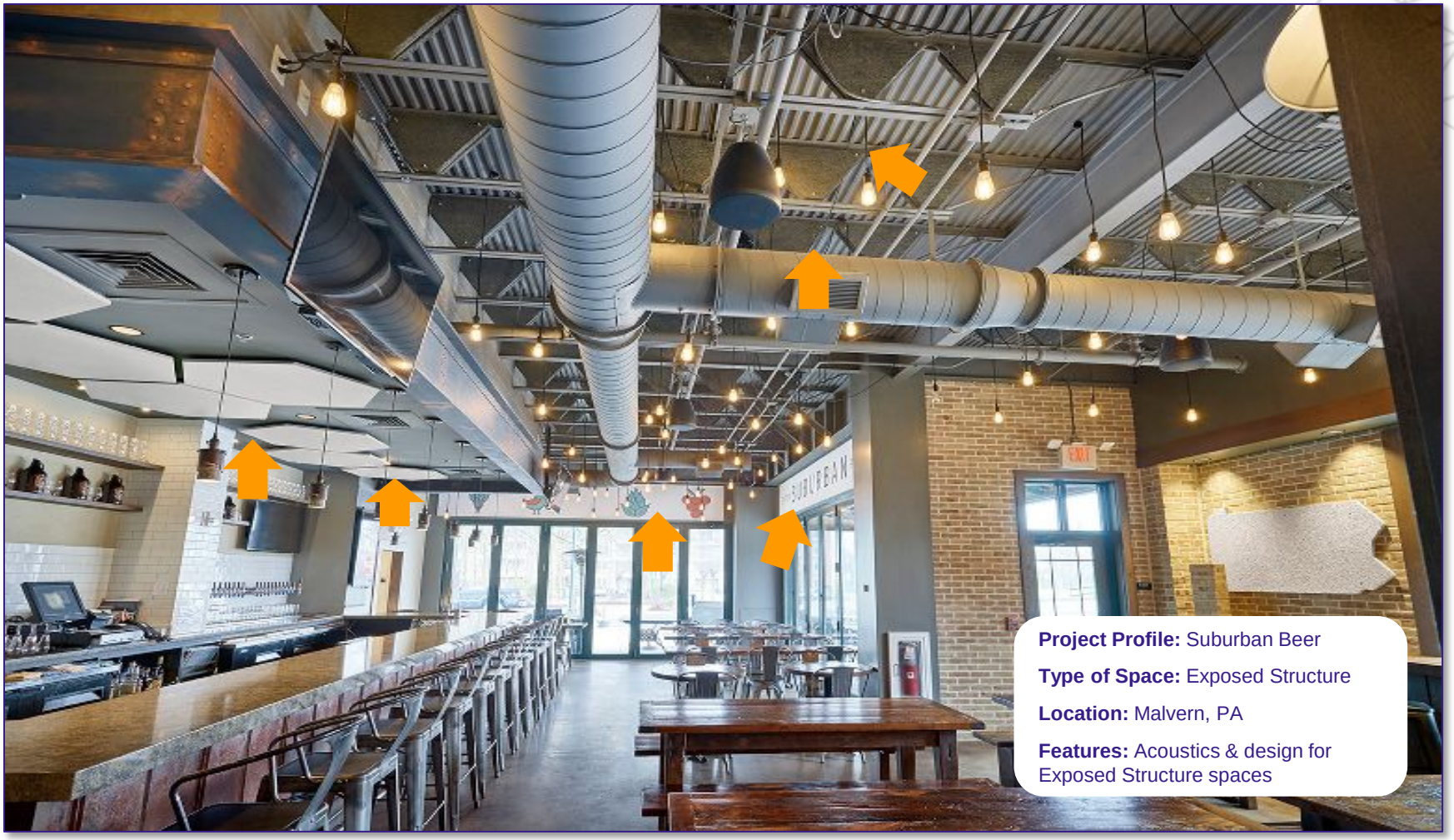
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DESIGNFlex adds a never before seen look to mineral fiber ceilings

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Exposed Structure Portfolio



Project Profile: Suburban Beer

Type of Space: Exposed Structure

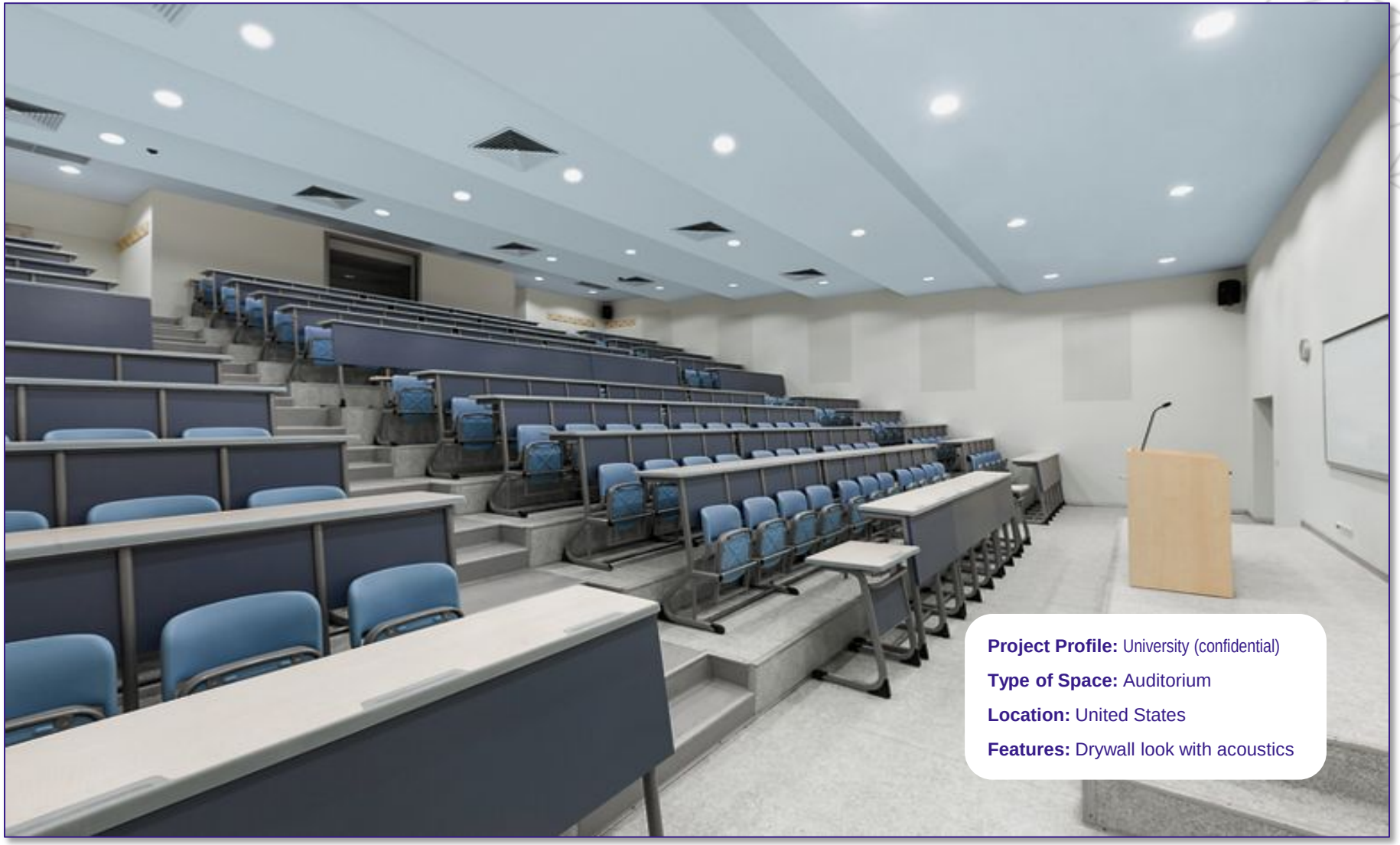
Location: Malvern, PA

Features: Acoustics & design for Exposed Structure spaces

Our Exposed Structure portfolio allows us to enter new spaces

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“AcoustiBuilt” - Seamless Mineral Fiber



Seamless mineral fiber gains share from drywall ceilings

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