



SHOULDER
INNOVATIONS

Investor Presentation

December 2025



Forward Looking Statement



Certain statements in this presentation and the accompanying oral commentary are forward-looking statements and relate to or are based on estimates regarding market and industry data that Shoulder Innovations, Inc. (the "Company") prepared based on management's knowledge and estimates, together with information obtained from publicly available resources, other third-party sources, the Company's customers and other contacts in the markets in which the Company operates. Management's estimates are derived in part from third party sources and data from the Company's internal research. Although the Company believes that these third-party sources are reliable, it does not guarantee the accuracy or completeness of this information, and the Company has not verified this information. In presenting market and industry data in this presentation, management has made certain assumptions that it believes to be reasonable based on the data available to the Company and other sources, as well as on management's knowledge of, and experience to date in, the industry and markets in which the Company operates. These statements relate to future events or the future performance of the Company, as well as its business strategy and plans and objectives for future operations, and are subject to a number of known and unknown risks, uncertainties and other factors that may cause the actual results, levels of activity, performance or achievements of the Company or its industry to be materially different from those expressed or implied by any forward-looking statements. In some cases, forward-looking statements can be identified by words such as "anticipate," "believe," "continue," "estimate," "expect," "intend," "may," "will," "could," "predict" and similar expressions or terminology. Important factors that could cause actual results, developments and business decisions to differ materially from forward-looking statements are described in the sections titled "Risk Factors" in our filings with the Securities and Exchange Commission (the "SEC"), and include, but are not limited to, the following substantial known and unknown risks and uncertainties inherent in our business related to: any expectations regarding the Company's commercial and/or research and development initiatives; any projections of financial information, market opportunities or profitability; any statements about historical results that may suggest trends for the Company's business; any statements of the plans, strategies, and objectives of management for future operations; any statements of expectation or belief regarding future events, potential markets or market size, or technology developments; and the other important factors described in our Quarterly Report on Form 10-Q for three months ended September 30, 2025 and other SEC filings. The Company has based these forward-looking statements largely on its current expectations, assumptions, estimates and projections. While the Company believes that these expectations, assumptions, estimates and projections are reasonable, such forward-looking statements are only predictions and involve known and unknown risk and uncertainties, many of which are beyond the Company's control. These and other important factors may cause actual results, performance or achievements to differ materially from those expressed or implied by these forward-looking statements. The forward-looking statements in this presentation are made only as of the date hereof. Except to the extent required by law, the Company assumes no obligation and does not intend to update any of these forward-looking statements after the date of this presentation or to conform these statements to actual results or revised expectations.

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Market data and industry information used throughout this presentation are based on management's knowledge of the industry and the good faith estimates of management. Certain information contained in this presentation and statements made orally during this presentation relate to or are based on studies, publications, surveys and other data obtained from third-party sources and our own internal estimates and research. While we believe these third-party studies, publications, surveys and other data to be reliable as of the date of this presentation, it has not independently verified, and makes no representations as to the adequacy, fairness, accuracy or completeness of, any information obtained from third-party sources. In addition, no independent source has evaluated the reasonableness or accuracy of our internal estimates or research and no reliance should be made on any information or statements made in this presentation relating to or based on such internal estimates and research.

Leader in Shoulder Surgical Care

- 1  Transforming the \$2.8B global annual shoulder arthroplasty market¹
- 2  Purpose-built, disruptive ecosystem to address existing limitations within shoulder arthroplasty
- 3  Pioneer of the InSet Glenoid, a biomechanically designed implant to specifically address glenoid loosening, a central complication with shoulder arthroplasty
- 4  A leading 3D AI pre-operative surgical planning technology
- 5  Capital efficient instrument system, supporting growth in the ASC & outpatient setting

~\$42M
3Q'25 Trailing
Twelve Months Net
Revenue



~55%
'23-3Q'25
Revenue CAGR

76%
Gross Margin
(YTD 2025)



Experienced Leadership Team Redefining Shoulder Surgical Care



Rob Ball
CEO



Jeff Points
CFO



Matt Ahearn
COO



Dave Blue
Chief Customer Experience Officer



Jon Osborne
VP, Commercial Development



Proven History of Successful Shoulder Innovation and Commercialization



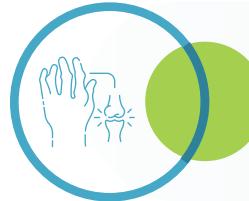
Shoulder Pain is Highly Prevalent with Quality-of-Life-Reducing Impacts



Key Drivers of Shoulder Pain



Osteoarthritis



Rheumatoid Arthritis



Rotator Cuff Tears



Shoulder Fractures

Shoulder Pain is Widespread

1 in 5 People

over 65 suffer from
shoulder pain in the U.S.

38% of Patients¹

with shoulder pain report
inability to perform activities
of daily life

8+ Million

annual physician visits
related to shoulder
conditions in the U.S.

Three Times²

as many total knee
replacements annually
compared to shoulder
arthroplasties in the U.S.

Despite This Prevalence, There Has Been a Historical Underutilization of Surgical Treatments for Shoulder Care

1. Estimated according to a study published in the *Journal of Shoulder and Elbow Surgery*

2. Based on 790,000 total knee replacements done annually in U.S. vs. ~250,000 shoulder arthroplasty procedures (<https://rheumatology.org/patients/joint-replacement-surgery>)

Shoulder Arthroplasty: Initial Focus Within Shoulder Surgical Care Market

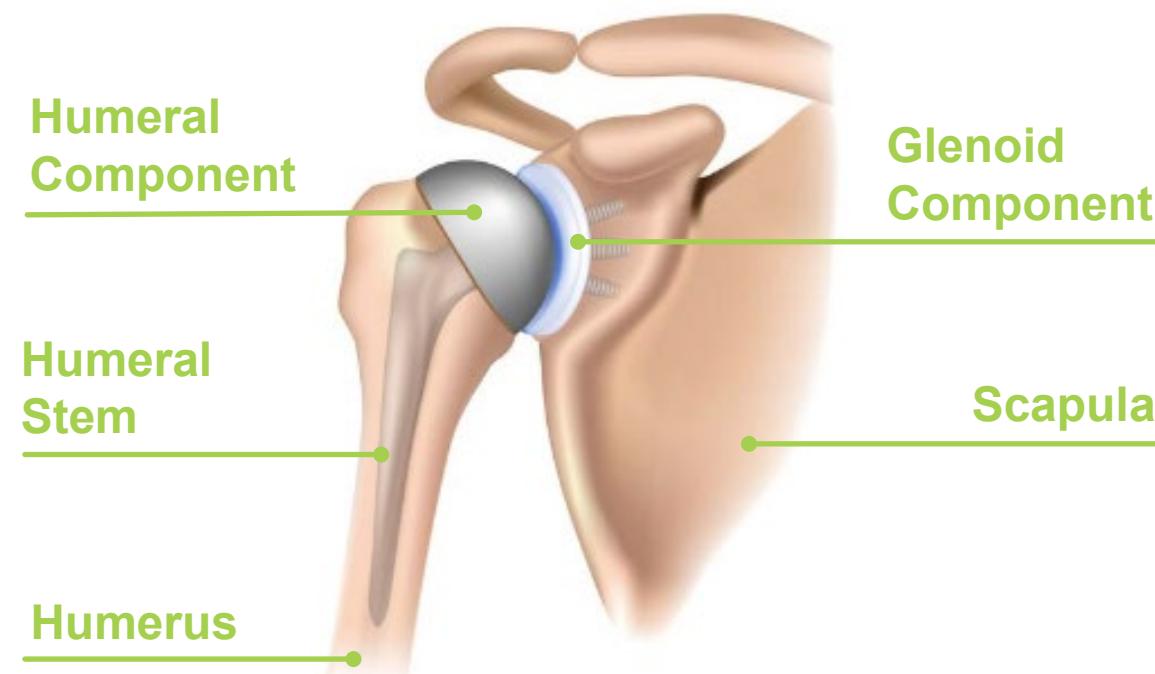


Established Surgical Procedures for Reducing Joint Pain and Restoring Shoulder Motion

Osteoarthritis

Anatomic Total Shoulder Arthroplasty (aTSA)

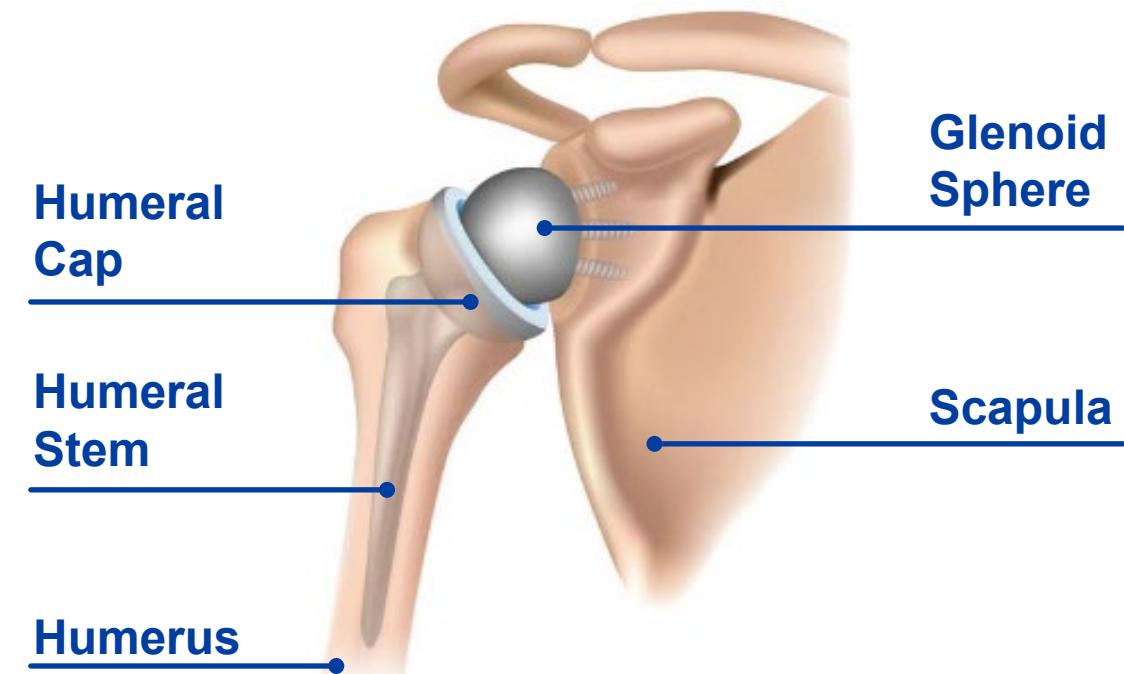
Imitates the natural joint anatomy



Osteoarthritis + Rotator Cuff Deficiency

Reverse Total Shoulder Arthroplasty (rTSA)

Inverts the shoulder anatomy and joint configuration



Shoulder Arthroplasty is One of the Fastest Growing Segments Within MedTech



1. Based on management estimates

4. Number of shoulder arthroplasty procedures expected in the U.S. in 2025 based on management estimates

7. Expected global market growth through 2030

2. Expected U.S. market growth through 2029

5. Defined as U.S. surgeons performing the majority of shoulder arthroplasty procedures

3. <https://PMC.ncbi.nlm.nih.gov/articles/PMC5685972/>

6. Expected global market growth through 2029

Current Solutions in the Market Have Significant Limitations



1 Low Rates of Implant Survivorship

~40% of Implants Subject to Revision Surgery¹

2 Frequent Post-Operative Complications

~15% of Subscapularis Tendons Fail Following an aTSA Procedure²

3 Imprecise Implant Positioning

Positioning as Little as 5 Degrees Off Angle Can Lead to Inferior Outcomes

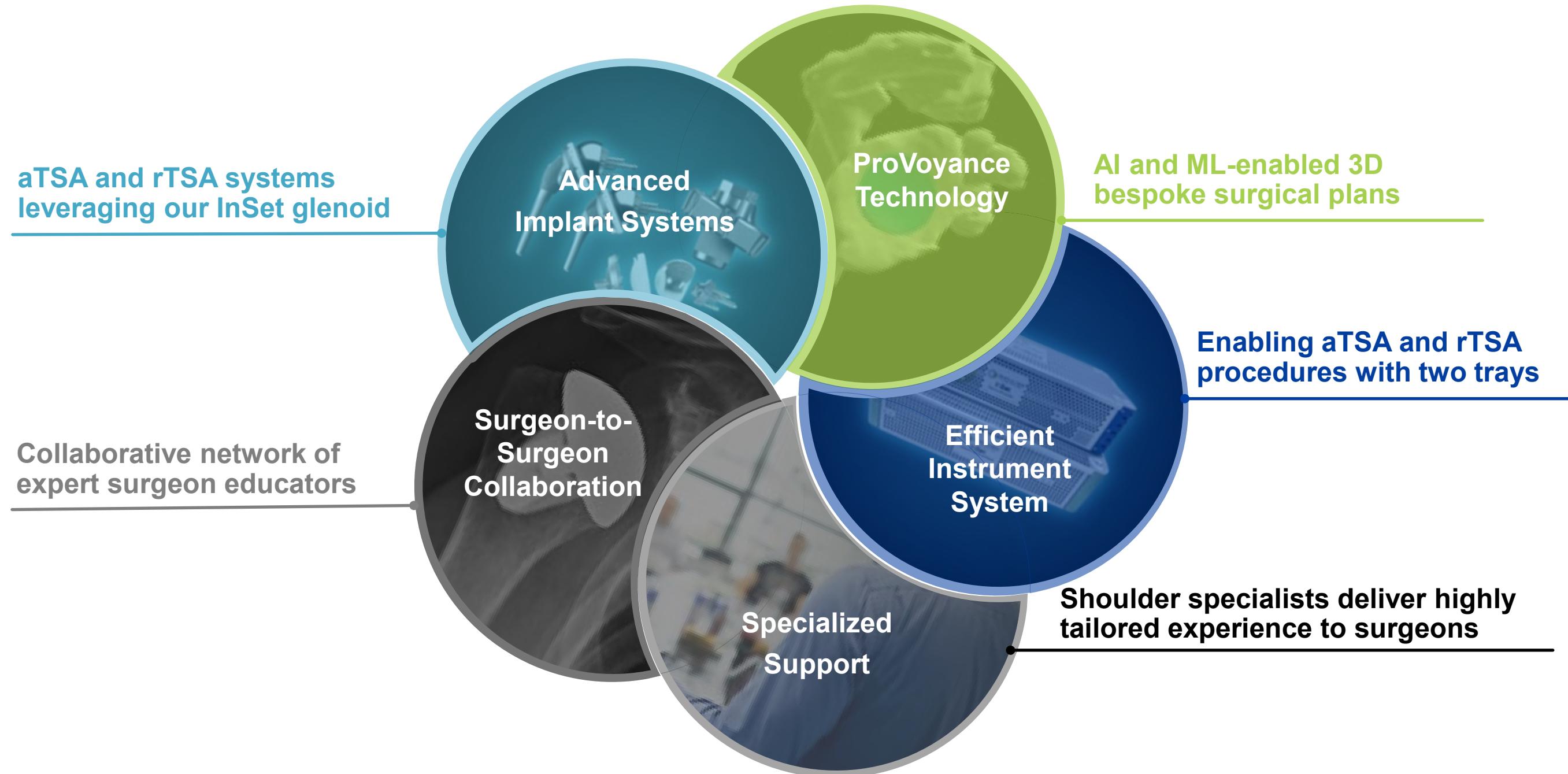
4 Burdensome Surgical Workflow

Up to 9 Surgery Trays to Complete a Single Procedure

1. Revision surgery at 10-year follow-up

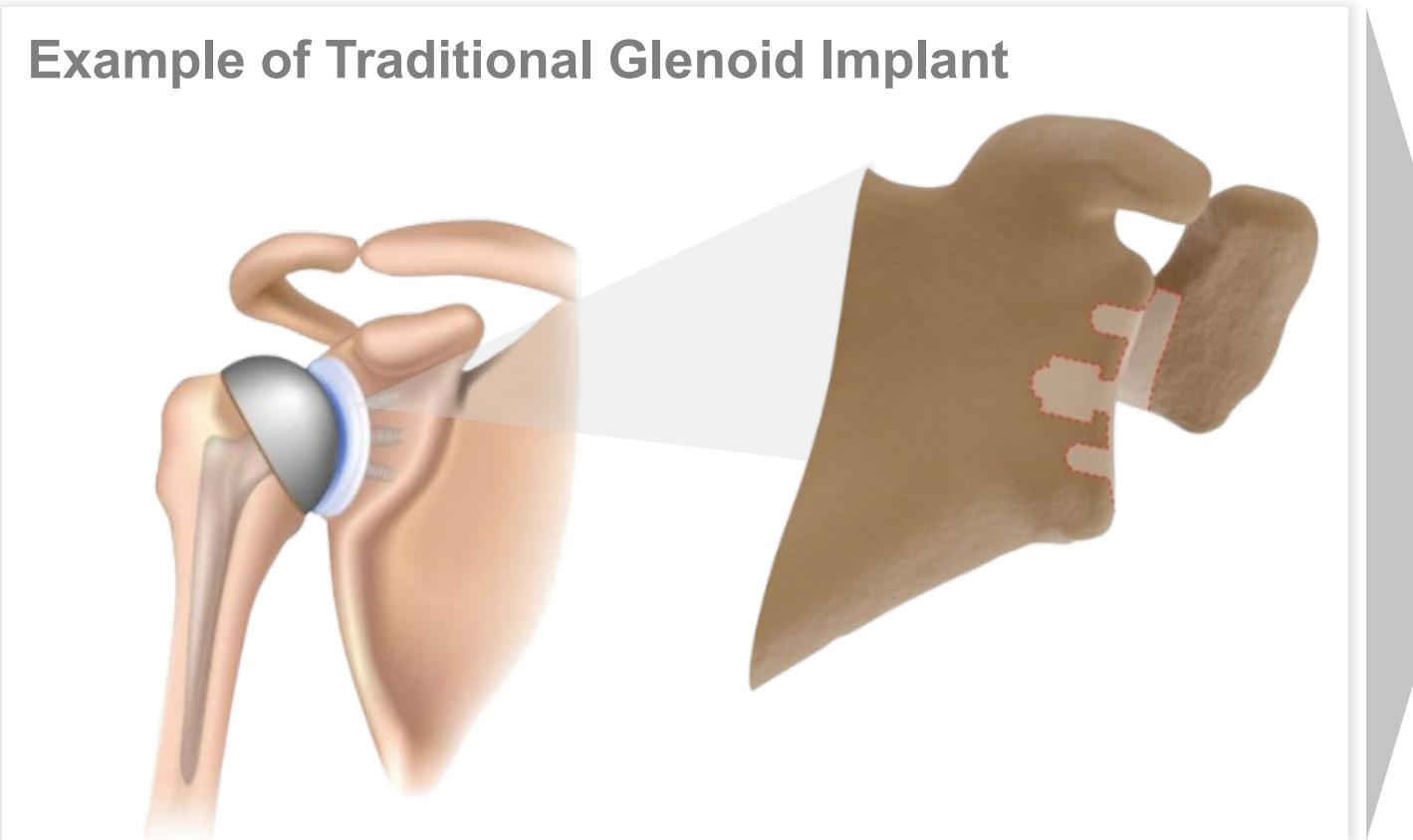
2. Based on a study published in the *Journal of Shoulder and Elbow Surgery* in which the tendon connecting the subscapularis muscle to the humeral bone is damaged

We Have Developed a Highly Differentiated Ecosystem that Seeks to Improve Core Components of Shoulder Surgical Care

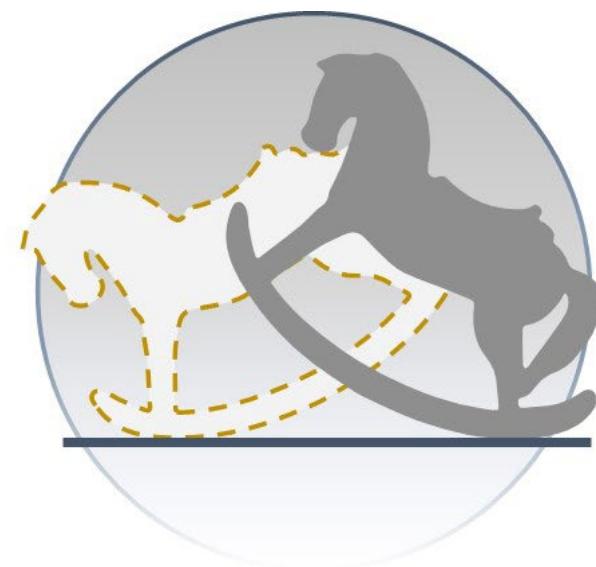
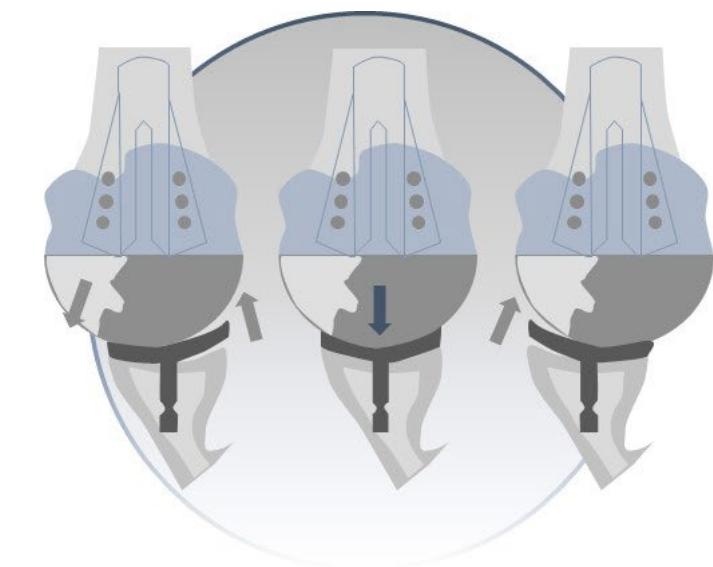


Traditional Implant Designs Have Low Rates of Implant Survivorship and Often Require Additional Surgical Intervention

Example of Traditional Glenoid Implant



With traditional implants, **normal movement can rock the glenoid loose**



Too much loosening can cause pain, and necessitate subsequent revision surgeries over time

~25% of aTSA Procedures
demonstrate precursor to loosening¹

~30% of aTSA Procedures
demonstrate moderate to severe loosening²

~40% of Implants
were subject to revision surgery³

1. J Shoulder Elbow Surg. 2012 Nov;21(11):1526-33. Precursors to loosening within 5 years post-procedure

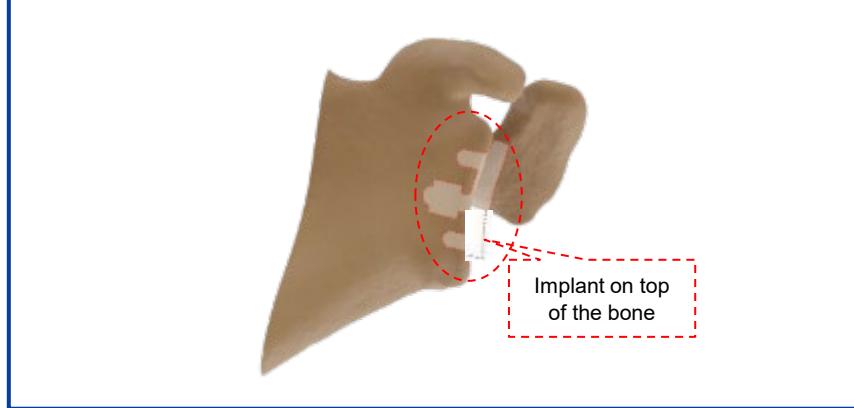
2. J Shoulder Elbow Surg. 2020;29(6):1188-1196. Moderate to severe loosening at a mean of 6.6 years

3. J Shoulder Elbow Surg. 2020;29(6):1188-1196. Revision surgery at 10-year follow-up

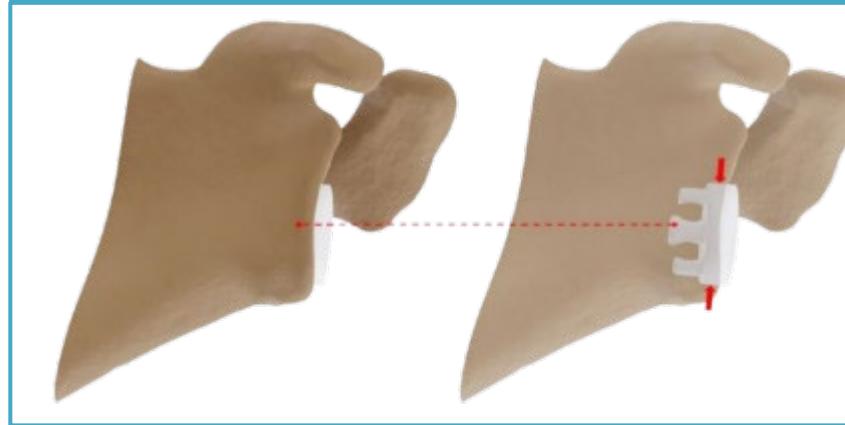
Our Novel InSet Glenoid Design Sets a New Standard for Fixation and Stability



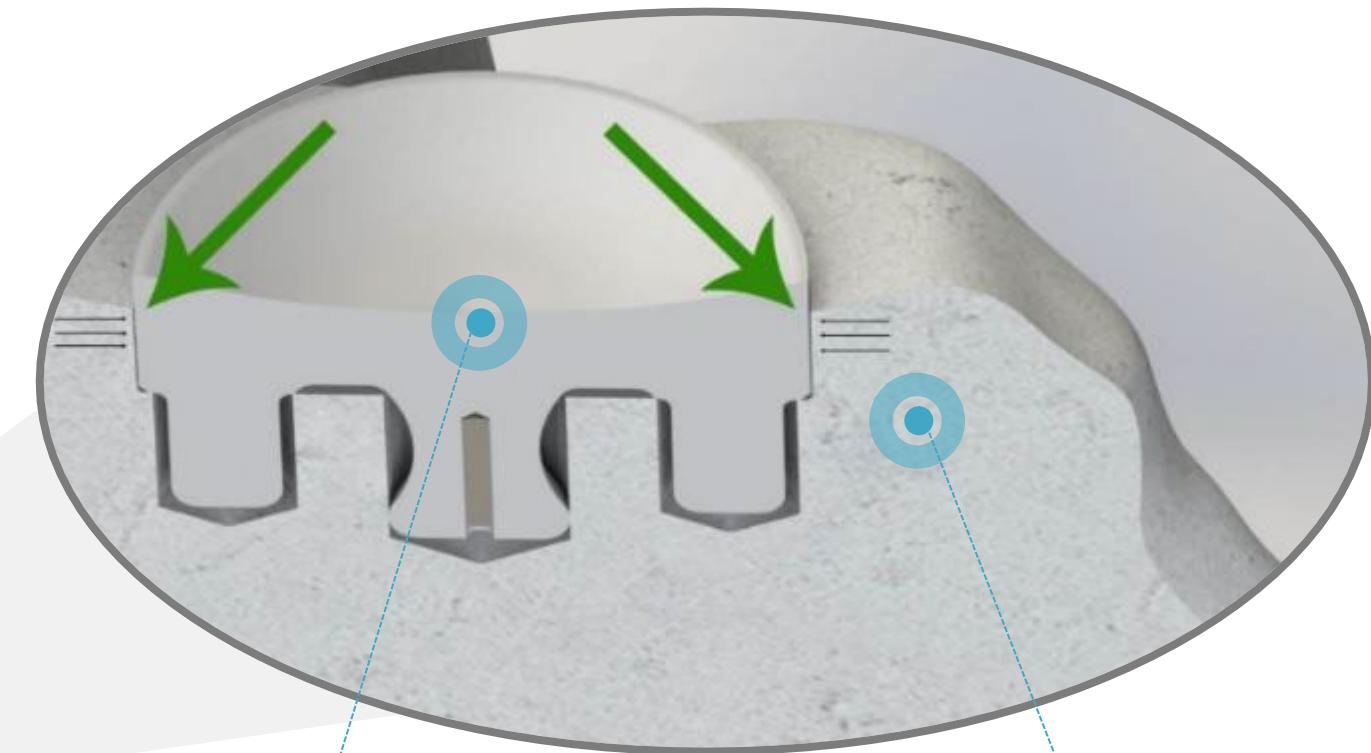
Traditional Implant, Sitting on Top of Bony Surface



InSet Glenoid, Sitting Within a Rim of Bone



InSet Glenoid



Complex articular surface further reduces rocking horse motion

Peripheral bone ledge is buttress against rocking horse motion

Improved Fixation Mechanics, More Reliable Implant Placement, Smaller & Simpler Surgical Exposure

InSet Glenoid Technology Supported by Data that Demonstrate Significant Clinical Benefits and Improved Patient Outcomes



Pre-Operation

In constant pain and unable to complete daily activities



Pain-free and enjoying better quality of life



+ 72

Point Score Improvement^{3, 4}

23

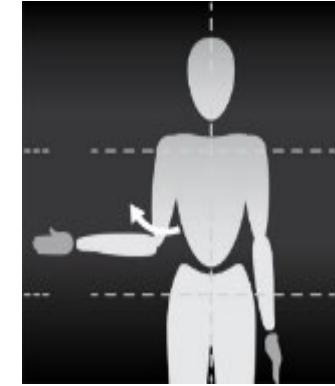
Pre-Op ASES¹ Score³

95

Post-Op ASES¹ Score^{3, 4}

Key Clinical Factors

Rotation



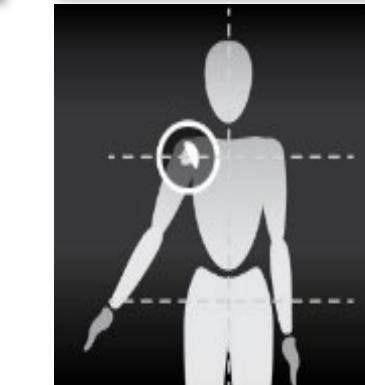
Forward Flexion



Pain



Durability



✓ 87% Reduction²
In "Rocking Horse" Motion

✓ ZERO⁵
Surgical Complications

✓ ZERO⁵
Loose Implants

✓ ZERO⁵
Revision Surgeries

✓ FULL RANGE OF MOTION⁵
Ability to Raise Arm & Reach Back

InSet's Differentiation Demonstrated by 100% Implant Survivorship⁵ and 87% Reduction in "Rocking Horse" Motion²

1. ASES: American Shoulder and Elbow Surgeon Score (0-100 scale, with 100 representing a patient's normal function) at a mean follow-up of 8.7 years

2. Shoulder Elbow Surg. (2012) 21, 759-803. Finite Element Analysis and Physiologic Testing of a Novel, Inset Glenoid Fixation Technique

3. J Shoulder Elbow Surg. (2019) 1-9. Long-Term Follow-up of Total Shoulder Replacement Surgery With Inset Glenoid Implants For Arthritis with Deficient Bone

4. From a retrospective long-term follow-up analysis of patients who underwent a TSA procedures with our InSet Glenoid.

5. Results observed at a mean follow-up time of 8.7 years

Common Post-Operative aTSA Complications Require Surgical Conversion to rTSA

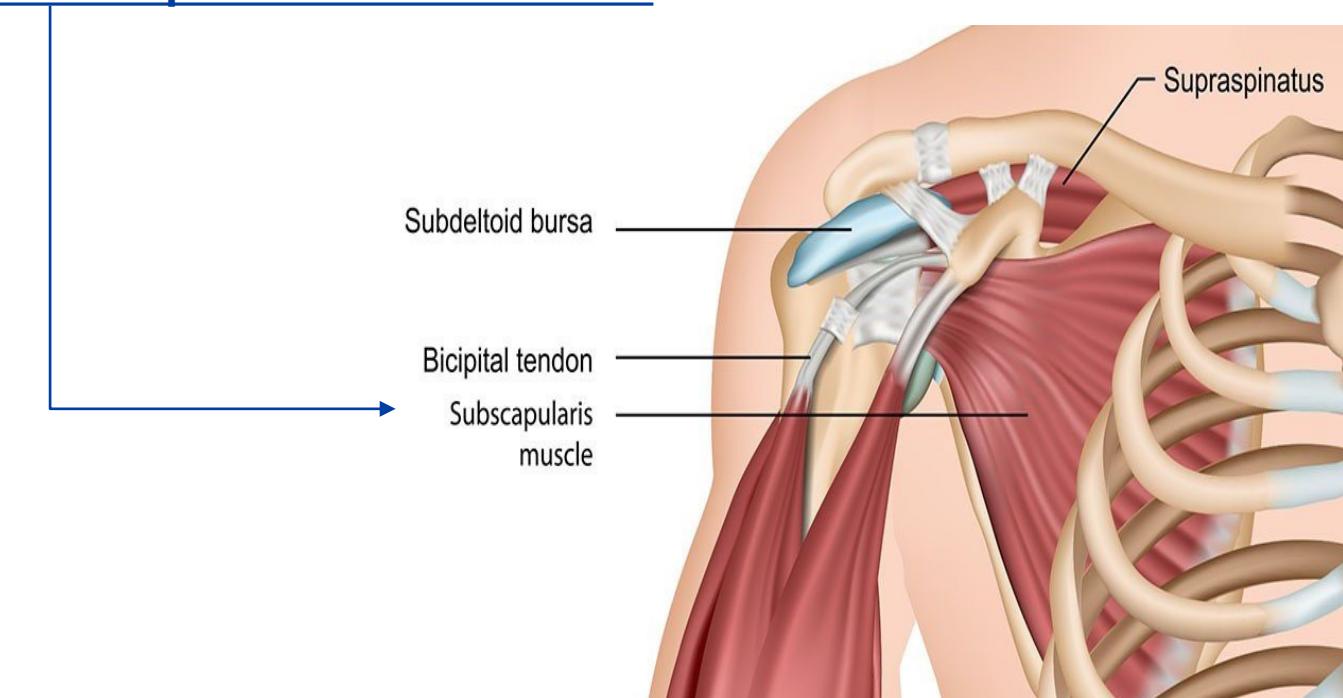
However, Traditional Implants are Not Designed for Replacement, Revision, or rTSA-Conversion Procedures

Traditional Implants....

- ✗ Place the implant stem deep into the humerus
- ✗ Require a high degree of initial bone removal
- ✗ Difficult to replace
- ✗ Not easily convertible from aTSA to rTSA

Post-Operative Complications Can Include...

Overstuffing, shoulder dislocation, humeral fractures, and **subscapularis tendon failure**



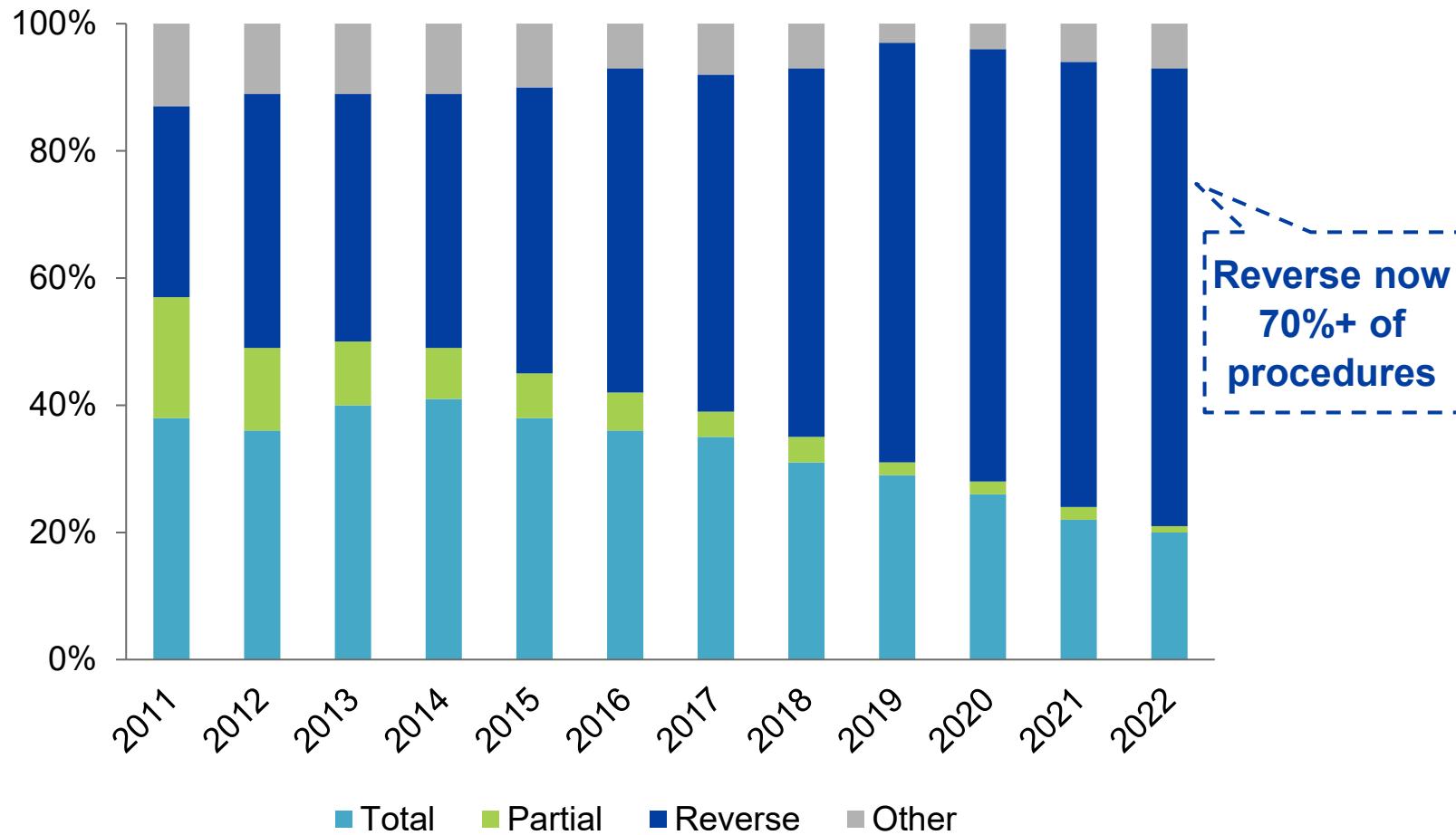
**~15% of Subscapularis Tendons Fail
Following an aTSA Procedure^{1, 2}**

1. Based on a study published in the *Journal of Shoulder and Elbow Surgery* in which the tendon connecting the subscapularis muscle to the humeral bone is damaged

2. Due to inadequate healing of the tendon post-aTSA procedure

Frequency of Post-Operative aTSA Complications are Driving Significantly Higher rTSA Volumes

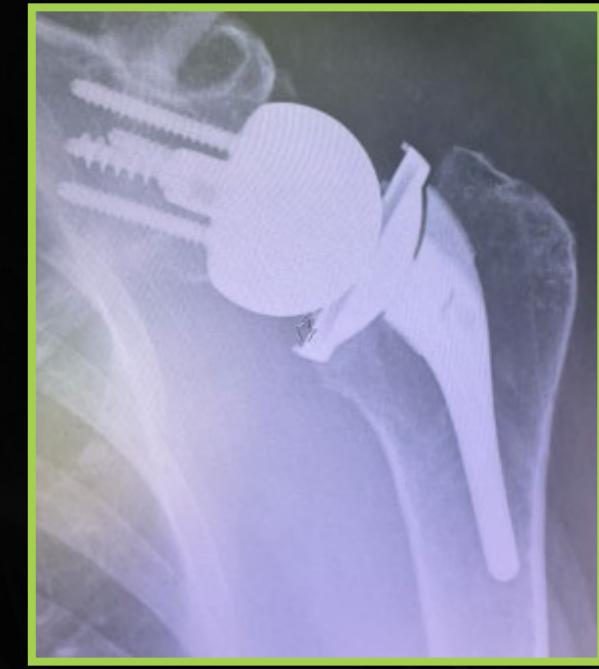
Evolution of Shoulder Arthroplasty Procedure Mix



Gradual Market Transition Towards Inlay Reverse Arthroplasty



Onlay
Arthroplasty

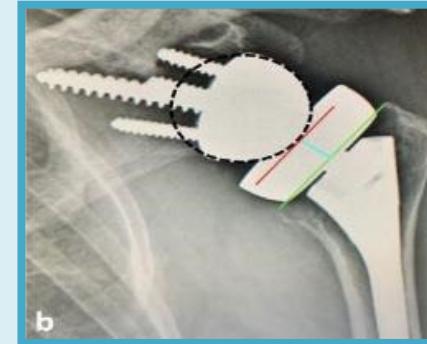


Inlay
Arthroplasty

InSet Reverse Stem Provides Biomechanical Advantages

Engineered to Provide Bone Sparing Implant Options to Achieve Desirable Range of Motion Biomechanics

Traditional
Reverse



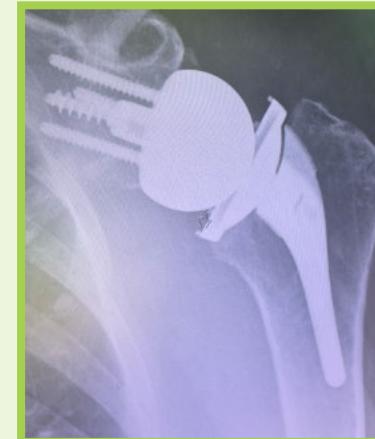
*Medialized Glenoid-
Medialized Humerus*



41%

of rTSAs Have Limited
Internal Rotation after
Surgery

InSet
Reverse



*Lateralized Glenoid-
Lateralized Humerus*



Improved Post-Op Internal Rotation



Biomechanical advantage: a more
“anatomic” reverse shoulder
construct



Inlay design enables ability to both
raise arm **and** reach back (unlike
traditional reverse system designs,
which can constrain range of motion)



Achieves **desirable impingement
free range of motion** and avoids
arm lengthening and overstuffed



Design enables full conversion
from anatomic to reverse as needed

InSet Reverse Was Designed to Behave Like an Anatomic Replacement, Maximizing Post-Operative Motion

Our InSet Stems Are Compatible Across a Full Range of Implant Systems, Enabling Seamless Interchangeability Between aTSA and rTSA



Three InSet Stem Options

Stemless

70% of primary aTSA



Short Stem



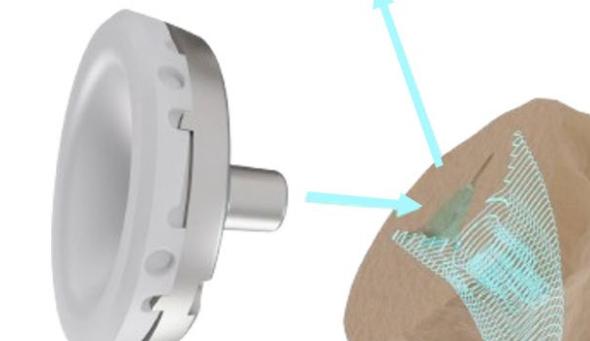
InSet 95



All InSet Stems are Compatible with Both aTSA & rTSA Humeral Heads...



aTSA InSet Humeral Head

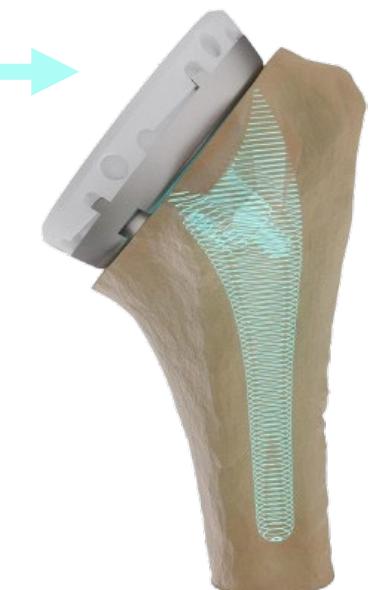


rTSA Humeral Tray and Bearing Assembly with proprietary "Twistlock" locking mechanism

InSet Stem



...Making Revision / Conversion Surgeries Straightforward



InSet Stem Remains in Place

✓ *Consistent surgical technique*

✓ *Identical instruments*

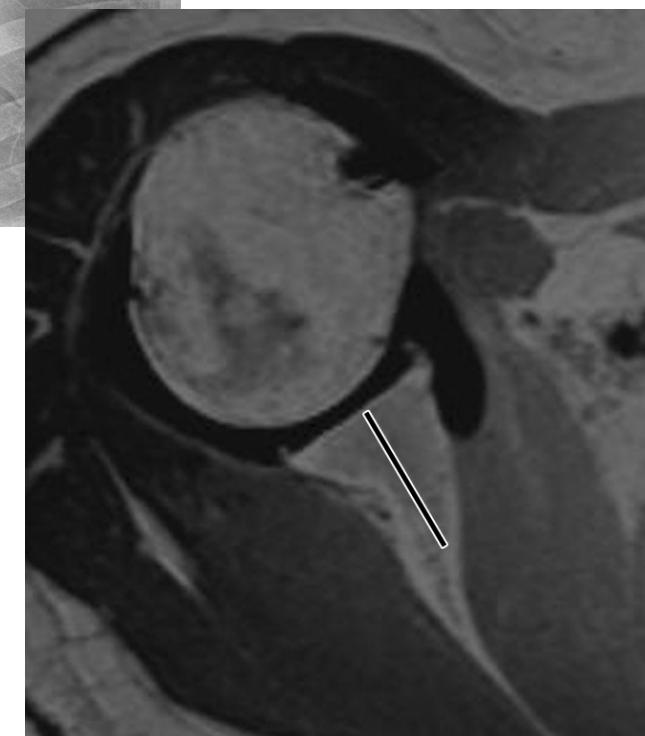
✓ *Similar biomechanics*

✓ *Interchangeable with aTSA / rTSA*

Implant Positioning as Little as 5 Degrees Off Angle Can Lead to Inferior Patient Outcomes



Shoulder x-Ray

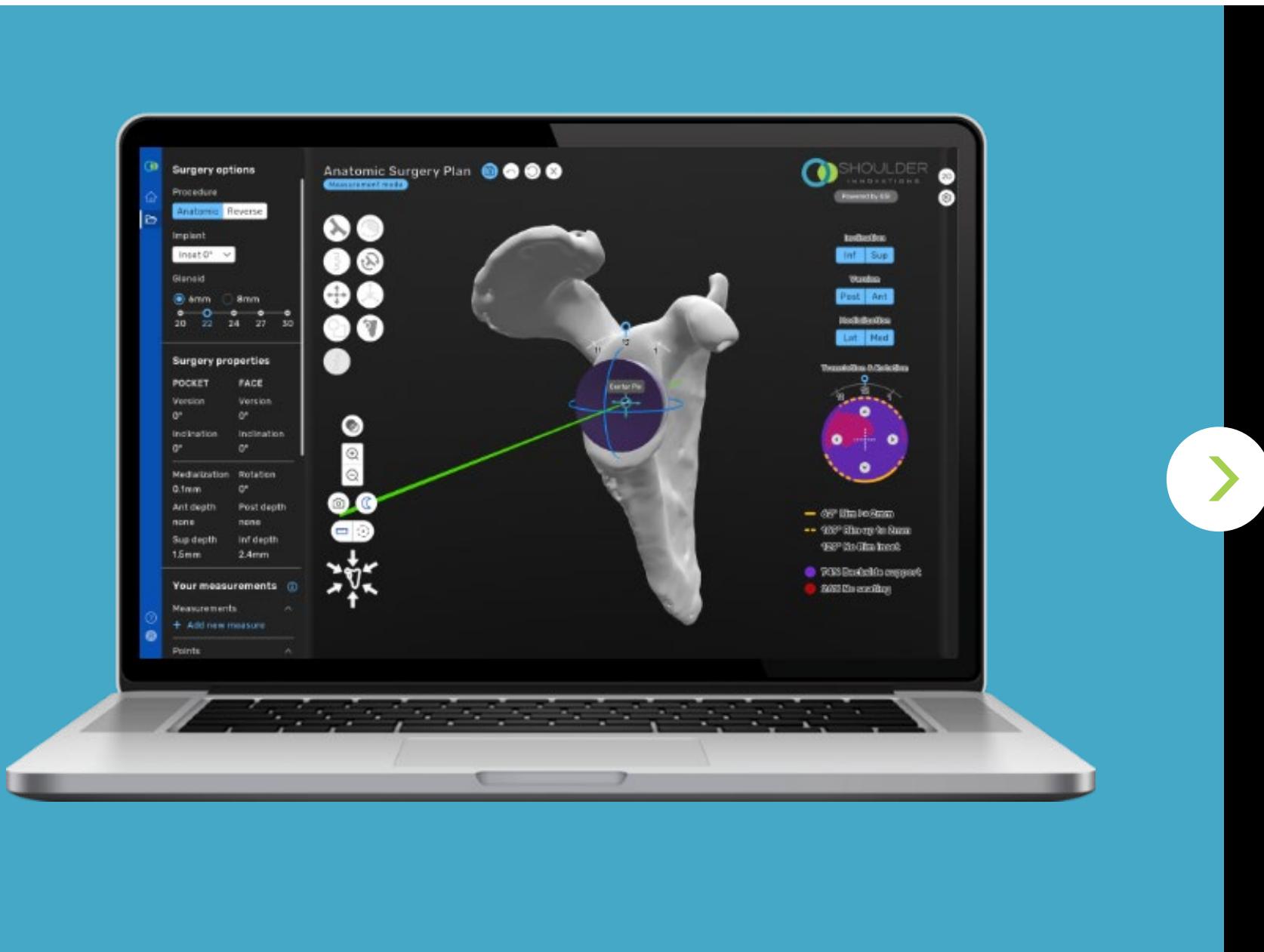


Shoulder MR Arthrogram

Surgeons have historically relied on **basic imagery** to inform **surgical approach**

- ✗ **Lacks 3D bone rendering**
- ✗ **No biomechanical simulation**
- ✗ **Does not fully capture patient-specific anatomy**
- ✗ **Requires outsourcing of imaging interpretation**
- ✗ **Offers limited surgeon engagement**

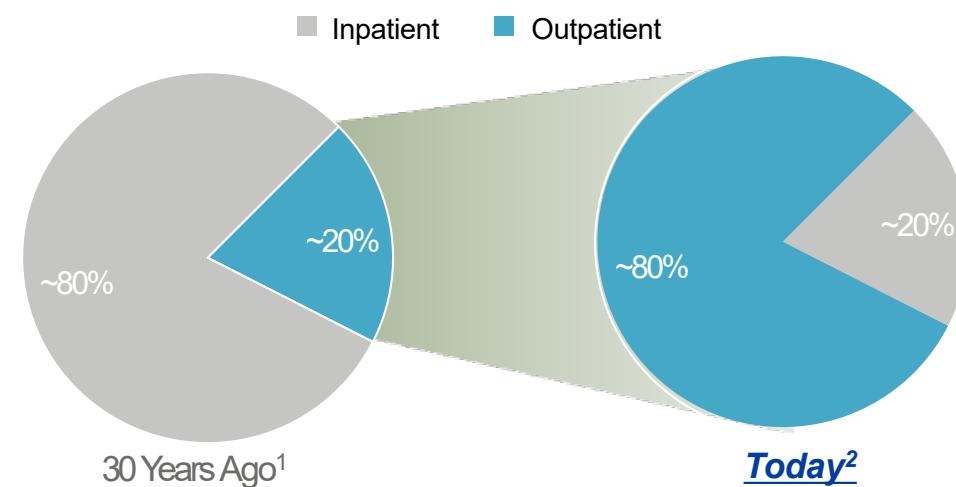
Our ProVoyance 3D Platform Streamlines Pre-Operative Planning Process



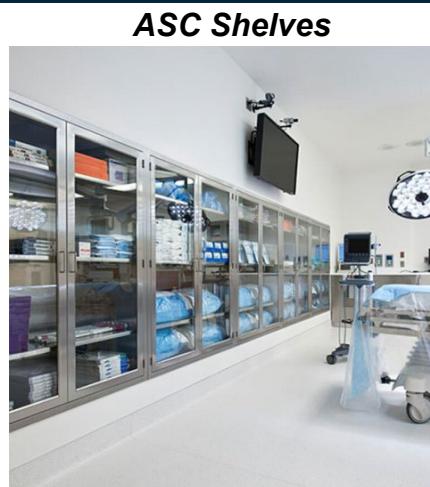
- **Hands-on** procedural planning performed by surgeons **at the site of care**
- Integrates **AI/ML** to transform CT images into **3D renderings of patient-specific anatomy**
- Provides **enhanced preoperative planning experience** for surgeons
- **Ease of use** is facilitated by the platform's highly intuitive, Unity-based interface

Transition to the Outpatient Setting

Surgery is Experiencing a Long-Term Secular Shift Toward ASC



Inherent Resource and Space Constraints in ASCs vs. Hospital



ASCs as Site of Care Present Numerous Advantages

- ✓ ASC has emerged as a **cost-efficient site of care delivery for shoulder arthroplasty**
- ✓ **Positive ASC-based clinical outcomes** relative to hospital-based outcomes in shoulder surgery
- ✓ Enables **streamlined workflows, scheduling flexibility, and operational autonomy**
- ✓ Expectation for **future shoulder arthroplasty growth to be largely within ASCs** vs. hospitals
- ✓ 2024 CMS reimbursement decision to add shoulder arthroplasty to the **ASC-covered procedure list** further supports growth

Our Capital Efficient Technology Suite Reduces Complexity & Cost



Status Quo

Up to 9 surgery trays to complete a single procedure



 Competitor Trays and Implants

 Shoulder Innovations Trays and Implants

Significant Reduction in Surgery Tray Usage

- ✓ Full SI product portfolio and all procedures supported by **two instrument trays**
- ✓ Fewer SKUs and trays **reduce the implant footprint** per procedure
- ✓ Decreased capital outlay per procedure enables a **compelling economic value proposition**



ASC Portion of Procedures: ~10% in Dec 2023 → ~30% in Dec 2024¹

1. During the month ended December 2023 and the month ended Dec 31,2024

InSet Glenoid Technology Leveraged Across a Full Range of Solutions for Both aTSA and rTSA Procedures



InSet aTSA System



InSet rTSA System



Consistent Innovation with Robust Pipeline of New Technologies



2016 – 2023

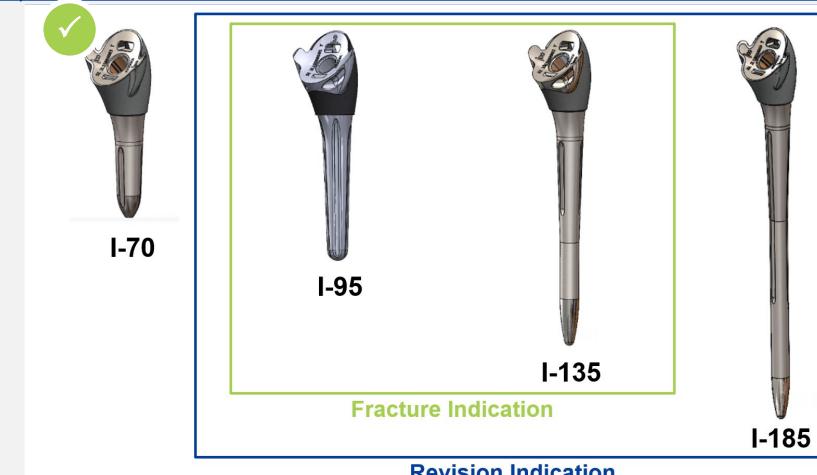


History of successfully launching new technologies to enhance our ecosystem and provide surgeons with the tools and support needed to deliver quality outcomes for patients

Pipeline

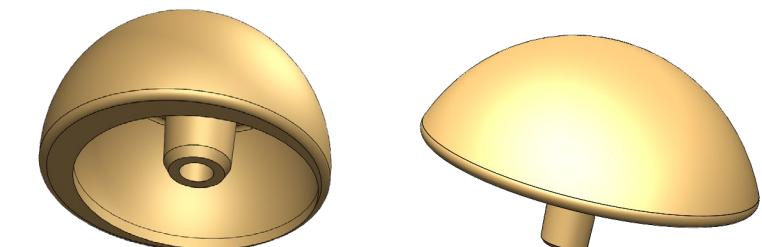
I-Series Expansion and New Indications

- Fully launched I-70 in September 2025, expanding I-Series product line
- Recently received FDA 510(k) clearance for certain fracture indications; commencing limited market release while advancing full breadth of indications through remainder of 2025 and into 2026



Technologies for Metal Sensitive Patients

- Developing a line of humeral head and glenoid technologies for the ~10-15% of the general population with metal hypersensitivity
- Anticipate FDA 510(k) clearance and commercial launch around year-end 2025



Adjacent Market Expansion

- ✓ Sports medicine
- ✓ Shoulder trauma

Strategic Partnership with INS to Introduce a Robotic Platform for Shoulder Arthroplasty



- ✓ New robotic system to be **integrated with ProVoyance** pre-operative planning platform to enhance precision and workflow efficiency in shoulder arthroplasty
- ✓ **Portable design** will enable easy transport into the OR for broad adoption, including ASCs
- ✓ **Targets challenges of traditional robotic surgery**, including high cost, limited mobility, workflow complexity, and steep learning curves
- ✓ **Supports streamlined surgical workflows** and real-time intraoperative adjustments
- ✓ **Advances technology ecosystem** beyond implants toward comprehensive enabling technologies
- ✓ **No expected impact on ability to achieve cashflow breakeven** with current cash on hand

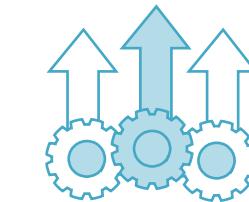
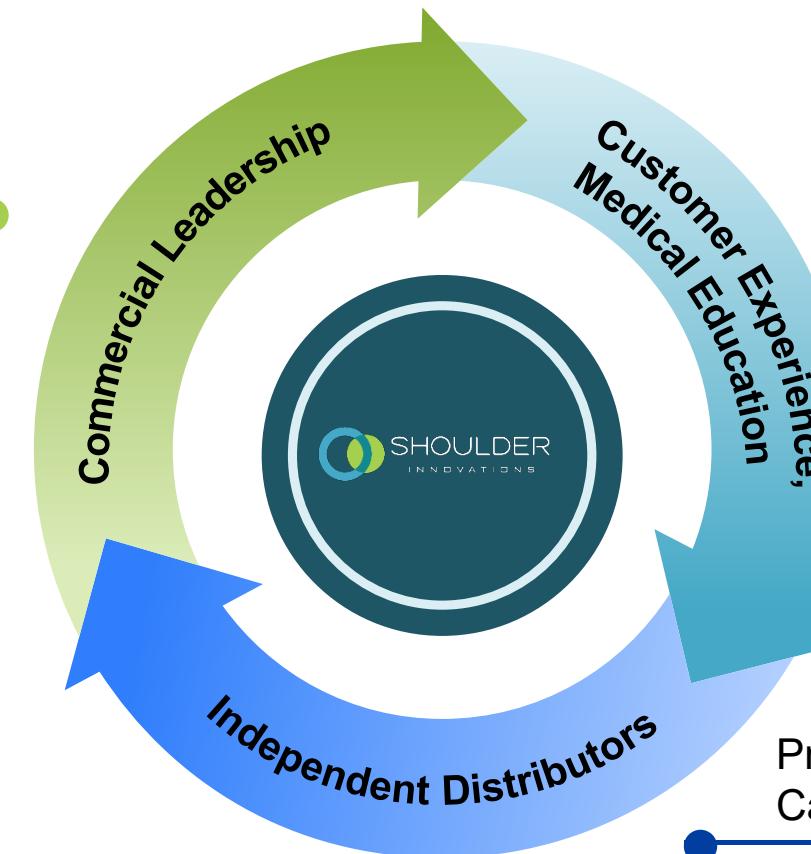
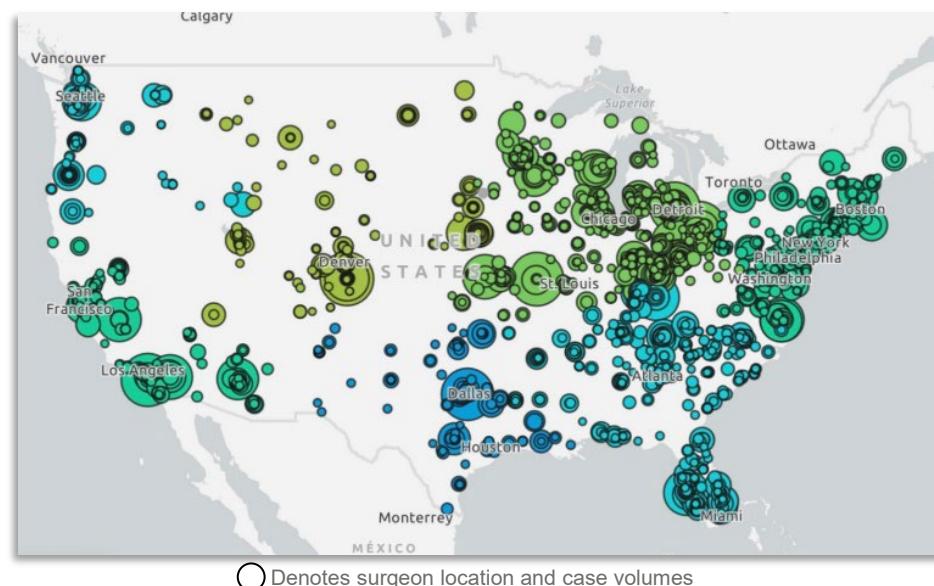


Integrated Commercial Approach Accelerates Adoption, Drives Deeper Surgeon Relationships, and Enhances Long-Term Retention



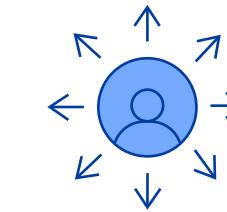
Distributor Management, Target Prospecting, Forecasting, Performance Management

- ✓ 27 specialized commercial leadership team members
- ✓ Leverage proprietary business intelligence tools and partner with independent distributors for account management



Key Account Conversions, Utilization Management, Surgeon to Surgeon Training

- ✓ 7 expert surgeon educators
- ✓ Facilitate rewarding and meaningful experiences for surgeons focused on clinical value



Prospecting, Relationship Management, Servicing, Case Coverage

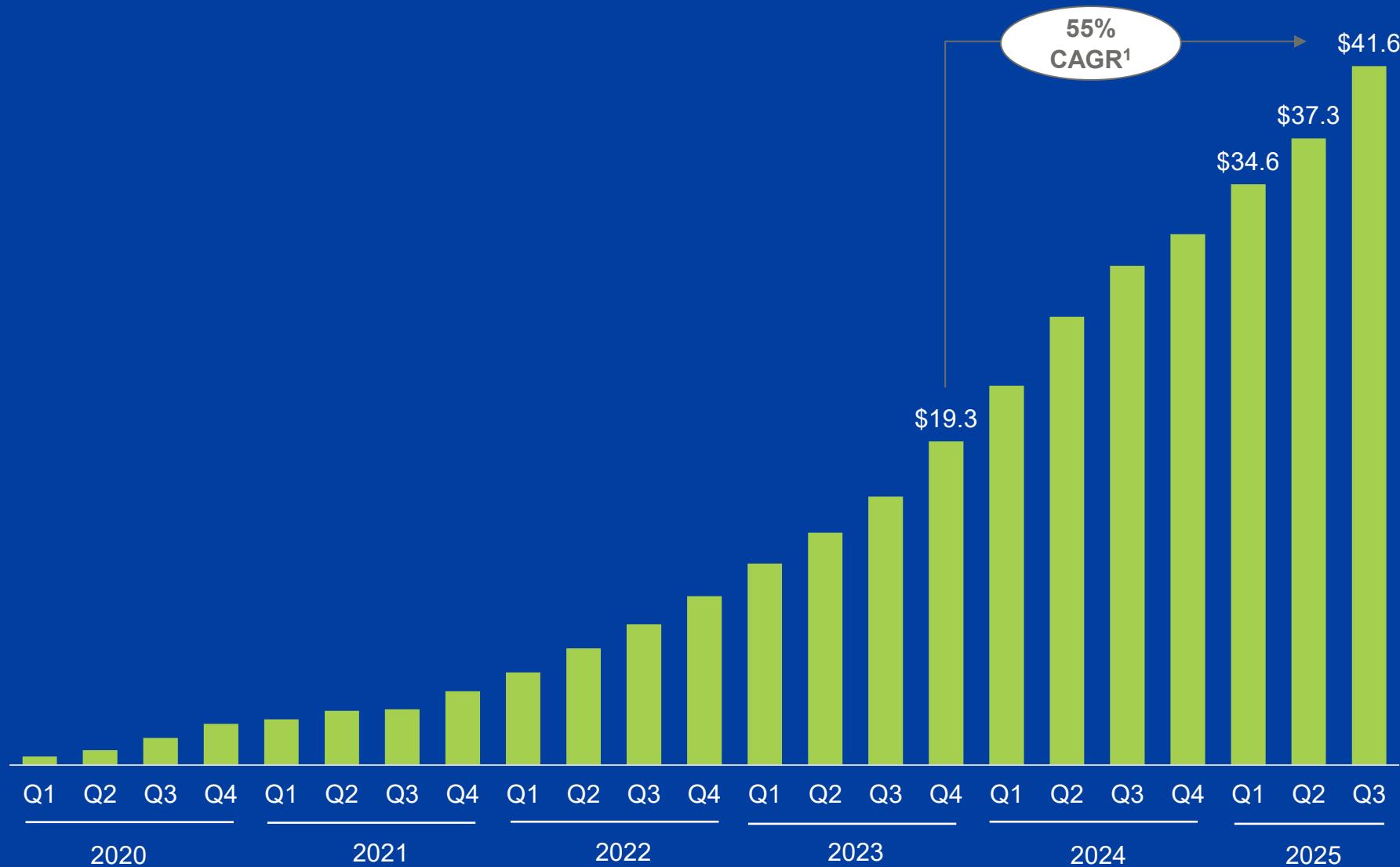
- ✓ 41 independent distributors with over 150 trained reps
- ✓ Primarily orthopedic specialists with exclusive agreements to carry InSet as their dedicated shoulder solution

Focused Commercial Approach Targeting the ~1,800 High Volume Surgeons Performing Majority of Procedures

Financial Summary

Trailing Twelve Months Revenue

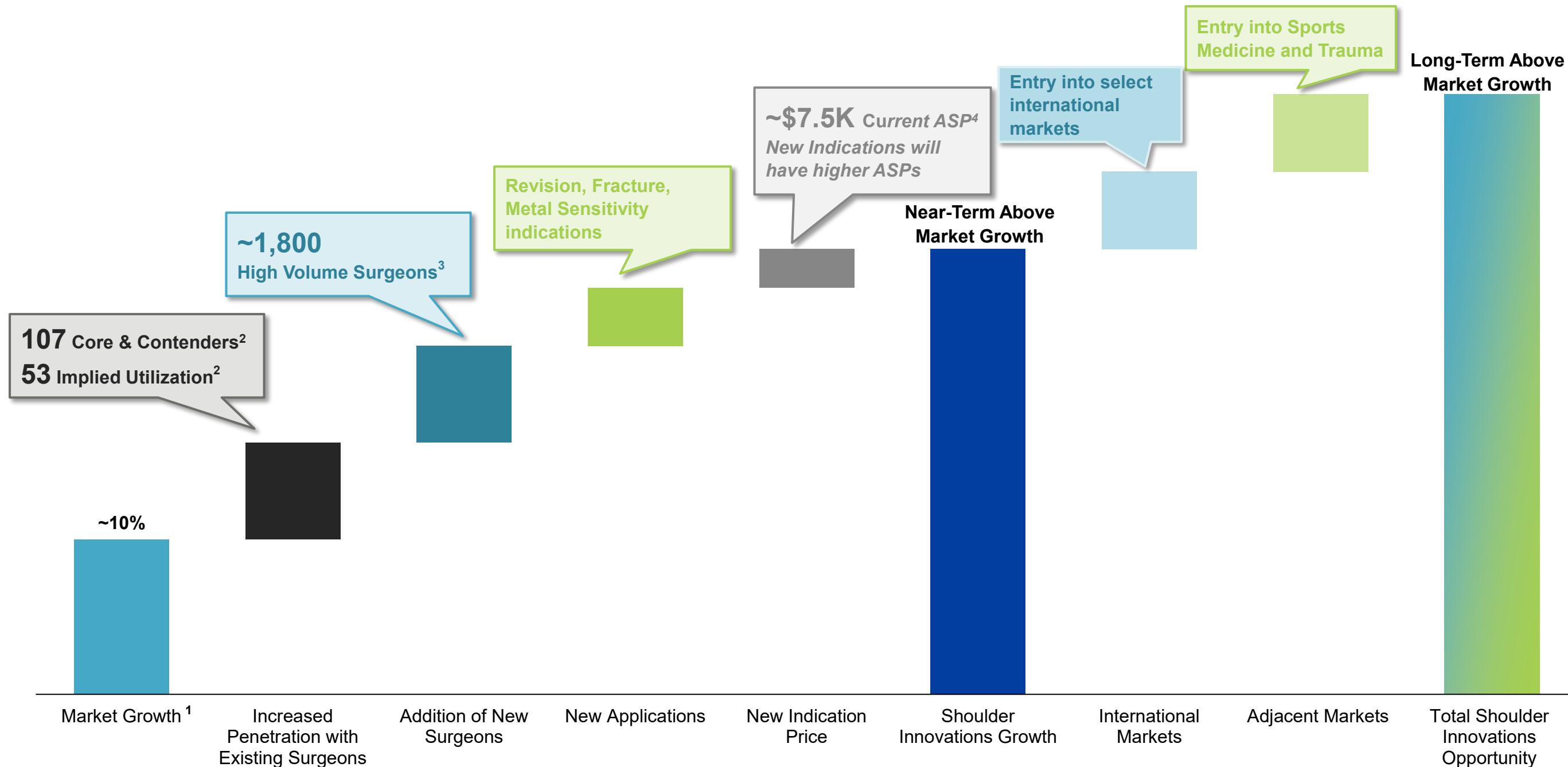
(\$ in USD millions)



Q3 2025 Highlights

- Revenue of \$11.8M, **58% Y/Y**
- 1,584 total implant systems sold, **53% Y/Y**
- **Continued rapid increase** in new surgeons
- Gross margin of **76.2%**
- **\$137M** in cash, cash equivalents, and marketable securities
- **Expanded I-Series humeral stem product line** with the full commercial launch of the InSet™ 70
- **Received FDA 510(k) clearance** expanding I-Series humeral stem product line to include certain fracture indications

Multiple Drivers to Sustain Above-Market Growth



1. The number of shoulder arthroplasty procedures in the United States grew at approximately 10% per year from 2019 to 2024

2. As of June 30, 2025; Utilization defined as number of implant systems to Core & Contender surgeons divided by total number of Core & Contender surgeons

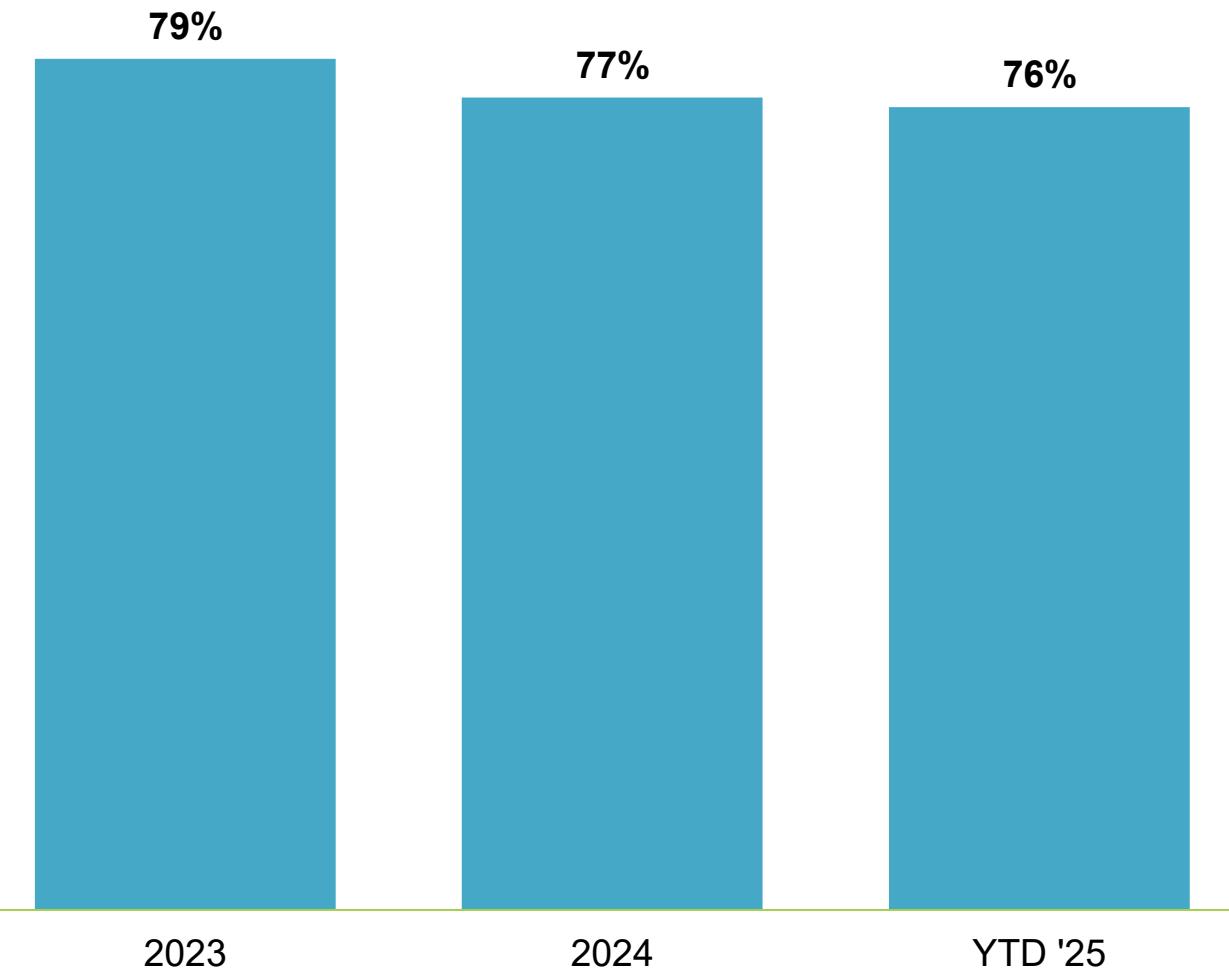
3. Based on management estimates; defined as U.S. surgeons performing the majority of shoulder arthroplasty procedures

4. ASP as of quarter ended September 30, 2025

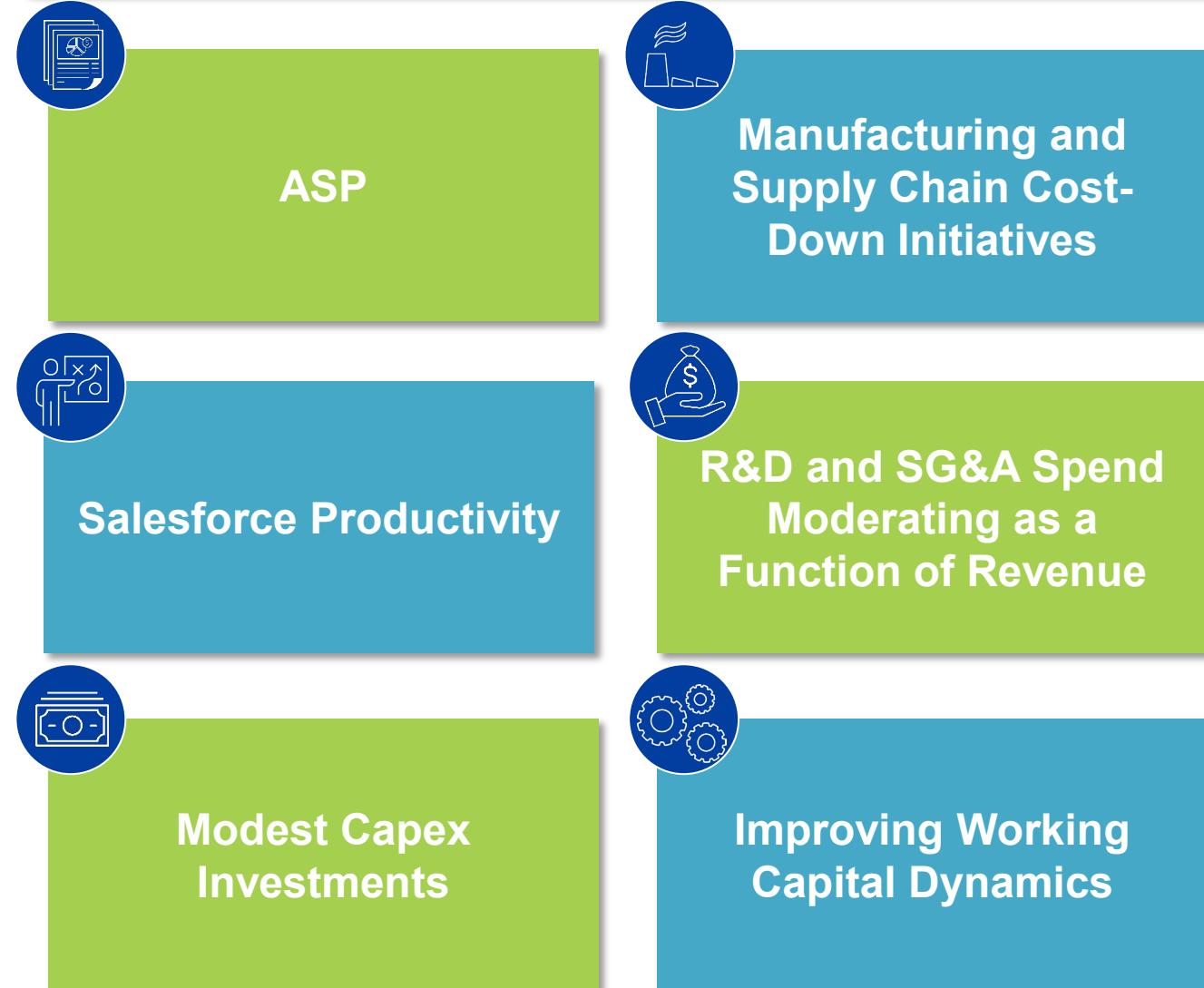
Multiple Initiatives to Drive Profitability



Attractive Gross Margin Profile



Key Profitability Initiatives



Investment Highlights





Thank You

