



Investor Day 2021

September 23, 2021

Safe Harbor

In addition to historical statements, this presentation contains statements relating to future events and our future results based on management's expectations as of September 23, 2021. These statements are "forward-looking" statements within the meaning of the Private Securities Litigation Reform Act of 1995.

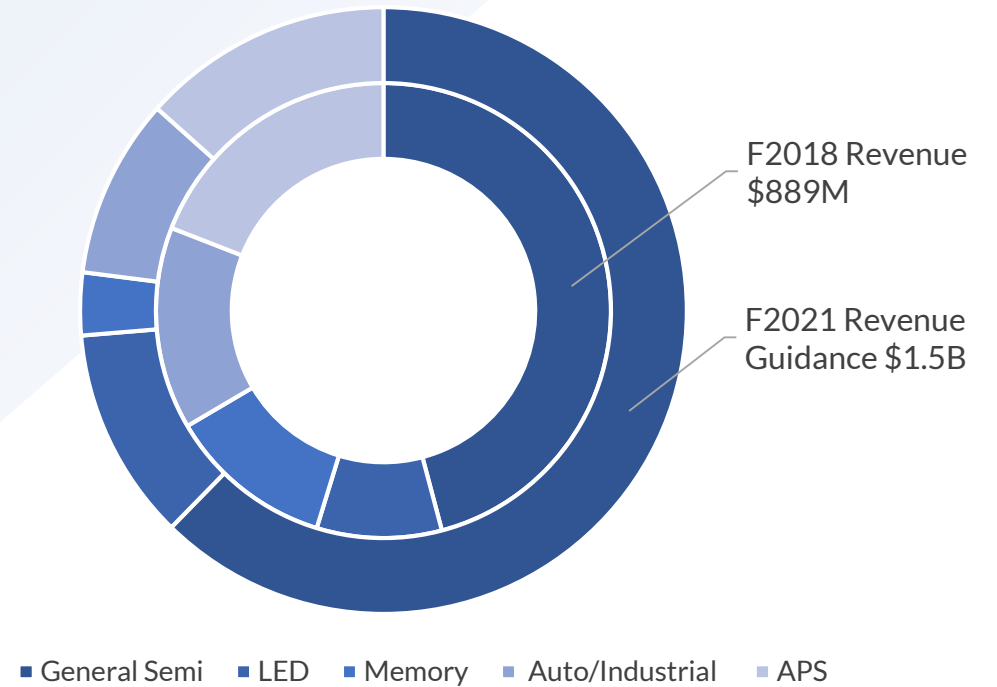
While these forward-looking statements represent our judgments and future expectations concerning our business, a number of risks, uncertainties and other important factors could cause actual developments and results to differ materially from our expectations. These factors include, but are not limited to the factors listed or discussed in our 2020 Annual Report on Form 10-K and our other filings with the Securities and Exchange Commission. Kulicke and Soffa Industries, Inc. is under no obligation to (and expressly disclaims any obligation to) update or alter its forward-looking statements whether as a result of new information, future events or otherwise.

At a Glance

Key Stats

Founded	1951
F2021 Revenue Outlook	\$1.5B
Revenue Growth <small>3yr CAGR</small>	19.0%
Operating Profit <small>3yr CAGR</small>	33.9%
Employees	3,000
Global Customers	>1,900
Global Manufacturing Sites	5
Global R&D Sites	9
Global Sales Offices	18

Revenue Composition



Meet Our Management Team



Fusen Chen
President & CEO



Chan Pin Chong
EVP & GM Capital Equip
Products & Solutions



Lester Wong
SVP & CFO



Meng Kwong Han
VP & GM Aftermarket
Products & Services



Bob Chylak
VP & CTO



Nelson Wong
SVP, Global Sales



Tong Liang Cheam
VP, Corporate Strategy



Lisa Lim
VP, Global Human
Resources



Shai Soloveizik
VP, Global Operations &
Supply Chain



Steve Drake
VP, Legal Affairs &
General Counsel

Analyst Day 2021

Today's Agenda

Goals of Today's Discussion

- ❖ Review organizational change & competencies
- ❖ Clarify incremental opportunities by end market
- ❖ Quantify financial expectations



Corporate Overview & Strategy

Fusen Chen – President & CEO



Financial Expectations

Lester Wong – SVP & Chief Financial Officer



Aftermarket Products & Services

MK Han – VP & GM Aftermarket Products & Services



LED & Advanced Display

Bob Chylak – VP & Chief Technology Officer



Automotive & Industrials

Chan Pin Chong – EVP & GM Capital Equipment

General Semiconductor & Memory

Chan Pin Chong – EVP & GM Capital Equipment

Q&A

Overview

Progress & Strategy



Fusen Chen

President & CEO

Over 30yr Industry Experience
Applied Materials
Lam Research
Mattson Technology
Lead K&S Since October 2016

KEY MESSAGES

A New Level of Performance

Tactical and strategic execution combined with evolving market trends enhance our business and provide a new set of opportunities

1

Pervasive Solutions

K&S solutions are increasingly essential to the Semiconductor Industry

2

Rooted Competencies

Institutional knowledge, proven innovation, commercialization

3

Technology Transitions

Increases value-add, extends market access, supports profitability enhancements

4

Leadership

Experienced, empowered and accountable team with track record for market expansion and execution

5

Sustainable Profitability

New level of sustainable revenue supports higher level of profitability

Focused on a Sustainable Future

“Sustainability begins in our culture – it is also crucial to ensure that our suppliers and contractors uphold the same standards as us.”



Making the Environment a Priority

- ❖ Developing solutions with environmental integrity
- ❖ Aligning CR policies with United Nations Sustainable Development Goals
- ❖ Optimizing resource usage
- ❖ Minimizing waste discharge



Championing Employees as our Greatest Asset

- ❖ Advocating for progressive employment practices
- ❖ Recently expanded Diversity & Inclusion initiative
- ❖ Sustaining a culture that empowers and supports
- ❖ Positively impacting communities



Implementing Best Business Practices

- ❖ Building internal sustainability competencies
- ❖ Established a code for organizational integrity
- ❖ Managing risk, building continuity and integrated management systems

Demonstrated Success

Our Value-Creation Cycle

Adjacent Opportunities

- ❖ Broadening Market Presence
- ❖ Changing Market Dynamics
- ❖ Competencies Extend to New Markets

Innovation & Development

- ❖ Proven Internal Process
- ❖ Rapid Development & Commercialization
- ❖ Proven Organic Growth

Financial Strength

- ❖ Operational Leverage
- ❖ Opportunistic & Consistent Shareholder Returns
- ❖ New Investments



Sales & Support

- ❖ >1,900 Customers
- ❖ 75% of Sales Through Internal Sales Channels
- ❖ Value Added Service Opportunities

Operational Excellence

- ❖ Empowered, Accountable Organization
- ❖ KPIs Aligned with Market
- ❖ Flexible Manufacturing

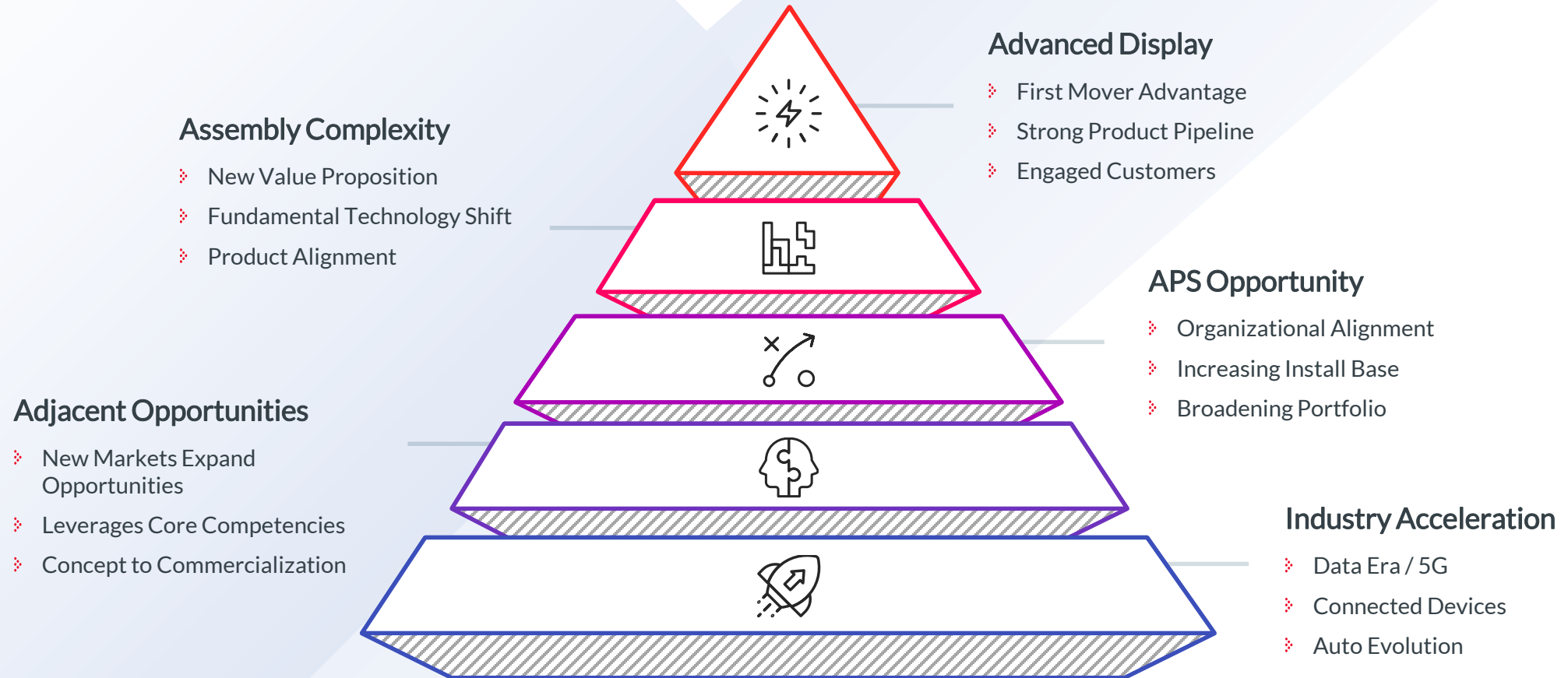
Market Leadership

- ❖ Large Installed Base
- ❖ Established Relationships
- ❖ >50% Share in Most Markets

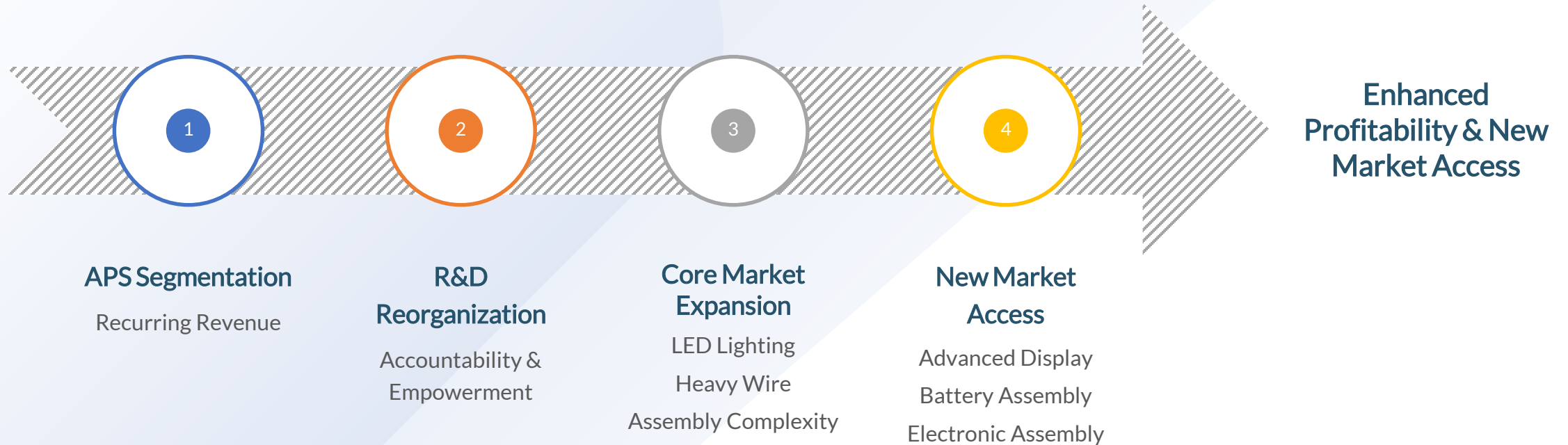
Breadth of Solutions

- ❖ Major IC, LED & Automotive Trends
- ❖ Broad Market Exposure
- ❖ Integrated Equipment & Tools

Multiple Themes Support Sustainable Growth



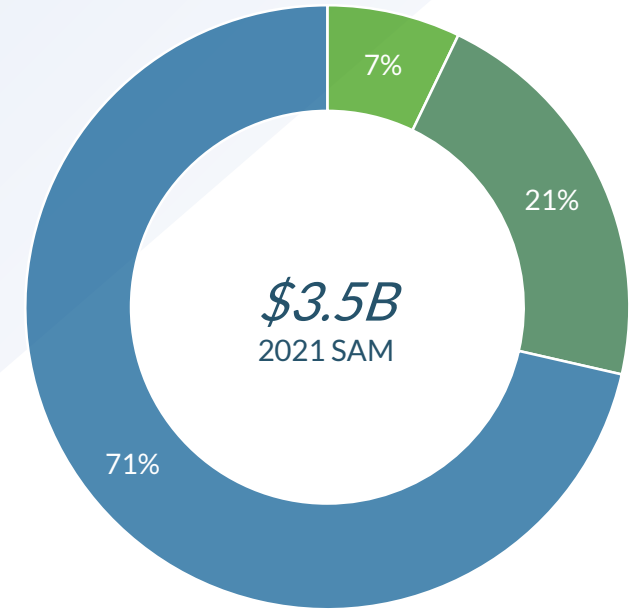
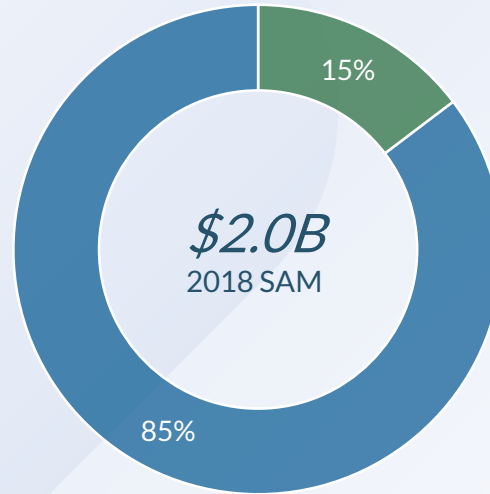
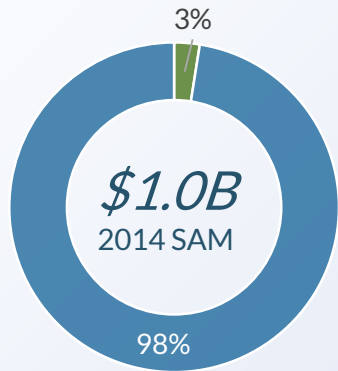
Strategic Alignment Fiscal 2017



Expanding Opportunities

Through Organic Development & Prudent Acquisitions

- Core
- Assembly Complexity
- Advanced Display



Organizational
Alignment

+

Prudent
Acquisitions

+

R&D
Investment

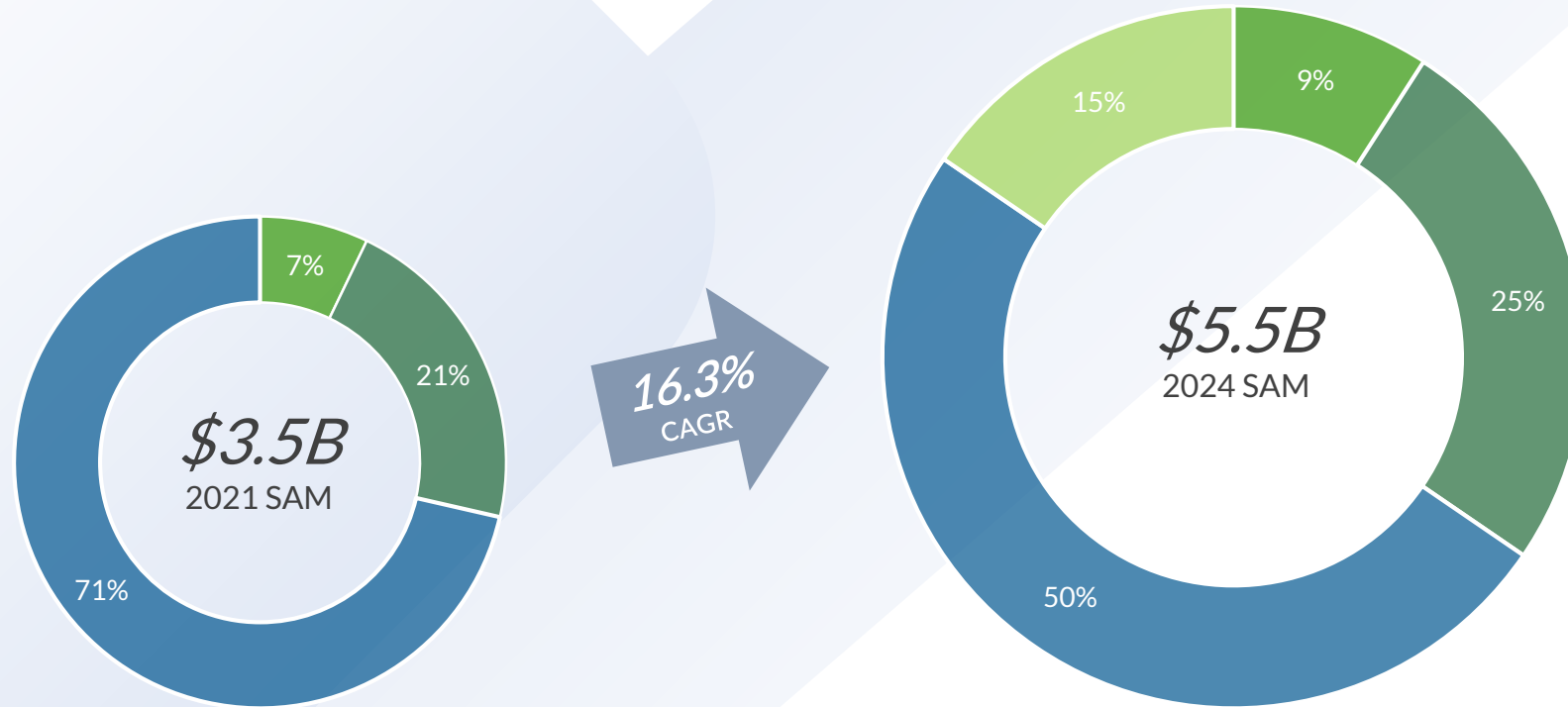
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Growth
Execution

New Served Market Target

Opportunity Set is Increasing

- High-Volume Semi
- Assembly Complexity
- Advanced Display
- Adjacencies



Share Gains & High-Growth Market Involvement
Support New-Levels of Performance

Stabilize Revenue & Support New Performance Level



Overview

Financial Framework & Expectations



Lester Wong

SVP & Chief Financial Officer

Joined K&S in 2011

Leads IT, Finance & Facilities organizations

Critically involved in M&A, capital allocation

KEY MESSAGES

A New Level of Performance

Tactical and strategic execution combined with evolving market trends enhance our business and provide a new set of opportunities

1

Accelerating Baseline

2

Track-Record In Achieving Past Targets

3

Multiple Paths For Enhancing Returns

4

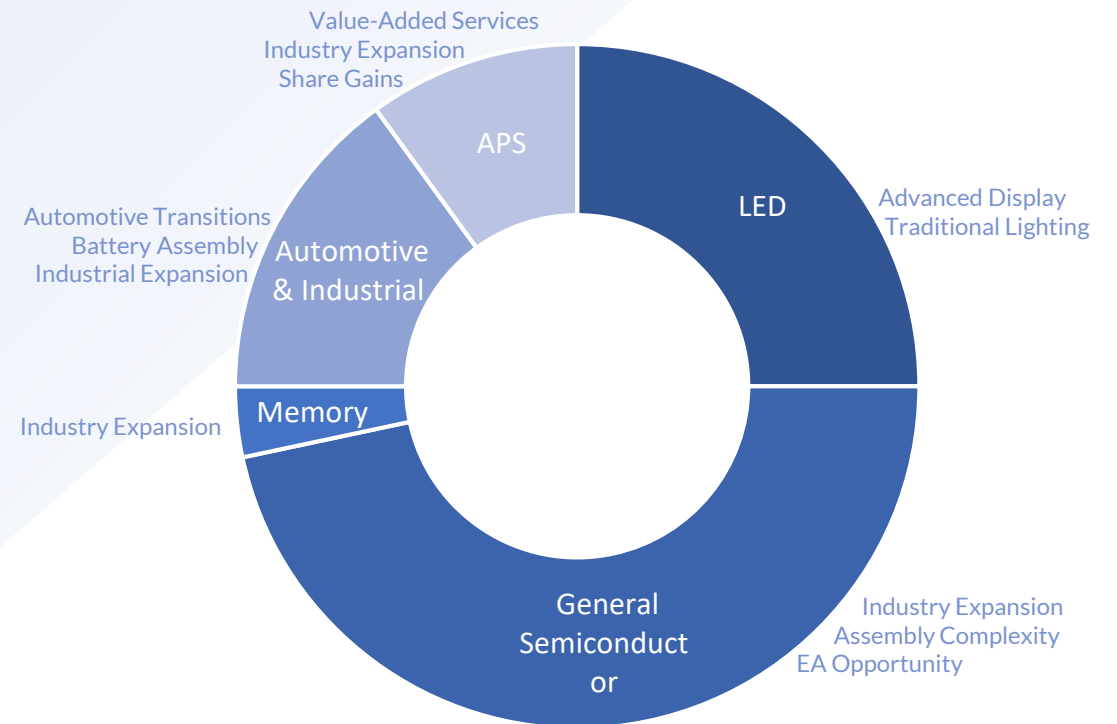
Structural Improvements Enhance Earnings Consistency

Clear Path To Accelerate Baseline

Diverse Set of Opportunities

- ❖ Baseline growth from \$900M to \$1.5B, by F2024
- ❖ Opportunities supported by strategic execution
 - ❖ Market growth
 - ❖ Technology transitions
 - ❖ Share gains
- ❖ Track record in guidance
 - ❖ Surpassed 2018 Analyst Day targets
 - ❖ Upside potential in high-growth areas

Twelve Specific Opportunities Across Five Served Markets



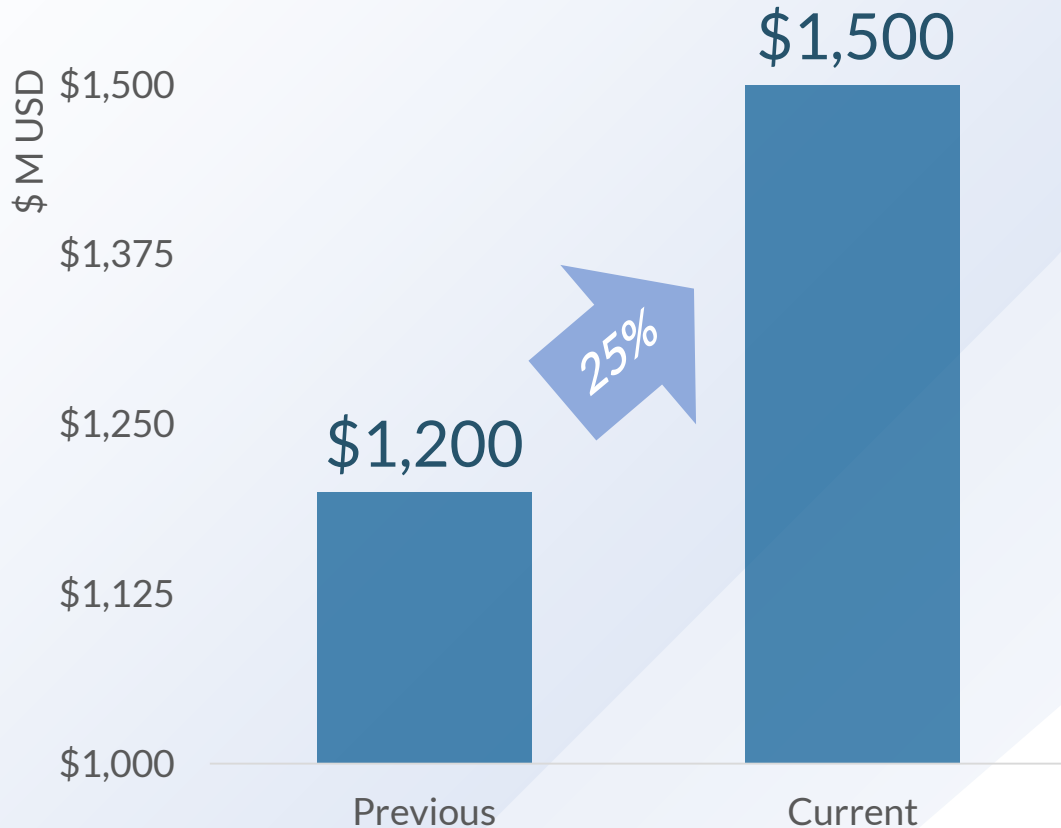
Baseline Revenue

Management's view of normalized revenue under a linear industry growth environment

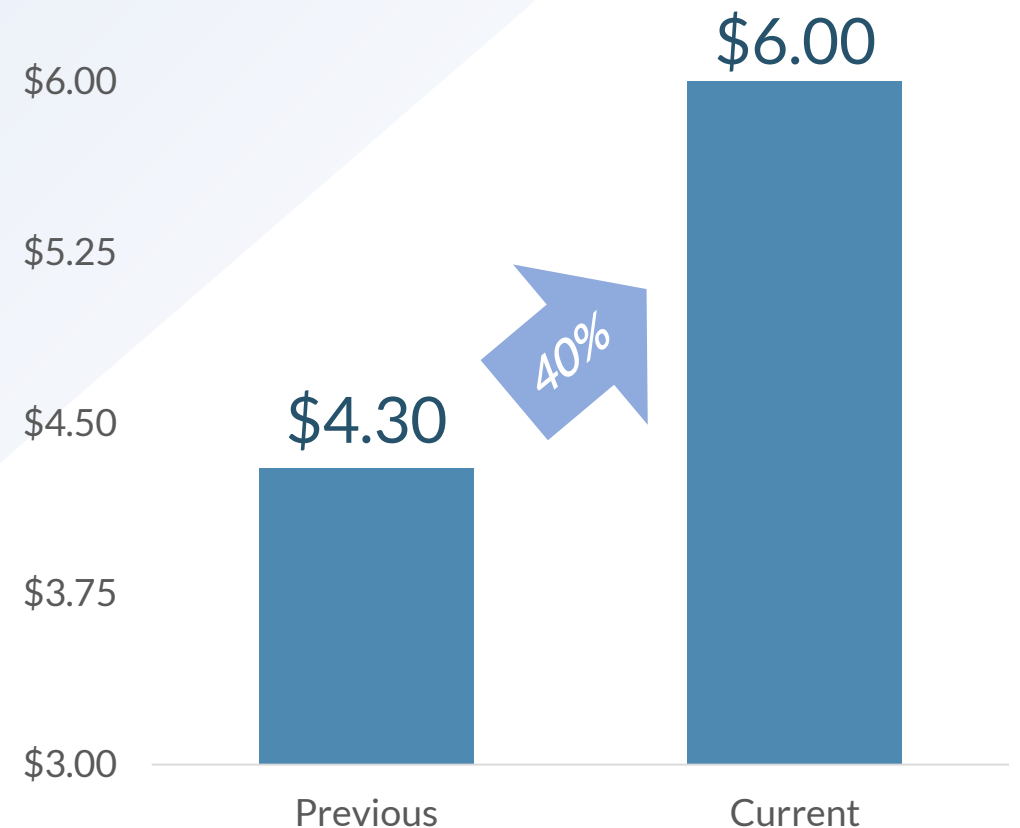
Outperformance to Aspirational Goal

Prior Investor Day Target Fiscal 2018

F2021 Revenue Target

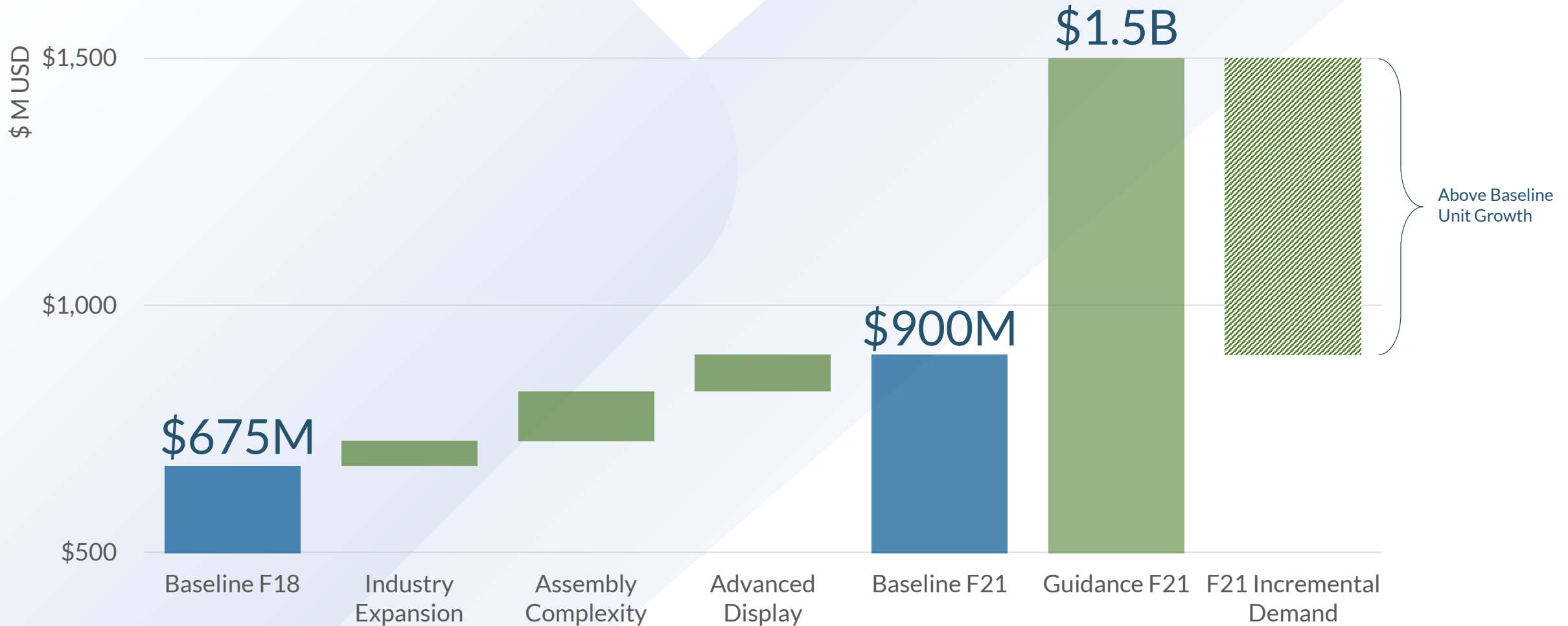


F2021 Non-GAAP EPS Target



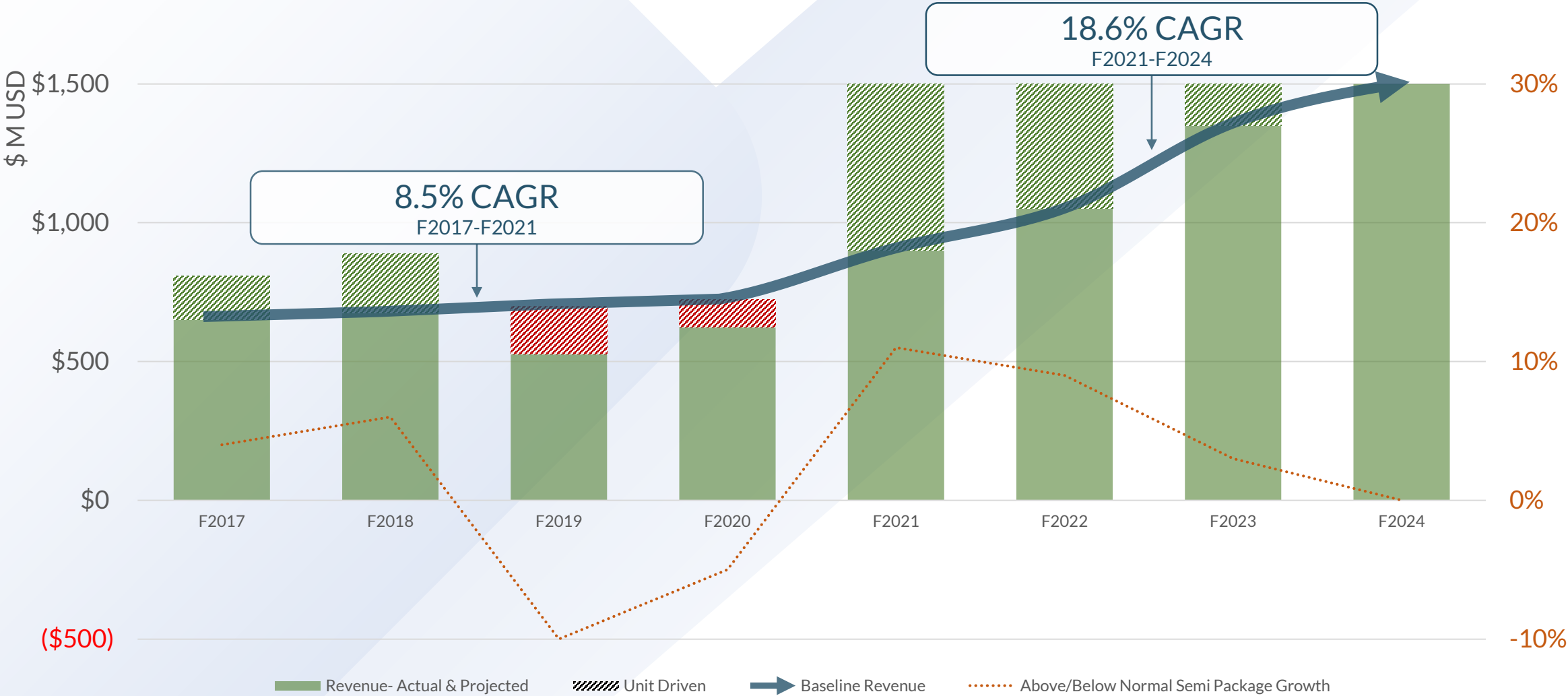
Baseline Revenue Has Expanded

Sustainable & Structured Growth



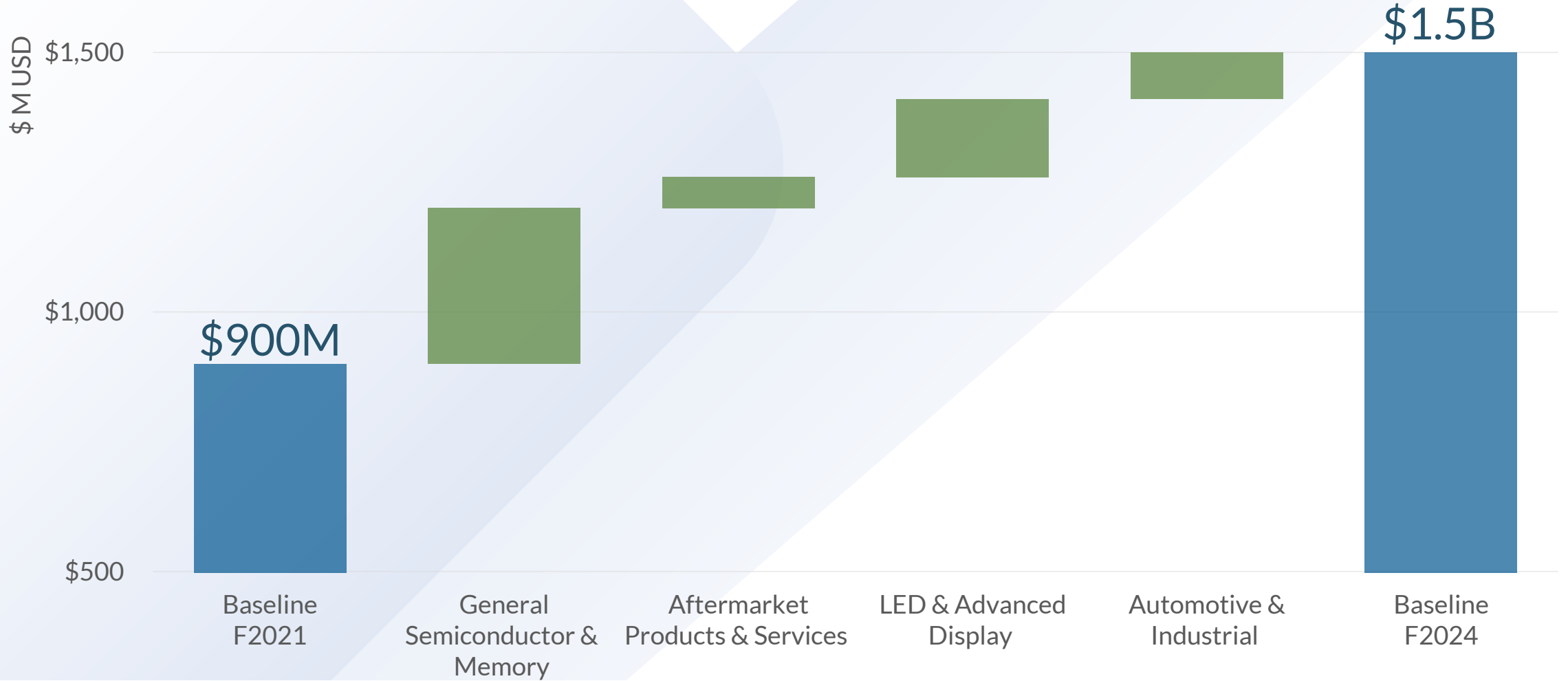
Above Average Semi Growth Expected to Continue

Baseline Revenue Accelerating



Baseline Revenue Acceleration

Structured for Growth



A New Level of Sustainable Earnings

	F2018 Baseline		F2021 Baseline		F2024 Baseline*
Revenue	\$675M	10.1% CAGR	\$900M	18.6% CAGR	\$1,500M
Gross Margin	46.0%		45.7%		51.0%
Operating Margin Non-GAAP	14.2%		18.3%		30.2%
EPS Non-GAAP	\$1.22	21.1% CAGR	\$2.17	41.0% CAGR	\$6.09

Multiple Paths to Extend & Deliver Value

PRINCIPLES

- 1 Invest in attractive opportunities aligned with competencies & market presence
- 2 Maintain balance sheet strength & flexibility
- 3 Utilize both consistent & opportunistic shareholder returns paths

PERFORMANCE - Q1F18 to Q3F21

> \$460M
R&D

> \$25M
M&A

> \$250M
Share Repurchases

> \$95M
Dividends

Overview

Aftermarket Products & Services



MK Han

VP & General Manager
Products & Services

Joined K&S 2017

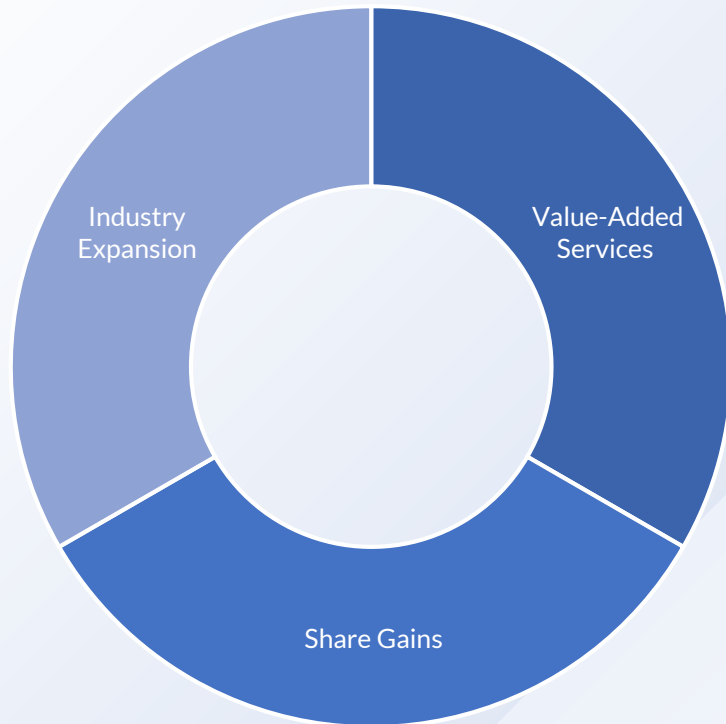
Over 20 years experience with large peers

Leads K&S APS Segment

Accelerating Revenue Growth

+\$60M

Incremental APS Baseline Opportunities



KEY MESSAGES

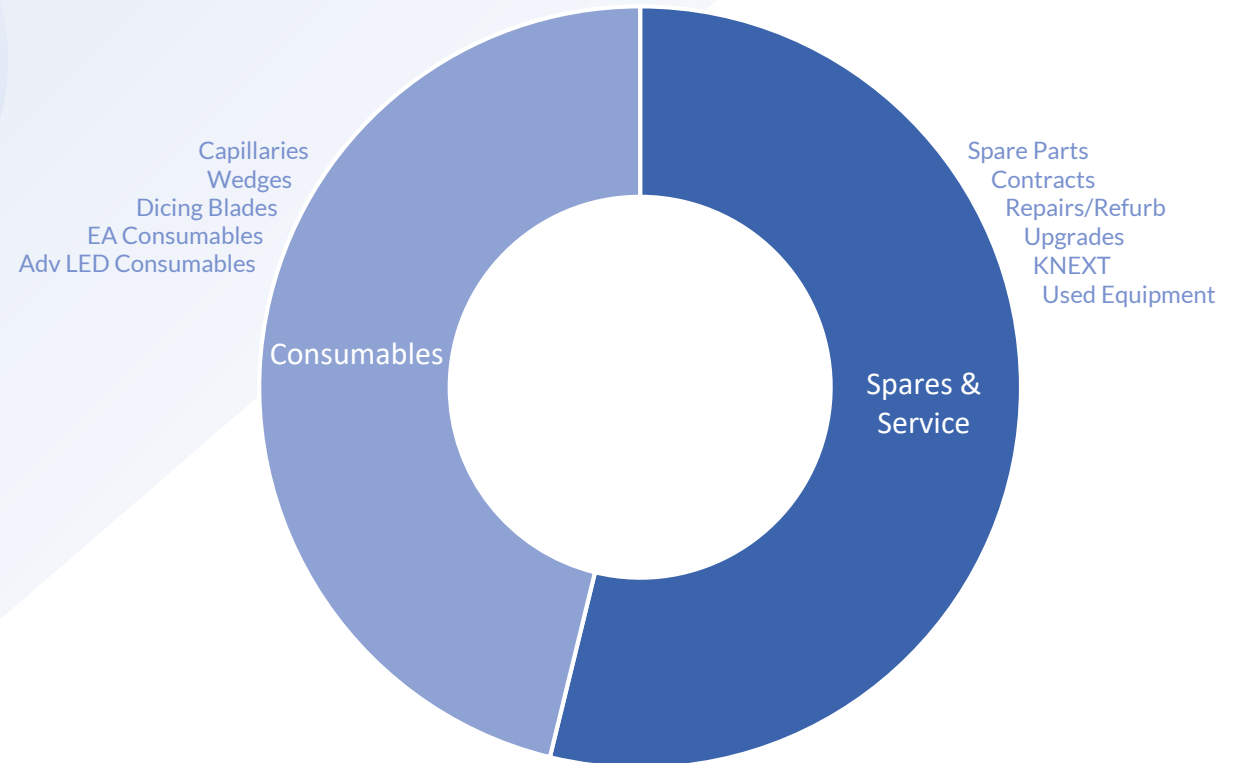
- 1 Close Customer Engagements**
Provides industry feedback for future development
- 2 Tactical Execution**
2017 APS Segmentation expanded market presence
- 3 New Value-Add Opportunities**
New challenges require new solutions

Comprehensive Service & Support Solutions

Helping Customers Win

- 1 Specialized equipment & application knowledge enhances customer engagements
- 2 Unique consumable offerings provides comprehensive aftermarket solutions
- 3 Global presence shortens response time
- 4 Market feedback flows back into new product development

APS Revenue Composition
\$193M TTM Revenue



Consumables Enhance Process Value

Consumables Outlook

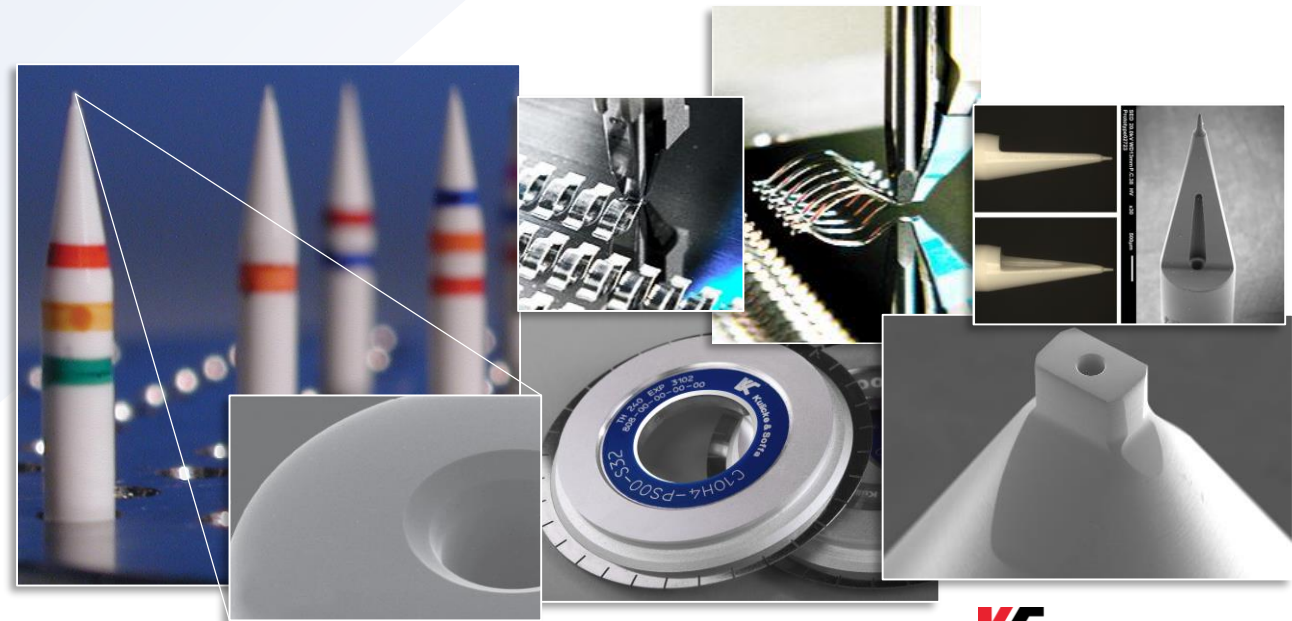
- ❖ Accelerating demand from strong factory utilization
- ❖ Industry expansion grows installed base
- ❖ New markets increase SAM
- ❖ Multi-year growth anticipated

Why We Win

- ❖ Designed & optimized for K&S equipment
- ❖ Comprehensive consumables product portfolio
- ❖ Best-in-class cost-of-ownership & quality
- ❖ Application expertise support

Advanced R&D & HV Manufacturing Competencies

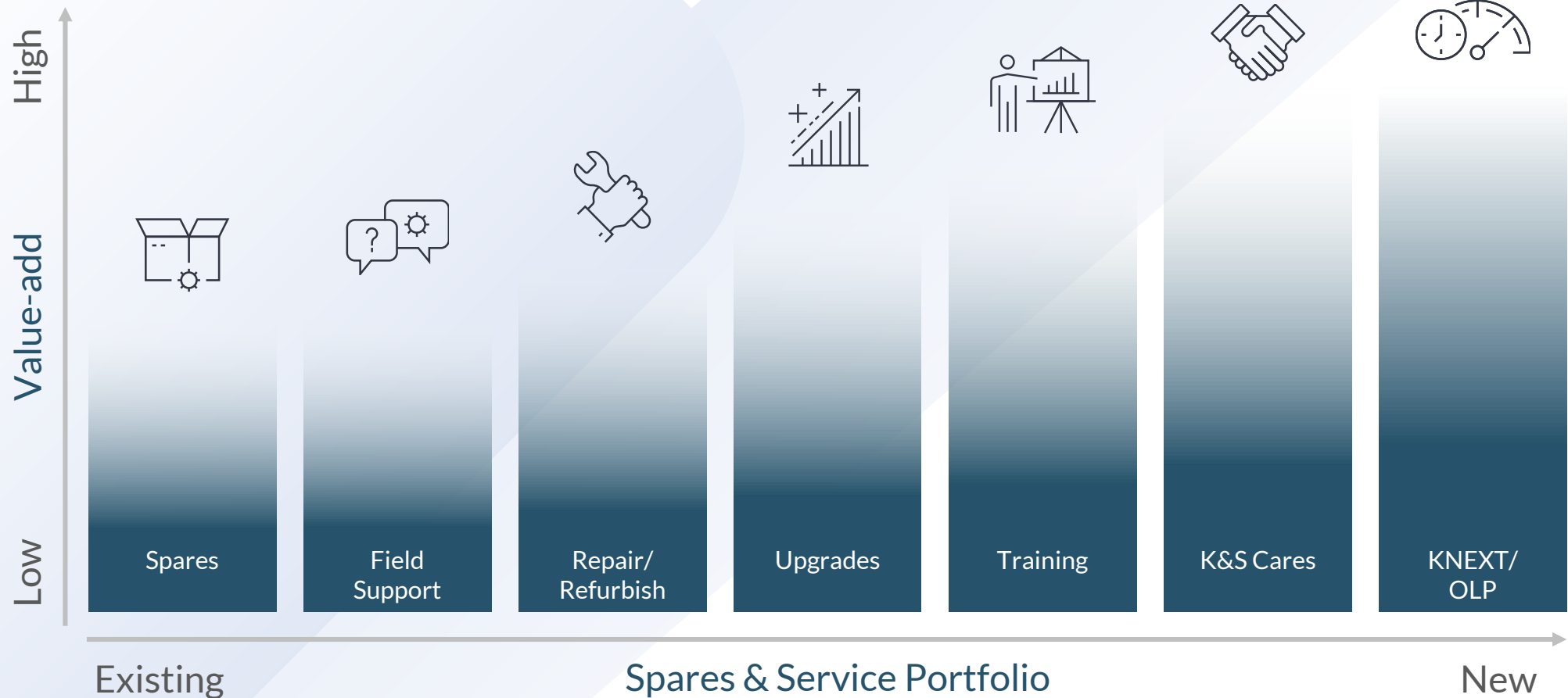
- ❖ Longstanding advanced materials R&D
- ❖ Continued productivity & factory automation enhancements
- ❖ Centralized consumables manufacturing hub



Market Demand for Value Added Solutions



New Industry Challenges Increase Demand



Industry 4.0 Ready

Industry 4.0 enabled by combining M-E-C solution



K&S Smart Equipment Features



APC:

Real-time analysis of process to identify / classify yield issues



Visualization:

Provide views to key data for user analysis & segmentation



Traceability:

Storage & upload of data for defects review



Predictive Maintenance:

Data-based maintenance enables maximum up-time



Big Data:

Analyze historical data sets for correction & control measures

Overview

LED & Advanced Display



Bob Chylak

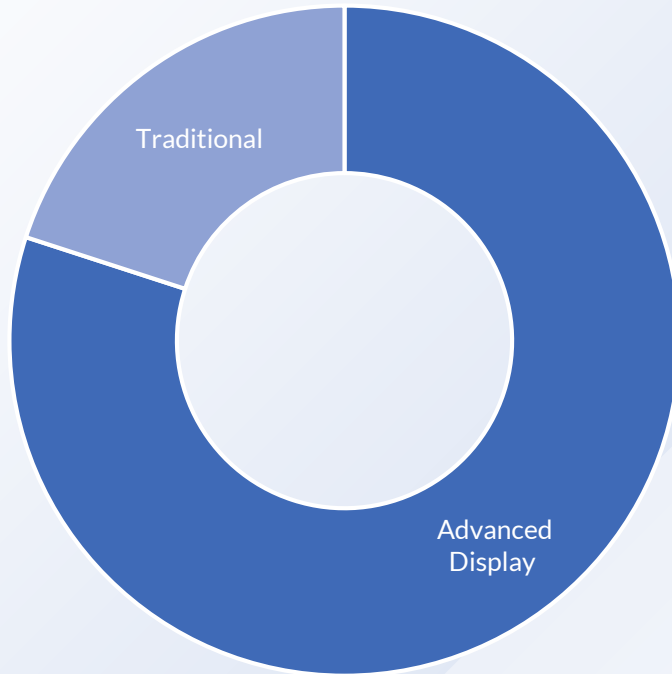
VP & Chief Technology Officer

Decades of Semiconductor assembly leadership
Led global process engineering teams & supported
copper transition, advanced packaging, automotive
& advanced display initiatives

Fundamental Technology Shift

+\$150M

Incremental LED Baseline Opportunities



KEY MESSAGES

- 1 Significant Growth Opportunity**
Dramatic potential in both micro & mini
- 2 Leadership Position**
Expanded & diversified core competencies through partnerships, M&A & organic investments
- 3 Key Customer Engagements**
Close customers engagements better enable industry adoption
- 4 Aggressive Roadmaps**
Several products in development pipeline comprehensively support multiple opportunities

Mini & Micro-LED to be Complimentary & Coexist

- ❖ Intimately involved with both mini & micro LED trends and supply chain
- ❖ Committed to enabling industry transition
- ❖ Mini LED transfer technology extendable to micro LED

Mini LED

- Serves high-volume display market
- Improved power efficiency, brightness & contrast
- Logical evolution in LCD technology
 - 2010 CCFL to LED commercial transition
 - Full transition a few years later
 - LCD industry driving adoption
- Applications ramping now

Micro LED

- R&D intensifying to solve near-term industry challenges to drive adoption
- Commercial displays, mobile & wearables to drive demand
- Competes with other self-emissive technology brightness of 5,000 nits without burn-in
- Micro-LED applications expected to ramp in 2024

A Significant New Opportunity

K&S is enabling advanced display transition at the industry-level

- 1 Current **leading solution & largest market share** for ultra-fast final placement today
- 2 Recent Uniqarta acquisition **expands market presence & adds laser competencies**
- 3 Broadening portfolio of **next-generation mini & micro LED market-ready solutions**
- 4 Mini & micro LED wafer production **expected to grow at a 55% CAGR, C2021 - C2025**

Leading the Mini-LED Transition

- ❖ Proven ability to rapidly intercept technology transitions
- ❖ Concept to commercialization within 2 years



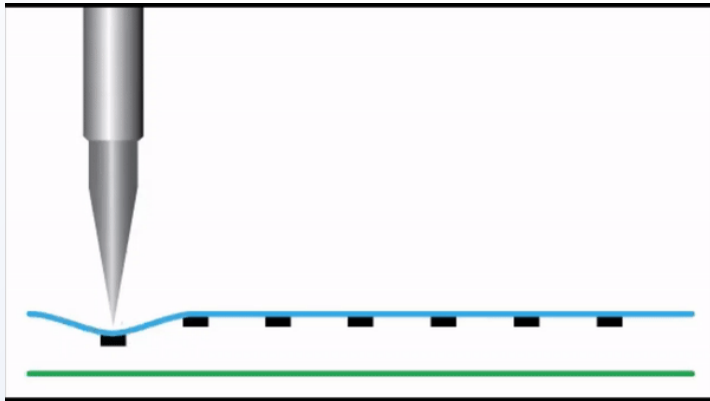
K&S is well positioned to enable widespread adoption of Advanced Display

Leading Current & Next-Generation Placement Technologies



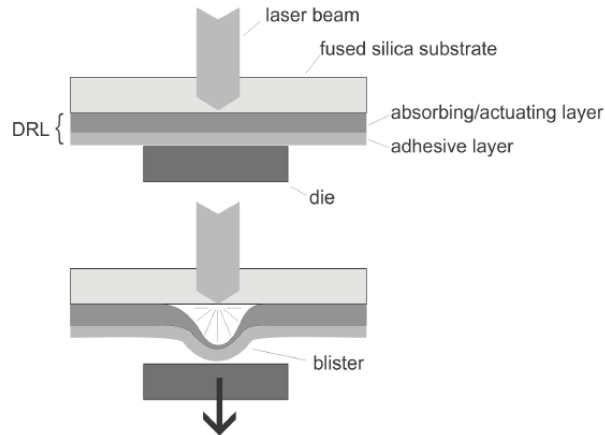
Mechanical Transfer

High-volume production since 2019



Patented Laser Transfer

First tool shipped Sep 2021

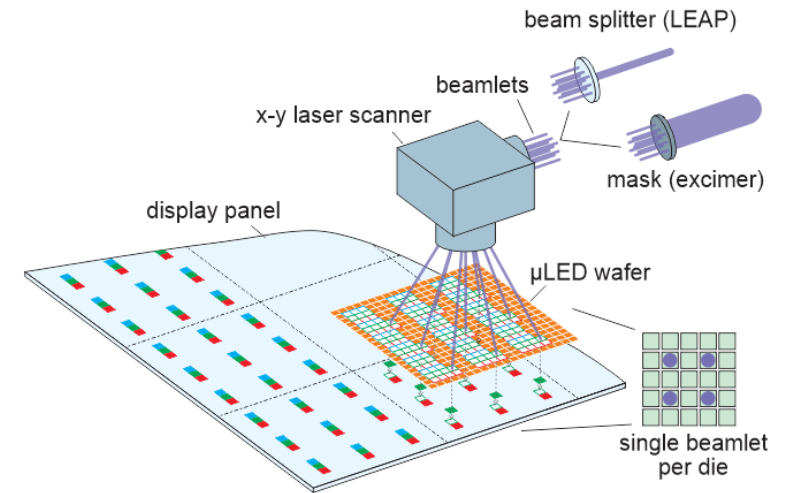


Next-Generation μ LED

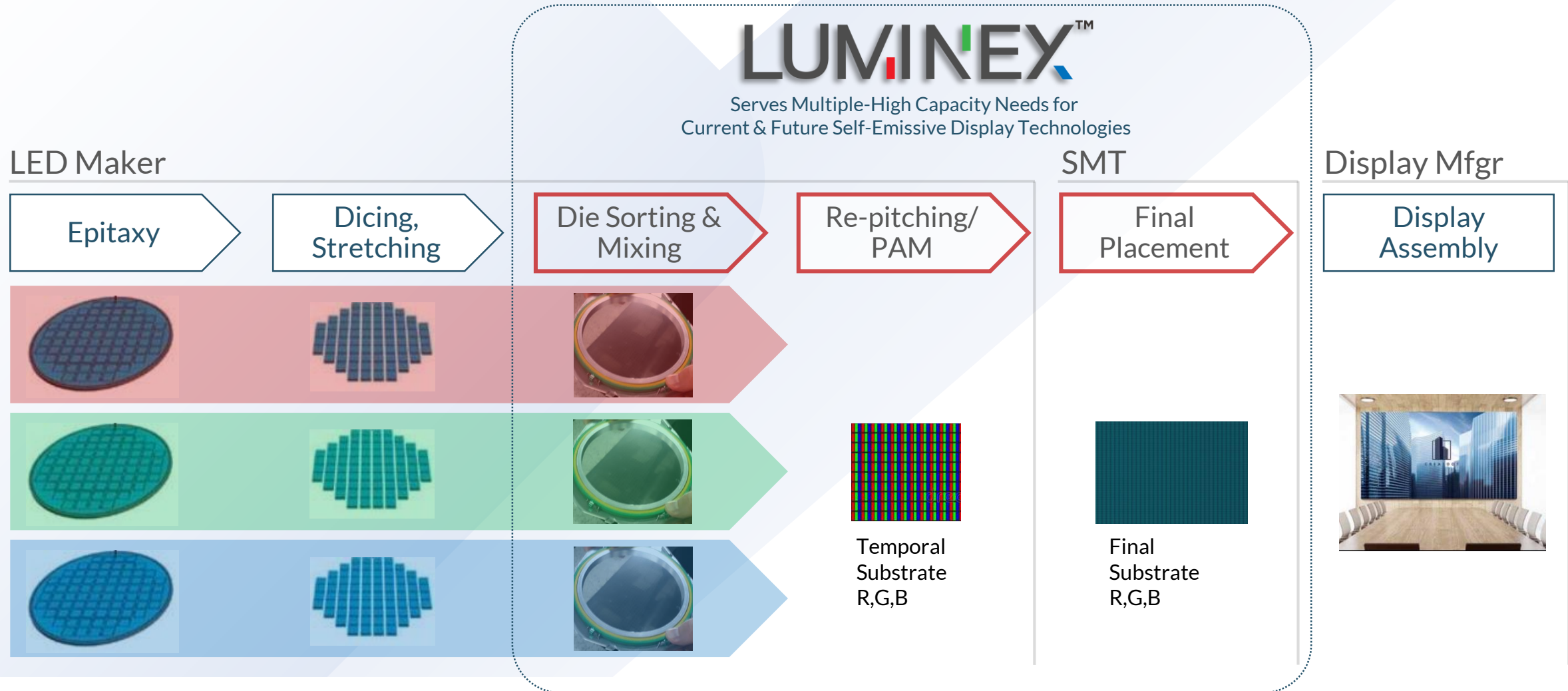


Multi-Die Laser Transfer

Volume production expected by 2023



LUMINEX™ Expands Our Potential

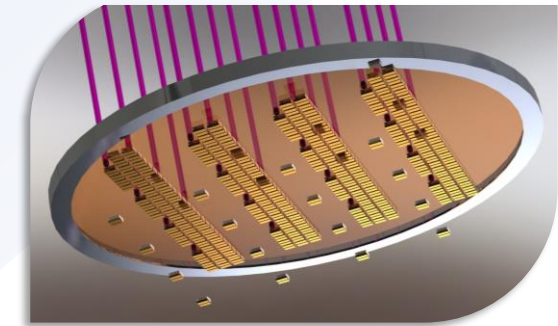


LUMINEX™ Expands Our Potential

Annual Mini & Micro Demand
4" Wafer Equivalents K pcs



Full Suite of Mini & Micro-LED Solutions



Future-Generation LUMINEX

Application	Backlighting	Backlighting & Self Emissive	Self Emissive
End-Market	Emerging Premium Displays	Mass Display Market	Future μ LED Displays
Customer Engagement	Limited	Many	Several
K&S IP	Partial	Full	Full
Accuracy	<20 μ m	<10 μ m	<1 μ m
Throughput	50-75Hz	100-1,000Hz	>10 KHz

Overview

Automotive & Industrials



Chan Pin Chong

**EVP & General Manager
Products & Solutions**

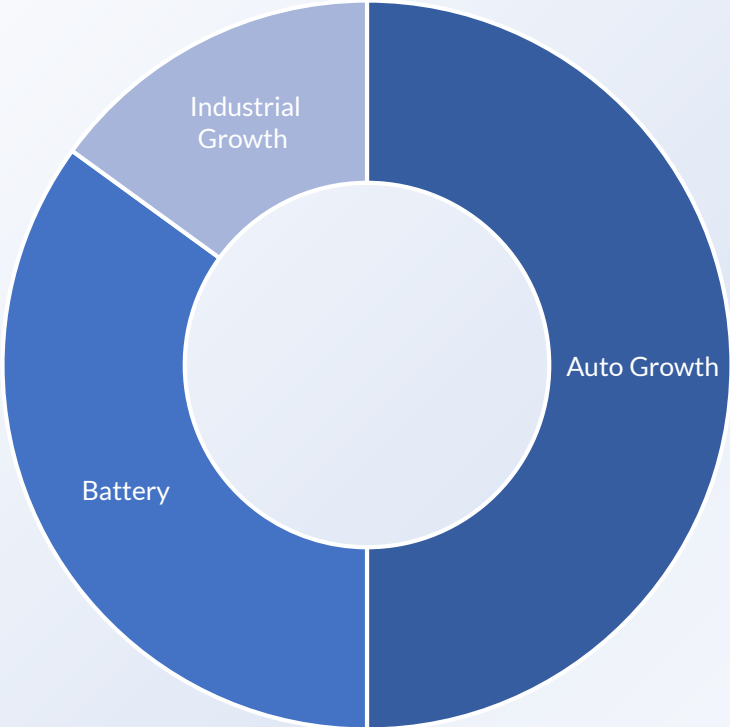
Joined K&S in 2014

Drove business execution within Advanced
Packaging, Automotive & Advanced Display

Fundamental Change Provides Opportunities

+\$90M

Incremental Auto & Industrial
Baseline Opportunities



KEY MESSAGES

- 1 Incumbent Position**
Above average Auto market exposure
- 2 Above Average Growth**
Semiconductor content to expand dramatically
- 3 Customer Engagement**
Close ongoing & new customer engagements
- 4 Ongoing Development**
Expanding served market

Long History of Involvement & Expansion

Expanded SAM organically & inorganically

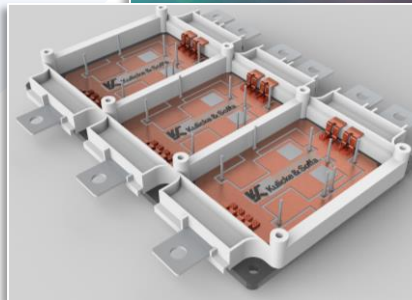
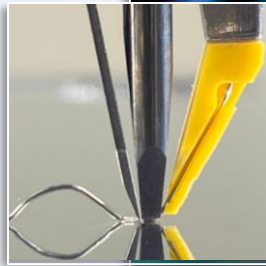
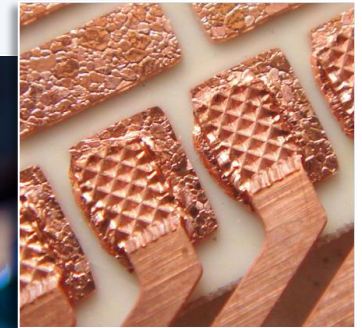
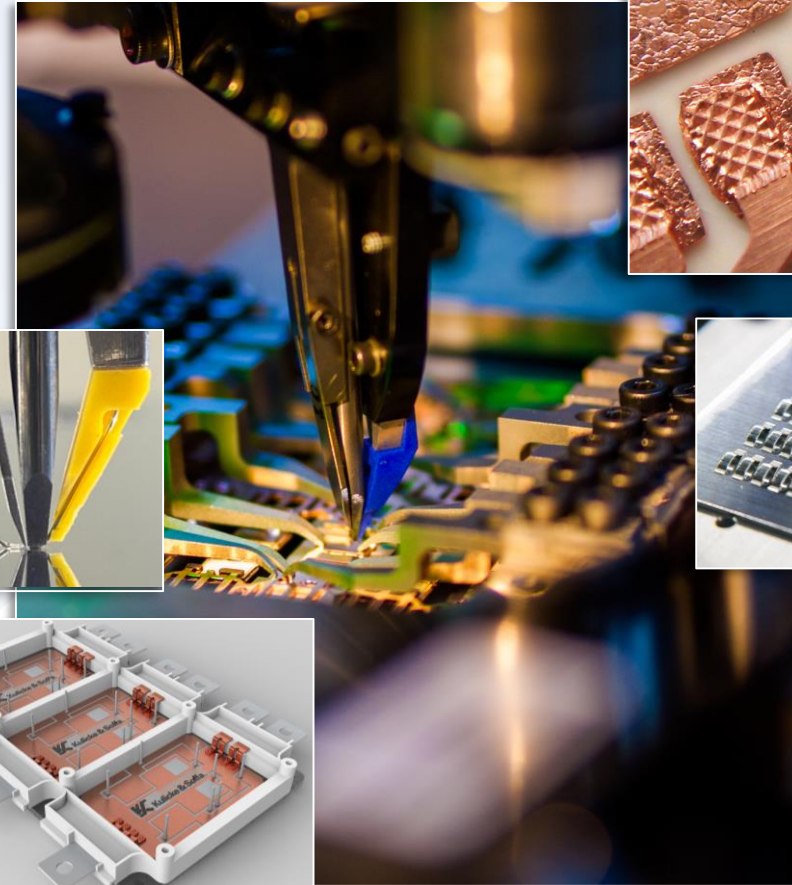
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|---------------------------------------|---|
| 2006: Entered Power IC market | 2017: Released Rapid Pro |
| 2015: Entered EA market | 2021: Expanding Battery Solutions |
| 2016: Entered Battery Assembly market | 2021: Anticipate >\$120M of F2021 Auto/Industrial revenue |

Competencies have changed industries

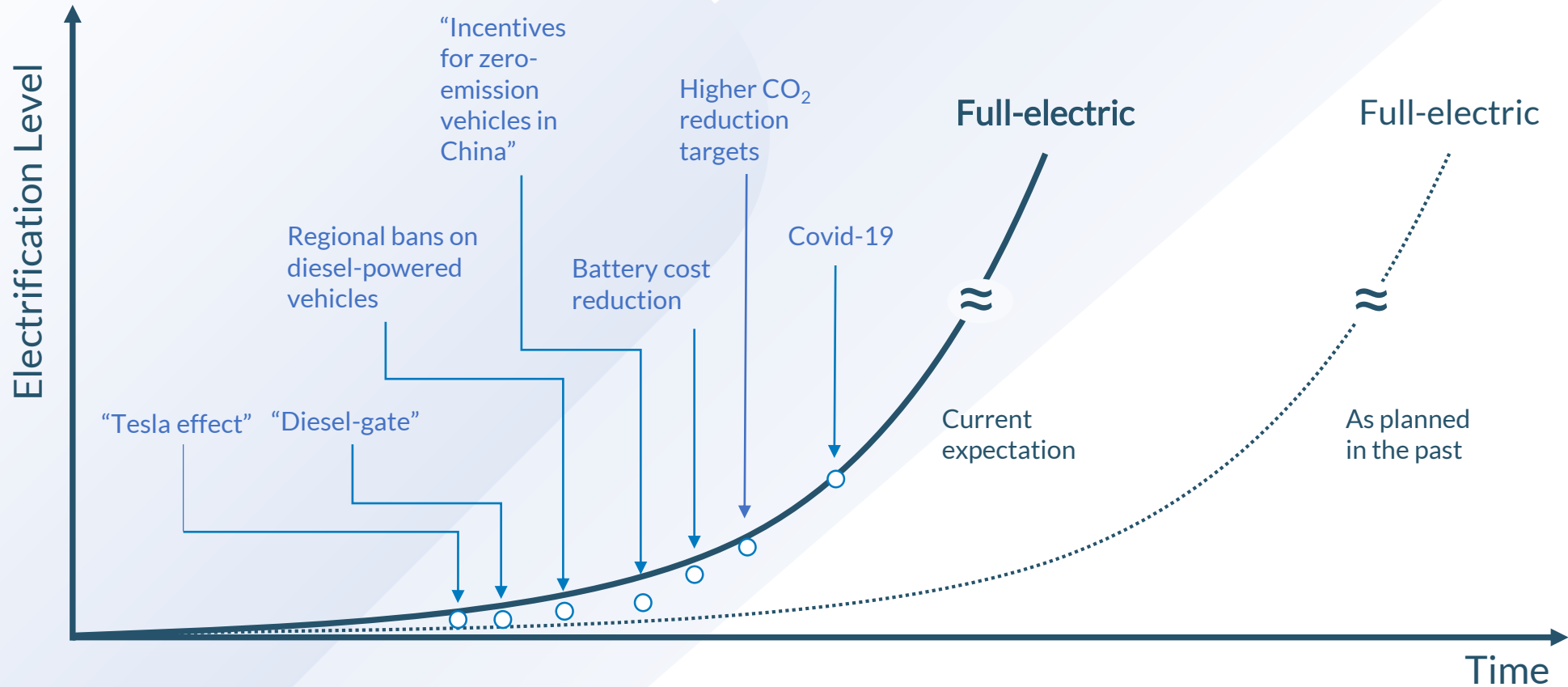
- ❖ Developed ribbon bonding globally used in
 - ❖ Industrial power control & distribution
 - ❖ Hybrid & electric vehicle production
- ❖ Enabled high-volume, high-reliability Electric Vehicle battery assembly

Close customer engagements

- ❖ >150 dedicated Automotive & Industrials customers Power-Discrete Solutions
- ❖ Power-Hybrid solutions
- ❖ Alternative-Energy solutions



Electric Vehicle Transition Has Accelerated



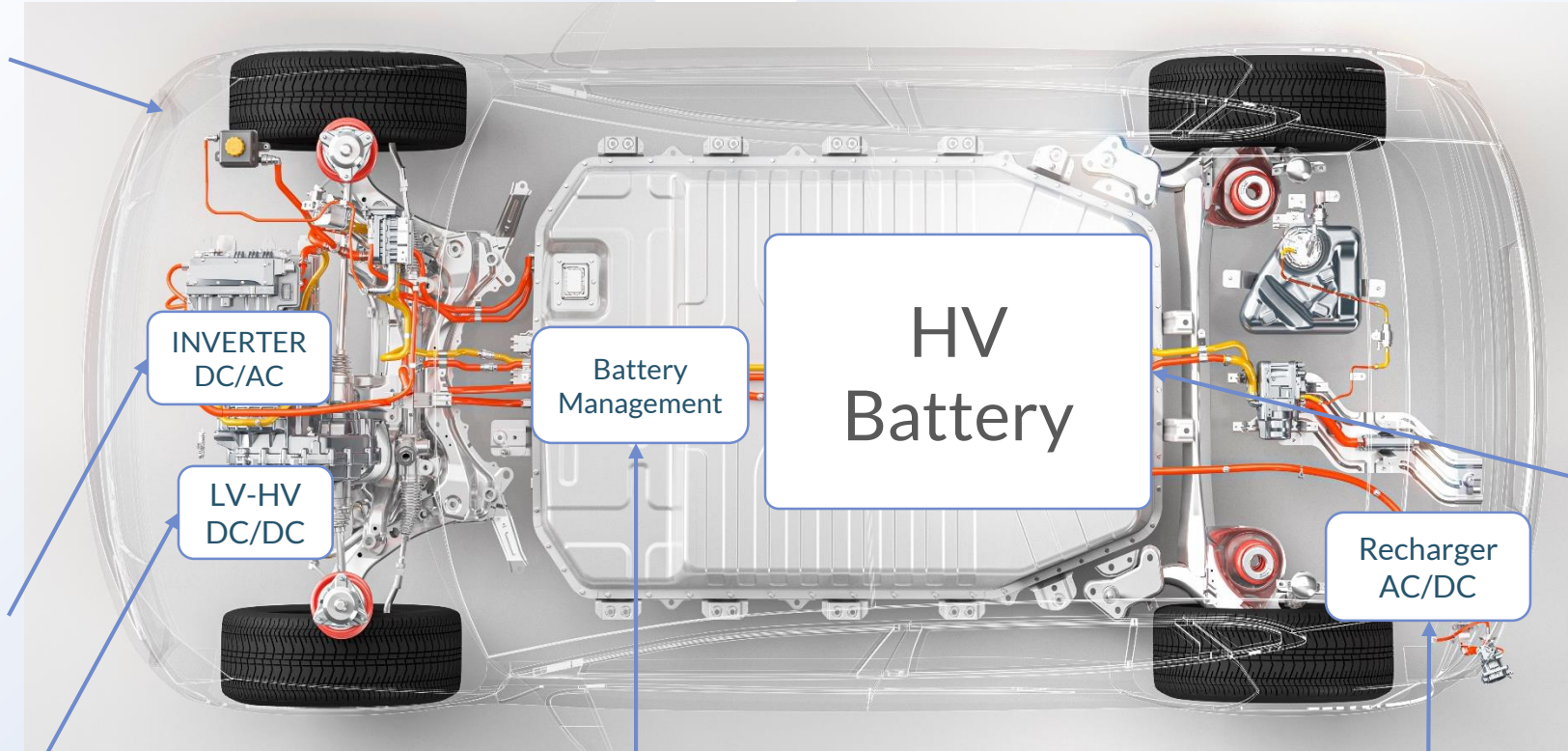
Semi Content / Vehicle to Grow 2X (EV) - 8X (Autonomous)

- Sensors – Pressure sensors, air-bag sensors, parking sensors



- Tricore (32-bit MCU)
- IGBTs
- Diodes (Si, SiC)
- HybridPACK™
- Gate Driver (EICE Driver)

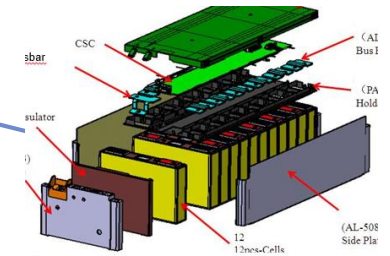
- Tricore (32-bit MCU, Master Control)
- MOSFETs
- Battery management IC (slave)



- Tricore (32-bit MCU, Master Control)
- MOSFETs
- Battery management IC (slave)



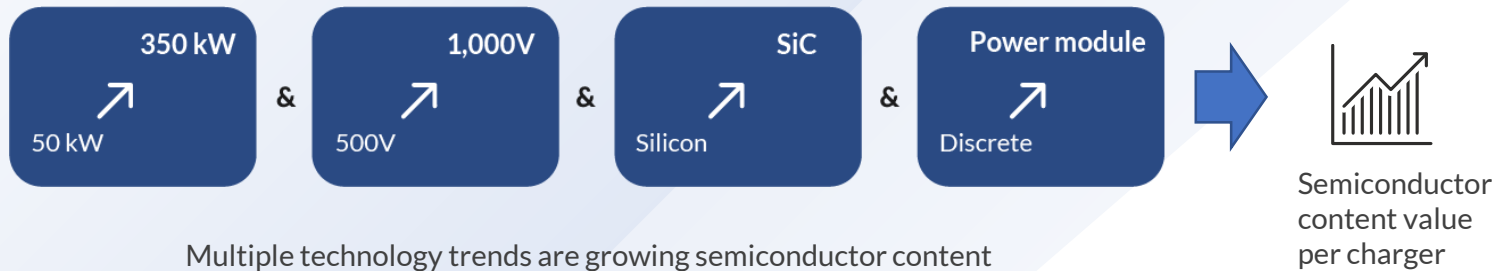
- XC2000 (16-bit MCU)
- Gate Driver (EICE Driver)
- CoolMOST™ (CFDA)
- Diodes (Si, SiC)
- Easy Module™



Beyond the Vehicle

Automotive & Industrial infrastructure provides additional Growth Paths

- ❖ New infrastructure requires new solutions
- ❖ Silicon carbide is enabling high-speed charging rates up to 350KW or 1,000V
 - ❖ Semi content per-charger growing
 - ❖ Transitions from on board to external DC charging stations
 - ❖ Transitions to “IPM” Intelligent Power Modules – additional logic to enhance efficiency (System-in-Package)



Demands more complex & feature rich equipment



Expanding Battery Exposure

Established position supporting Cylindrical battery market

- >500 battery assembly systems in cylindrical production
- Cylindrical to grow at 30% CAGR through F2025
- Cylindrical to represent <20% of EV battery market by F2025

New Laser-based Cylindrical battery system

- Recently qualified with major battery manufacturer in north Asia
- Exposure to large packs utilized in commercial trucking production

New Prismatic battery solution

- New offering for high-potential market
- To represent 10% of fiscal 2022 Auto/Industrial revenue
- Growing opportunity in Eastern Europe



Customer Highlight

Assembly Complexity



Mostafa Aghazadeh

Intel

Corporate VP & Director of
Die Prep & Assembly Technology Development

Over 37 years of experience
Leading transition of assembly complexity

Case for Heterogenous Integration Through Advance Packaging & System-on-Package

K&S Analyst day

Mostafa Aghazadeh

Intel Corporate VP



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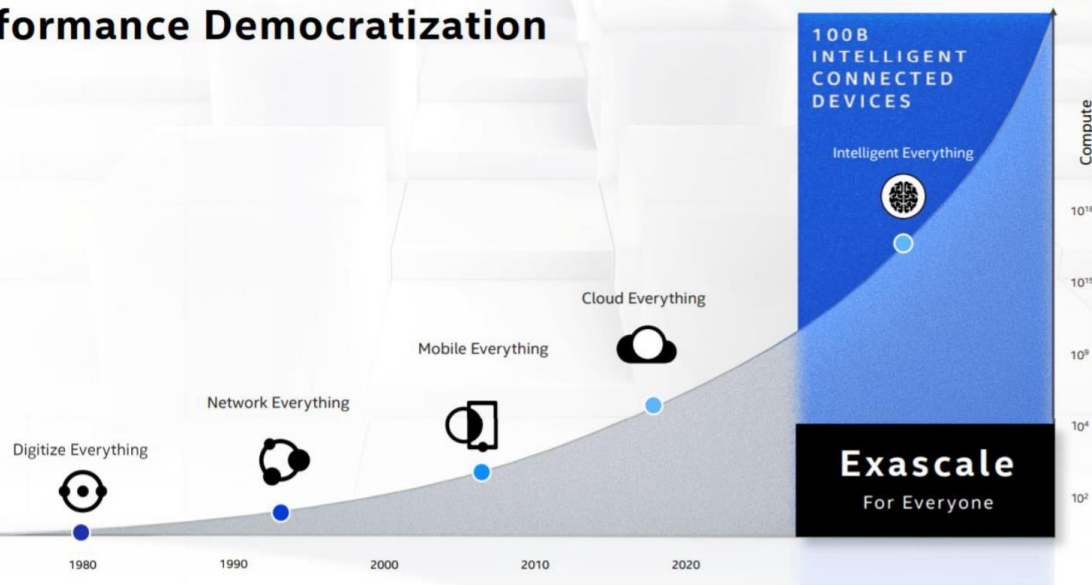
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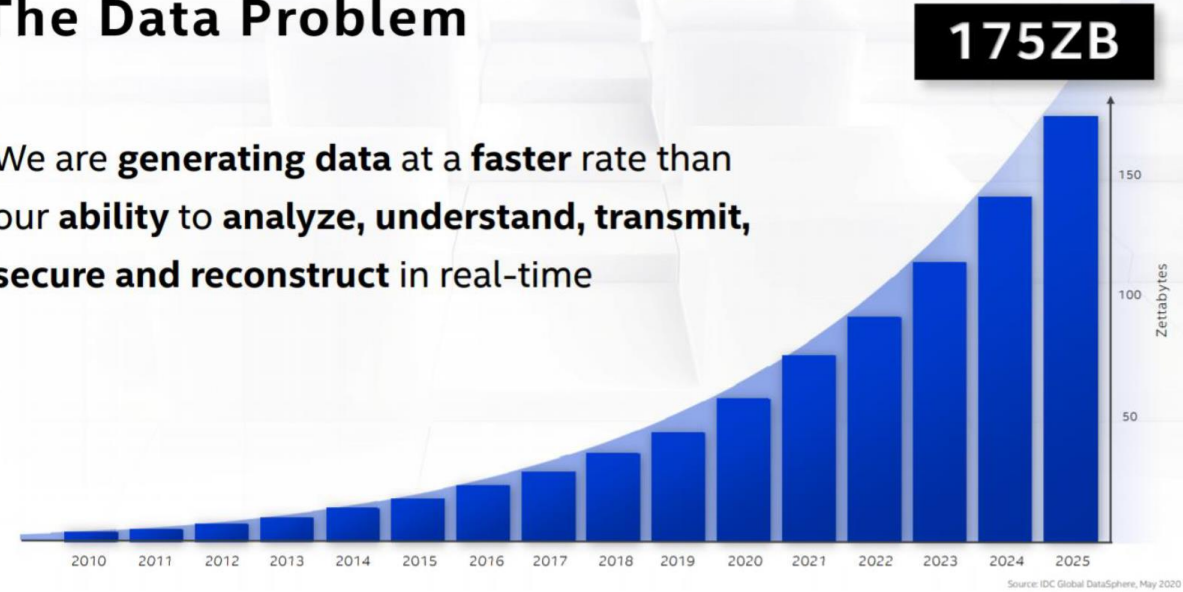
Data Centric Era of Smart & Connected Computing

Performance Democratization



The Data Problem

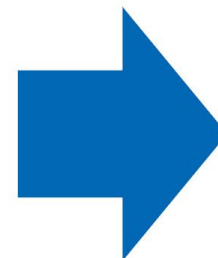
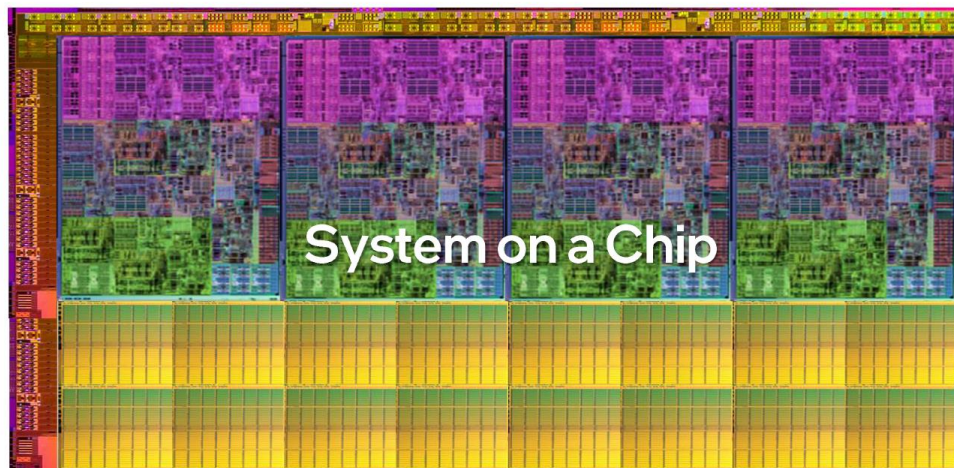
We are **generating data** at a **faster** rate than our **ability to analyze, understand, transmit, secure and reconstruct** in real-time



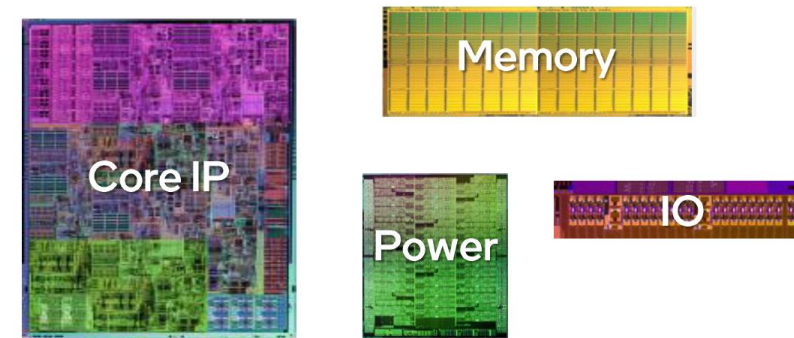
Exponential Growth of Data Requiring Exponential Increase in Compute, Network, and Storage Capabilities

Data Centric Products Driving The Need for Heterogenous Integration and System-on-Package

Monolithic SoC



Tile based SoP

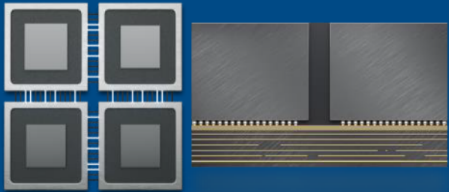


Metric	Monolithic SoC
Reticle Size Limitation	Yes
Si Yield	Lower
IP Optimization	No
Performance	Good
TTM	High
Total Cost	High

Metric	Tile based SoP
Reticle Size Limitation	No
Si Yield	Higher
IP Customization	Yes
Performance	Need to manage D2D IO
TTM	Lower
Total Cost	Lower

Intel's Advanced Packaging Platforms

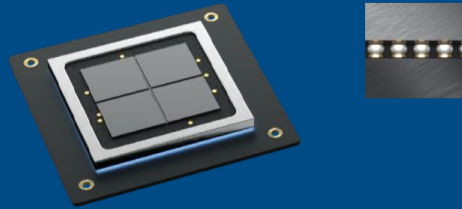
EMIB



Bump Pitch 55u-45u

- Industry's first 2.5D embedded bridge
- In production

Foveros



Bump Pitch 50u-25u

- First-of-its-kind 3D stacking solution
- In production

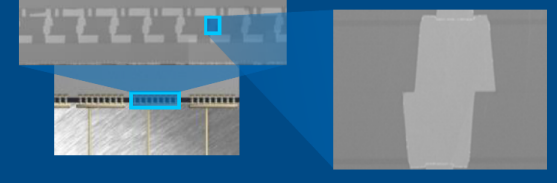
Foveros Omni



Bump Pitch 25u-18u

- 3D stacking technology
- Enables modular designs & performance
- In development

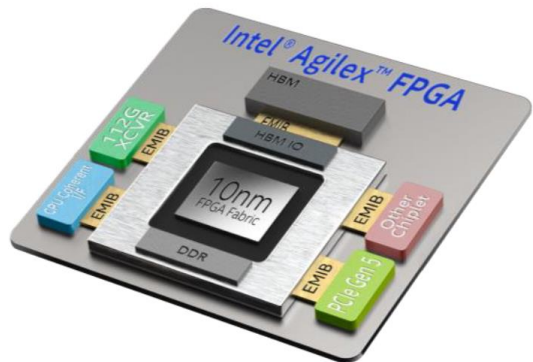
Foveros Direct



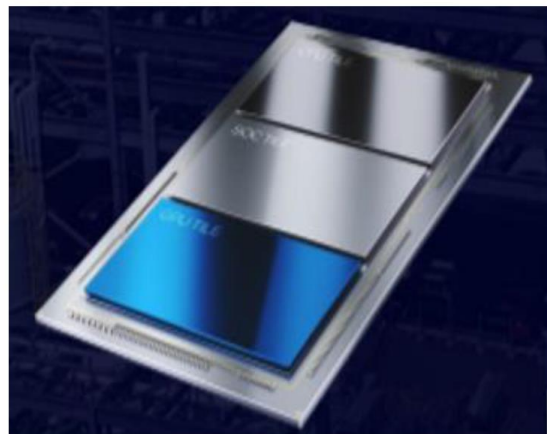
Bump Pitch < 10u

- Direct Cu-to-Cu bonding
- Blurs the boundary between wafer & package
- In development

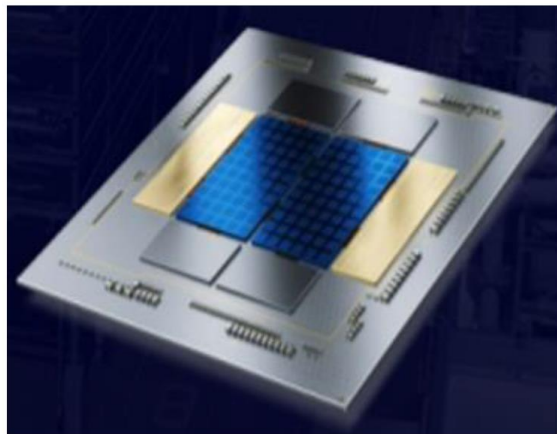
Intel's Heterogenous System-in-Package Examples



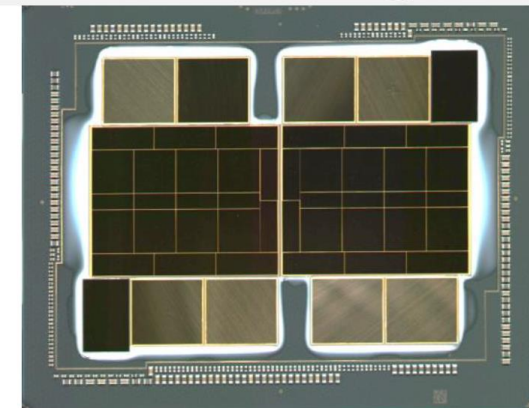
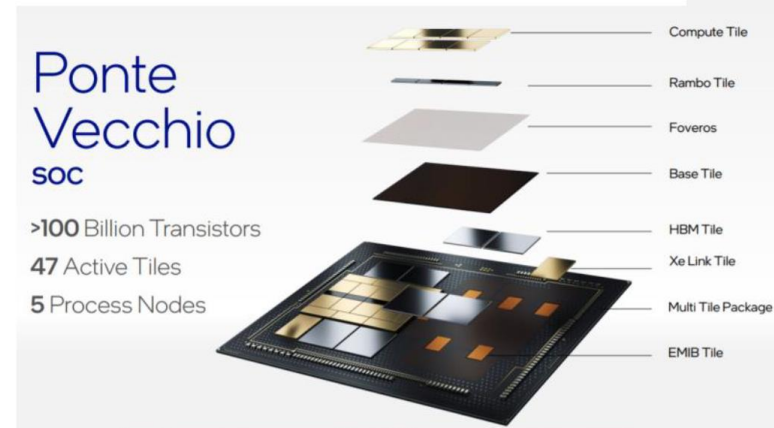
Intel Agilex™ (FPGA)
EMIB Technology



Intel Meteor Lake (Client)
Foveros Technology



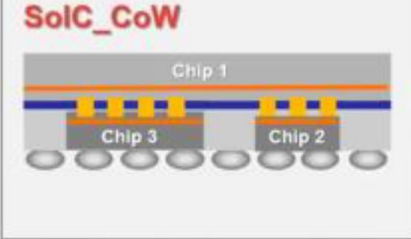
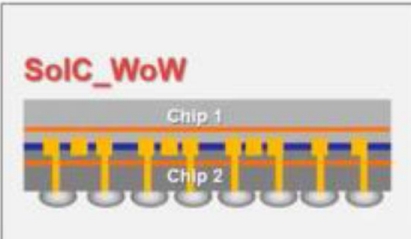
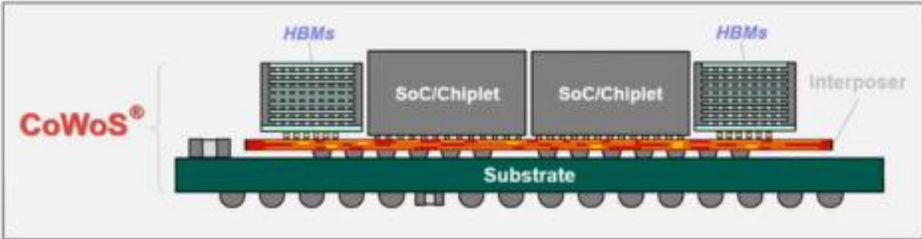
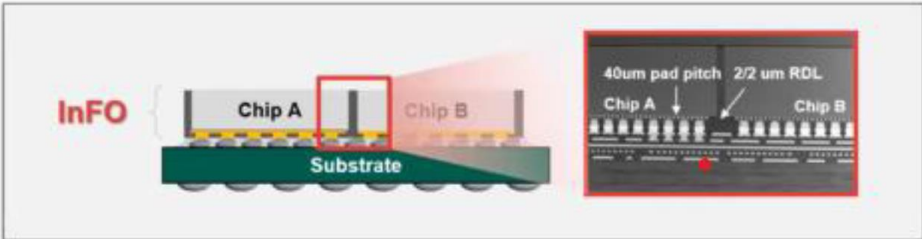
Intel Granite Rapid (Server)
EMIB Technology



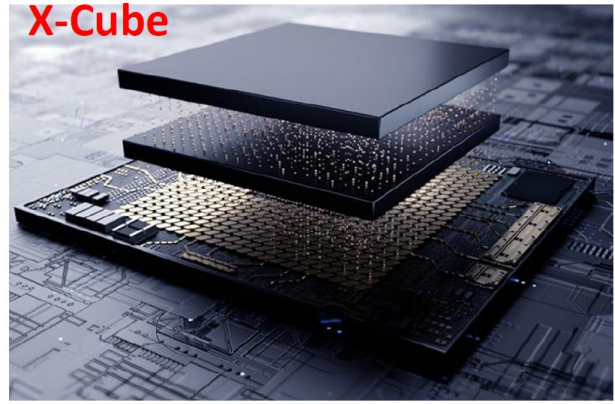
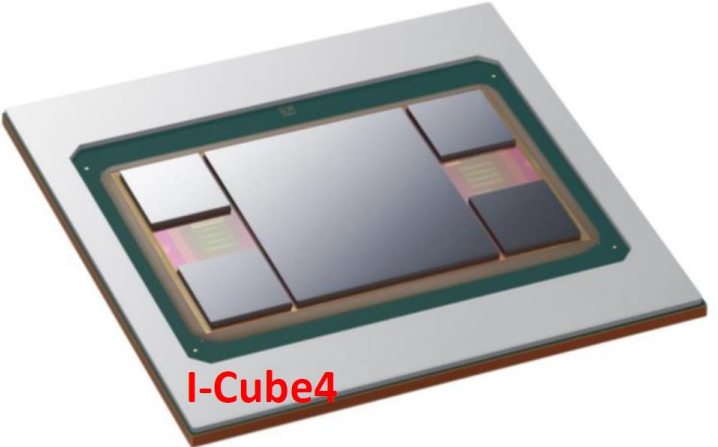
Ponte Vecchio – X^e(HPC)
EMIB+Foveros Technologies

Heterogenous Packaging Technology Enabling Products Across All Market Segments

Industry's Growing Portfolio of Advanced Packaging Solutions



TSMC's 3D Fabric



Samsung's Cube Series

Next Frontier in System-on-Package: Integrating Optical I/O



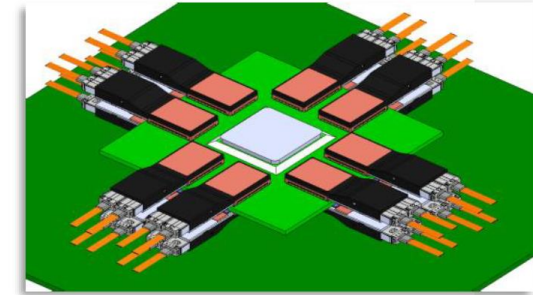
Current **Pluggable** Photonics Modules

Drivers:

- Bandwidth Scaling
- Network Power Efficiency
- I/O reach extension
- System design complexity



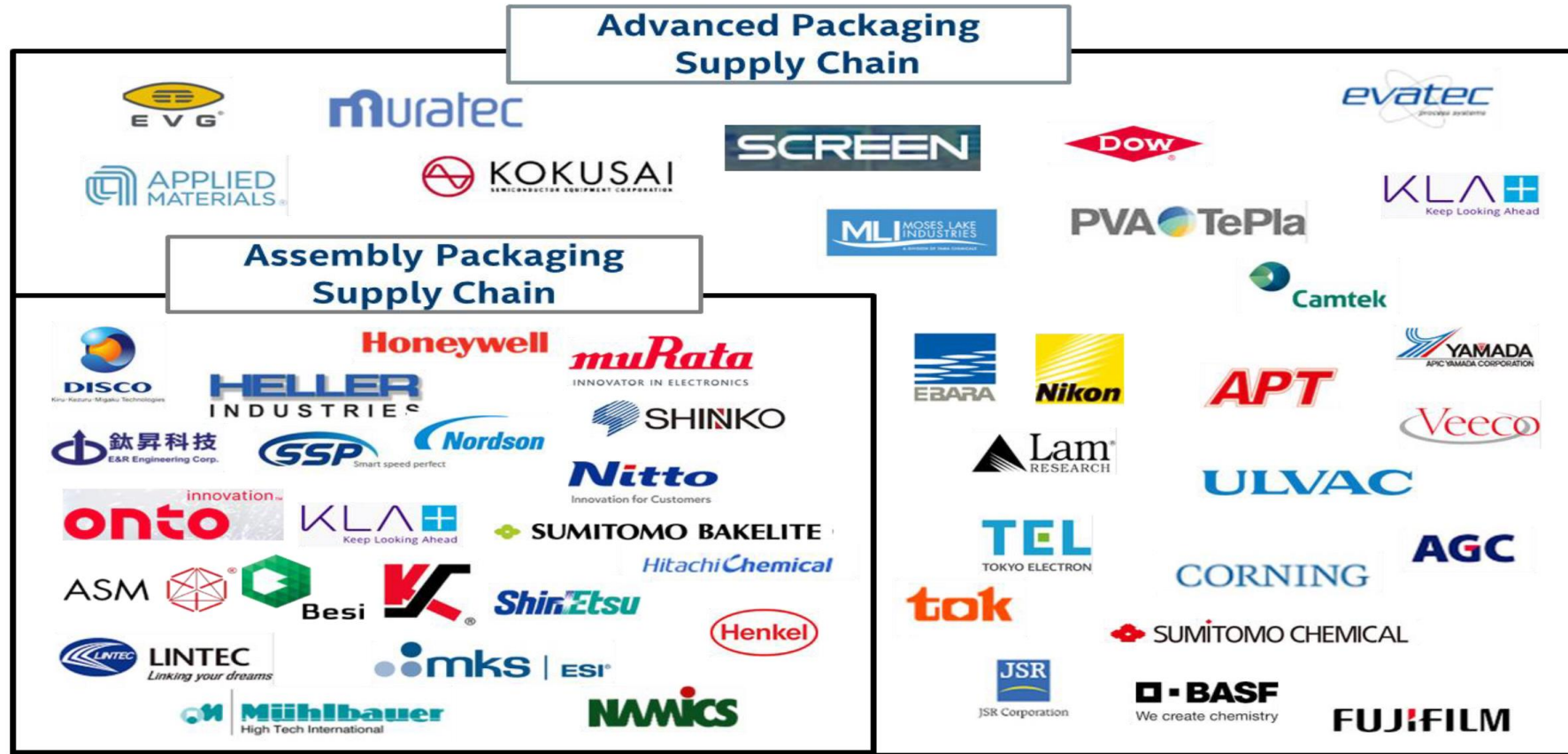
Intel's Demo Co-Packaged Optics Ethernet Switch Vehicle



Future **co-packaged optics**

Requires Innovations in Architecture, Design, Equipment and Materials

Advanced packaging Driving Supply Chain Convergence



Unprecedented opportunity for suppliers to invest, collaborate, innovate, differentiate, and win business

Intel & KnS Collaboration

- Strong strategic partnership
- Leadership commitment & investment
- Deep engineering bench
- Well engineered equipment
- Key enabler of Intel's advanced packaging technology and Manufacturing
- Continue improving along the quality, delivery, technology, affordability and sustainability vectors
- Many opportunities for investment and innovation to shape Intel & Industry's advance package roadmap
 - Cu to Cu Interconnect, Optical Integration, Panel Processing, Intelligent Mfg & Industry 4.0

Overview

General Semiconductor & Memory



Chan Pin Chong

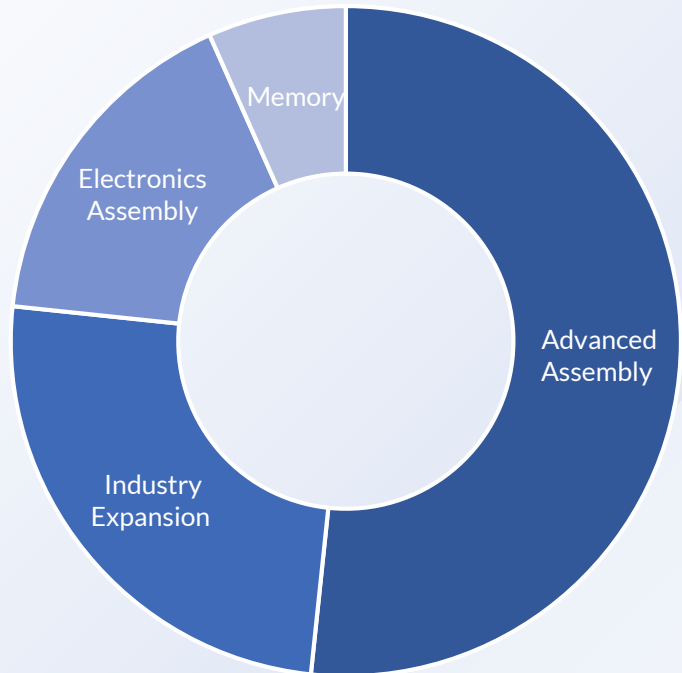
**EVP & General Manager
Products & Solutions**

Joined K&S in 2014
Drove Advanced Packaging, Automotive,
Advanced Display Initiatives

Fundamental Evolution to Core Semi Market

+\$300M

Incremental General Semi. & Memory Baseline Opportunities



KEY MESSAGES

1

New Value Across Assembly Markets

Increased capital intensity of Assembly is mitigating well-known node-shrink challenges

2

Multi-Year Industry Expansion

Expanded & diversified core competencies through organic & inorganic execution

3

Winning New Business

Complexity is enabling share gains in leading-edge Logic assembly, targeted share gains in Wire bond & EA markets

4

Intimate Customer Engagements

Strong track-record in solving customer & industry challenges

Refocus on Core-Competency

Deep, Electronics Assembly (EA) innovation with 2015 Assembleon Acquisition

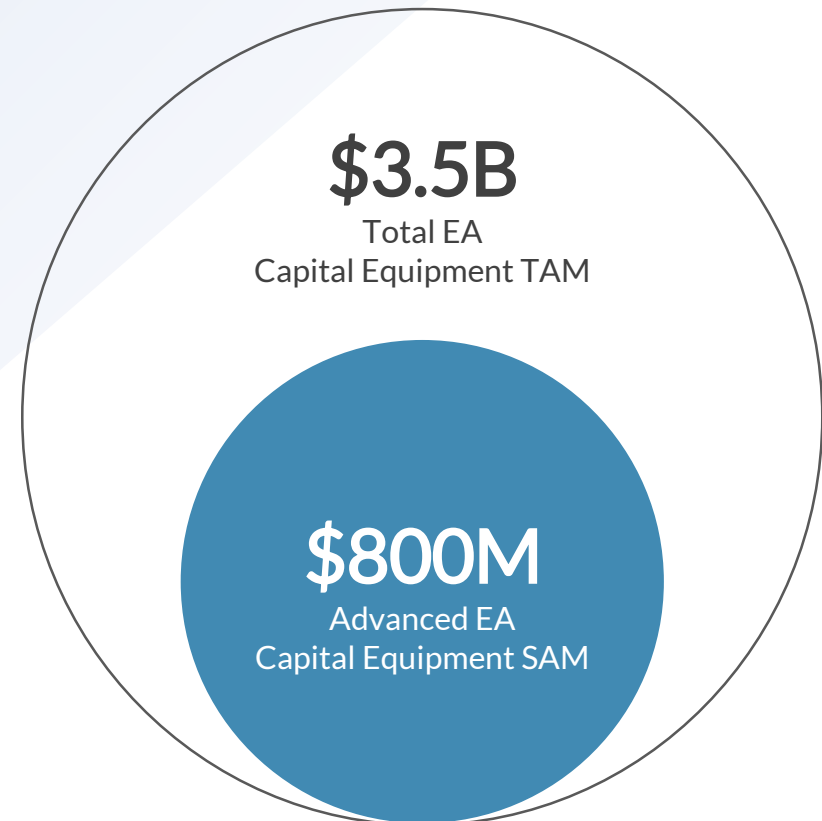
- ❖ PE owned asset acquired for 1.1X revenue in fiscal 2015
- ❖ Integration successfully leveraged competencies to
 - ❖ Enhance Advanced Packaging offerings
 - ❖ Enter mini and micro LED market
- ❖ Development team, competencies and offerings expanded since acquisition

Now refocusing efforts to compete aggressively in the EA market leveraging competencies in

- ❖ High-speed motion control
- ❖ Placement accuracy
- ❖ Throughput efficiency
- ❖ Cost of Ownership

EA Market

A Sizeable Opportunity



Tech Change + New Market Drivers Enhance Outlook

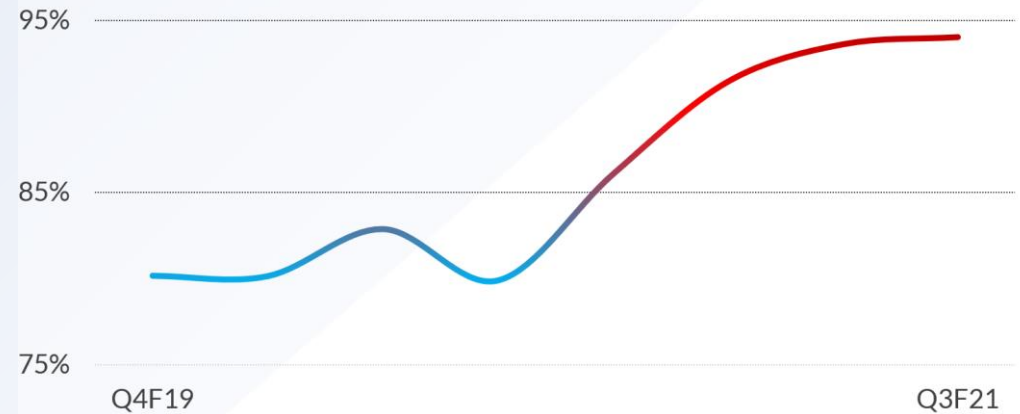
K&S leads High-Volume Semiconductor Assembly

- ❖ >1 Trillion semiconductor packages to be assembled in C2021
 - ❖ 6.5% trailing 10yr CAGR
 - ❖ Above average growth anticipated through F2023
- ❖ 8 of 10 semiconductor packages utilize wire bonding
- ❖ Increased complexity extends leadership

Why we lead

- ❖ R&D commitment
- ❖ Customer engagements
- ❖ Comprehensive tooling solutions
- ❖ Incumbent position
 - ❖ Productivity
 - ❖ Portability
 - ❖ Flexibility

Ball Bonder Field Utilization Rates

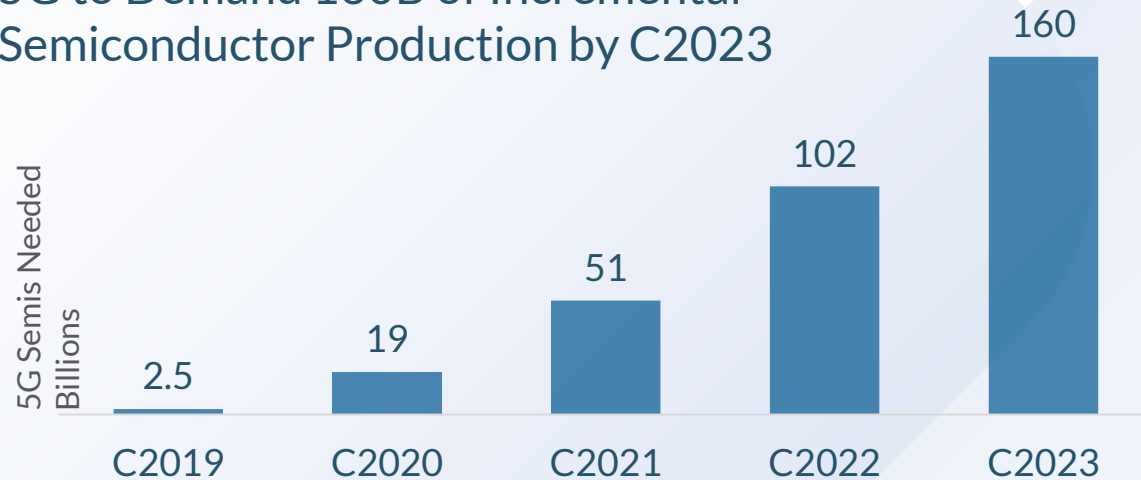


Multi-Year Industry Expansion

- Highly-utilized installed base
- Above average wafer starts
- Additional assembly capacity is essential

5G Driving Unit Growth is Enabling the Data Era

5G to Demand 160B of Incremental Semiconductor Production by C2023



- 5G semiconductors will grow at a **77% CAGR**, '21-'23, and still represent **only 50%** of new smartphones
- This 5G transition **independently** supports semiconductor industry **growth of 4% annually** through C2023

K&S Solutions Directly Support the 5G Transition

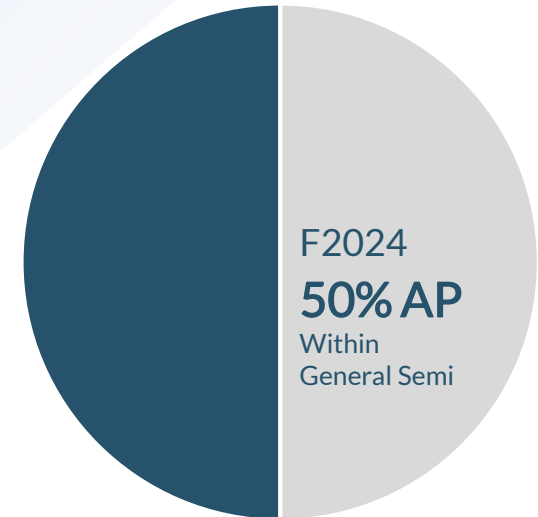
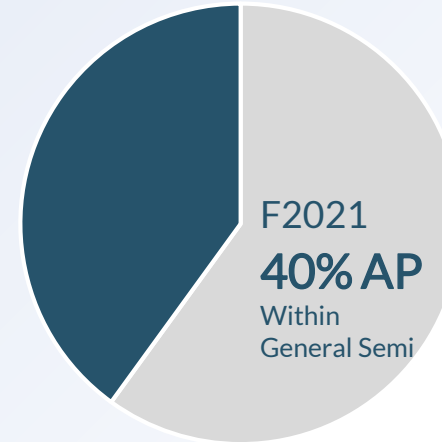
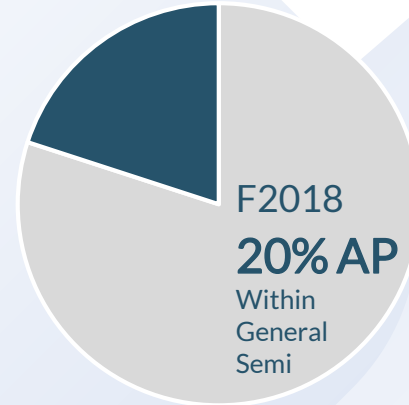
- ❖ Increased silicon content in devices
 - ❖ New modems
 - ❖ Increased RF content
 - ❖ mmWave antenna
- ❖ Increased content for Base Stations
 - ❖ In addition to 4G
 - ❖ Higher-silicon density per coverage area
 - ❖ Higher-bandwidth networking
- ❖ New devices & applications
 - ❖ Richer photos & videos
 - ❖ Data-center networking
 - ❖ New edge devices

General Semi & Memory
Assembly Complexity

Supporting Package-Level Transistor Density

Why Now?

- ❖ Transistor shrink has failed to maintain the pace of cost & performance benefits
- ❖ Consumer devices continue to demand more features & content (5G)
- ❖ Advanced assembly techniques provide market-ready solutions



Complexity Increases Value Proposition

- Extends growth across portfolio
- Reduces reliance on unit-driven capacity additions, enhancing earnings consistency
- Complexity enables higher-margin opportunities

K&S Solutions Support New Levels of Complexity for Both:

- High-volume applications
- Leading-edge applications

General Semi & Memory
Assembly Complexity

High-Volume Semiconductor

Connected Devices | 5G, IoT & RF

Memory | Stacked NAND & HBM

Optical & Sensing | CIS, face recognition, security

System-in-Package
Multi-Chip-Modules
Stacked Die
Wafer-level-packaging



ConnX

PowerFusion

ATPremier

CIS In-Line Solution

iFlex

RAPID

Broad Portfolio Supports Multi-die Package Growth

General Semi & Memory
Assembly Complexity

Packaging for the Leading Edge

Mobile | Application processors, sensing

AI | Edge Devices, machine learning

Datacenter | Heterogeneous, silicon photonics

TCB
Wafer-level Packaging
Hybrid Bonding
High-accuracy FC
Lithography



3



2



1.5



1



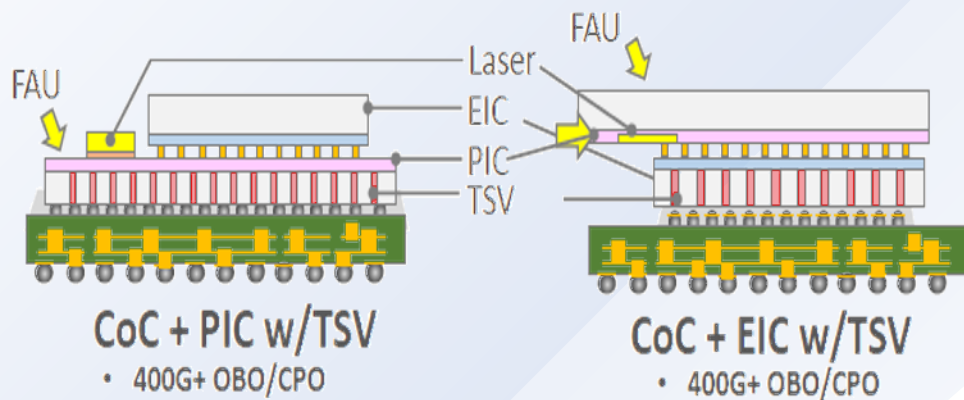
0.2

Placement Accuracy (μm)

Packaging for the Leading Edge

Silicon Photonics

- ❖ High-Bandwidth Transceivers Leading Transition
 - ❖ Co-Packaged Optics require complex assembly
 - ❖ Datacenter & longhaul transceivers largest opportunity
 - ❖ 5G necessitates broader infrastructure change
- ❖ 40% CAGR into C2025



Source: ASE EPIC 2021

Winning at the turn

- Emerging Silicon Photonics win
 - High bandwidth network to network communications
 - Strong outlook with 5G adoption
 - Silicon photonics require TCB placement
- High-volume mobile transitioning from FC to TCB
 - Mobile applications processors transitioning to TCB
 - Next-generation 3D sensing moving to TCB
- Significant potential in heterogeneous logic assembly
 - Emerging Chiplet trends to accelerate in F2023
 - Unique fluxless process is market ready
- Other recent AP wins
 - Cryptocurrency
 - AR display drivers
 - Leading-edge module
 - Embedded logic

Closing Comments

Summary & Recap



Lester Wong

SVP & Chief Financial Officer

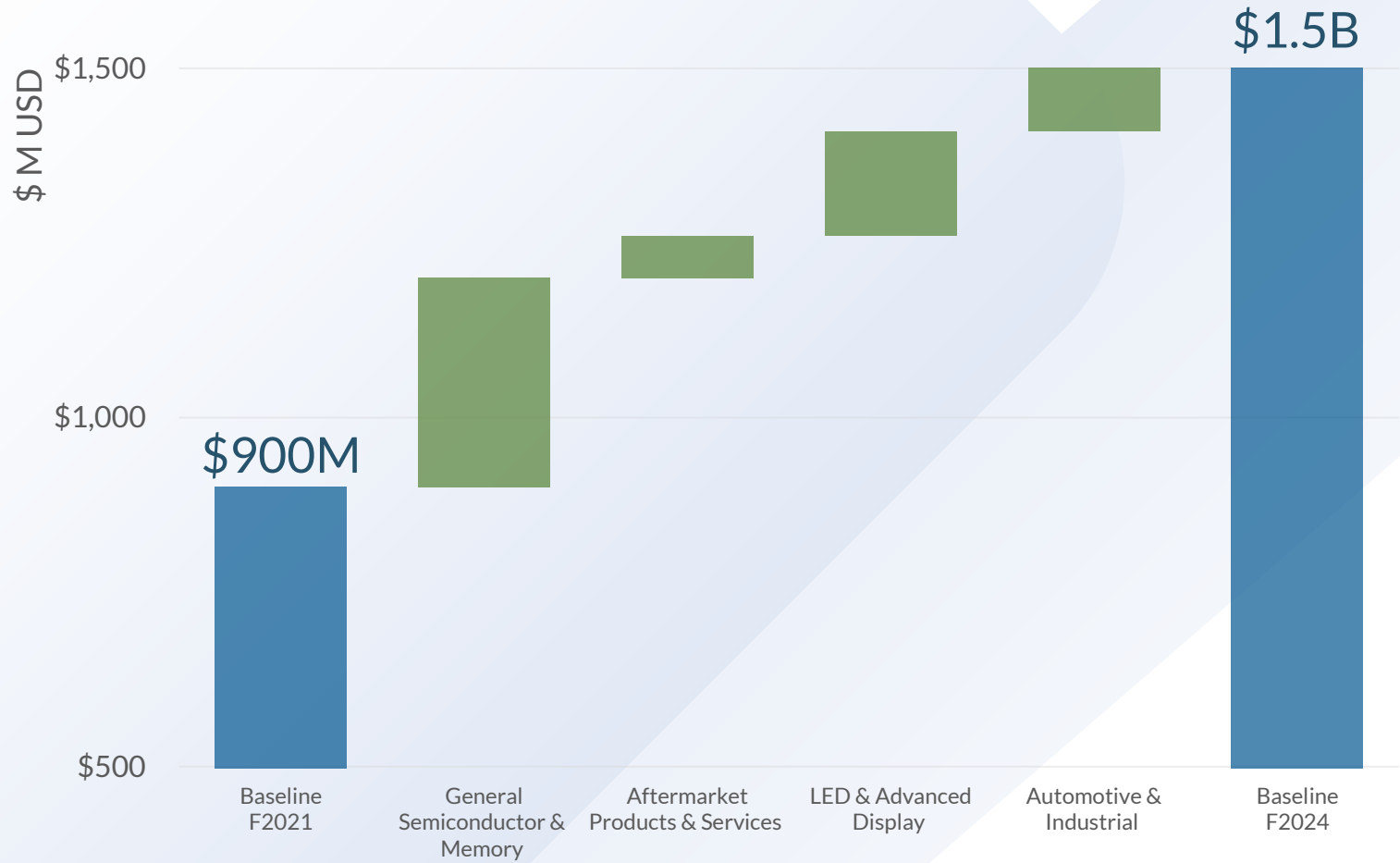
Joined K&S in 2011

Leads IT, Finance & Facilities organizations

Critically involved in M&A, capital allocation

Baseline Revenue Recap

New Sustainable Baseline Targets



\$1.5 Billion

Annual Revenue

>\$6

Non-GAAP EPS

- ❖ Industry strength to drive similar average performance through F2023
- ❖ Track-record of goal attainment
 - ❖ Quarterly guidance
 - ❖ Long-term targets
 - ❖ Throughout challenging global supply chain environment

Potential Drivers for Upside

Industry Level Dynamics

- ❖ Industry expansion, stronger for longer
 - ❖ 5G rollouts & end devices
 - ❖ New “at home” models
 - ❖ Global macro strength
- ❖ Semiconductor nationalism
 - ❖ Creates productivity inefficiencies
 - ❖ Supports more consistent levels of capital equipment spending

K&S Specific Dynamics

- ❖ Assembly complexity
 - ❖ Faster leading-edge transition to heterogeneous
 - ❖ Faster high-volume semiconductor transition to SiP & MCM
 - ❖ Baseline is backwards looking
- ❖ Global adoption of Advanced Display
 - ❖ Broader mini LED adoption
 - ❖ Faster micro LED rollout
- ❖ Balance sheet optionality

KEY MESSAGES

A New Level of Performance

Tactical and strategic execution combined with evolving market trends enhance our business and provide a new set of opportunities

1

Pervasive Solutions

K&S solutions are increasingly essential to the Semiconductor Industry

2

Rooted Competencies

Institutional knowledge, proven innovation, commercialization

3

Technology Transitions

Increases value-add, extends market access, supports profitability enhancements

4

Leadership

Experienced, empowered and accountable team with track record for market expansion and execution

5

Sustainable Profitability

New level of sustainable revenue supports higher level of profitability

Q&A

For additional information

 investor.kns.com

 investor@kns.com