



# Specialized Drug Delivery Technology for Pharmaceutical and Healthcare Markets

May 2023 | Nasdaq: STSS



# Overview

- **Founded in 2017 (IPO in 2022)** with a vision to develop innovative drug delivery technology for the healthcare industry
  - Strong product line of patented smart safety syringe systems.
  - Products are FDA, WHO and CE Mark approved and cleared for use by Pfizer and Moderna.
  - In 2023 Sharps prefillable syringe (PFS) systems will be launched covering volumetric delivery of 1, 2.25, 5, 10 and 50mL, including dual chamber systems.
- **Nephron collaboration** accelerates near-term revenue for (PFS) commercialization and expanded manufacturing
  - Transformative manufacturing agreement to produce with a state-of-the-art manufacturing facility.
  - Pharma Services Program to develop a pipeline for future growth w/specialized packaging opportunities to support fill / finish projects for industry customers.
  - Specialized distribution and sales agreement for Sharps products with access to 3000+ customers
    - Revenue expected to begin at end of Q2, 2023
  - Opportunity to expand manufacturing capabilities for growth initiatives w/100 million additional PFS products
- **Growing** specialty syringe market that includes all applications targeting healthcare and pharma customers
- **Strong management** team with extensive experience in drug delivery manufacturing and product development

# Nephron Manufacturing and Research Partnership



+



## Manufacturing Agreement

Sharps to Supply PFS products w/initial starting capacity of 20 million units/year



## Pharma Services Program

Sharps drug delivery system knowledge with Nephron's fill finish and cleanroom designs to service start-up med device companies



## Distribution & Sales Of Sharps Smart Safety Syringes

Nephron's distribution services to sell & distribute Sharps products to their 3000+ healthcare customers



## Manufacturing Expansion

100+ million PFS for rapid expansion opportunities to service demand for Billions of annual prefilled syringe needs



# Recent Press Releases

---

*Sharps continues to provide updates on progress as it advances through the transition of pre-revenue to commercialization. Below are notable press releases covering business developments as Sharps executes through milestones.*

Apr 04, 2023

Sharps Technology Issues Update Letter to Shareholders from CEO Robert Hayes

Feb 09, 2023

Sharps Technology Appoints Justin Page as Vice President of Technical Operations

Feb 06, 2023

Sharps Technology Announces Closing of \$3.8 Million Private Placement Priced At-the-Market

Jan 31, 2023

Sharps Technology Ships First Containers of Safety Syringes to Nephron Pharmaceuticals for Commercialization

Jan 10, 2023

Sharps Technology Inc. to Introduce New Specialized Prefillable Syringe Systems in 2023

Dec 20, 2022

Sharps Technology Begins Manufacturing at its Hungary Facility for the Company's Innovative Syringe Products

Dec 13, 2022

Sharps Technology and Nephron Pharmaceuticals Sign Distribution Agreement for its Innovative Syringe Products

Nov 10, 2022

Nephron Pharmaceuticals Corporation and Sharps Technology Inc. Announce Manufacturing and Research Partnership

# Product Line: Disposable Smart Safety Syringes

Manufactured at Sharps Hungary Facility



## Secureguard

- Ultra Low Waste
- Integrated Active Recessed Safety System
- Re-use Prevention
- FDA approved
- WHO approved
- CE Mark
- EtO sterilized
- Vial Draw Sizes 1ml -10ml



## Provensa

- Ultra Low Waste
- Integrated Passive PEEK Safety System
- FDA approved
- EtO sterilized
- Vial Draw 0.30ml – 3ml



## Provensa *RS*

- Ultra Low Waste
- Integrated Passive Recessed Safety System
- Pending FDA 510k submission
- EtO sterilized
- Vial Draw 0.30ml – 3ml



# Disposable Smart Safety Syringes Market

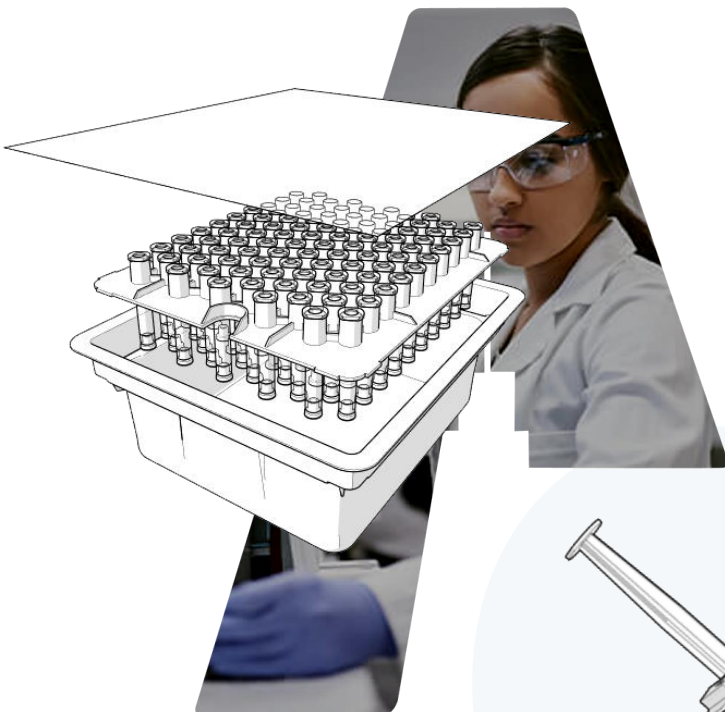
## Disposable Syringes Market 2021-2030



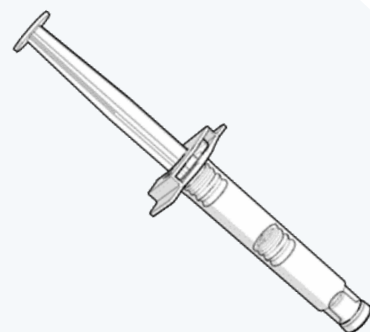
## Disposable Smart Safety Syringes Market



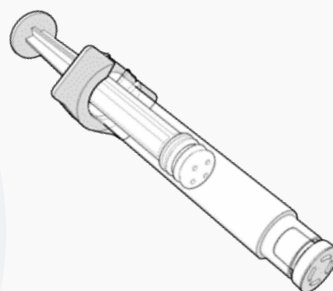
# Product Line: Prefillable Syringe Platform



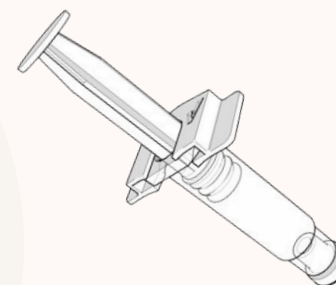
- Highly break resistant systems
- Clear, glass like transparency
- Can customize designs for unique autoinjector and pen applications
- Integrated Luer lock allows stronger connection to adaptor during administration
- Needleless Luer access device compatible
- High dimensional and fill volume precision
- Superior moisture barrier properties for improved drug shelf life



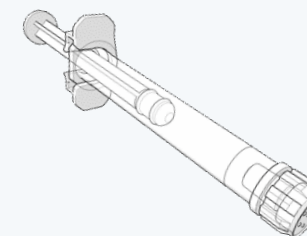
DUAL CHAMBER SYSTEMS



2.25ML



1ML SHORT



0.5mL-1mL LONG  
SILICONE FREE OPTIONS

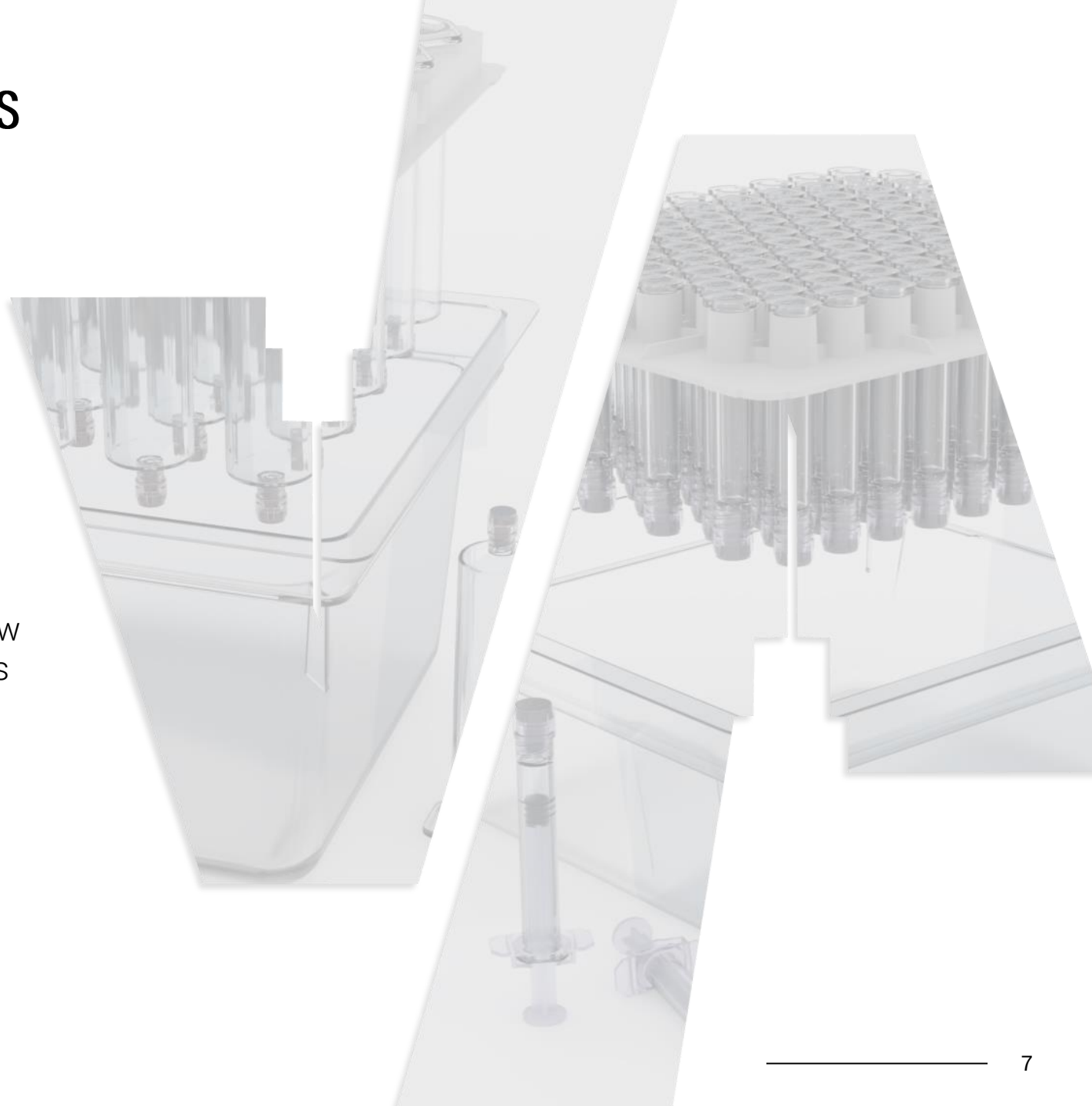
# Co-Polymer Prefillable Syringes

## *Benefits*

- Clear, glass-like transparency
- Works with industry standard rubber components
- Available in silicone free options
- Rapidly growing market
- Compatible with existing fill finish pharmaceutical operations

## *Advantages*

- Light weight, highly break resistant
- Custom configurations with mold designs can allow for better features and Auto Injector improvements
- Integrated Luer lock allows stronger connection to adaptor during administration
- Needleless Luer Access Devices compatible
- Dimensional precision for processing and fill volume variance reduction, and patient dosing
- Strong moisture barrier
- No alkali properties for improved drug stability
- Technology opportunities to incorporate artificial intelligence into production processes

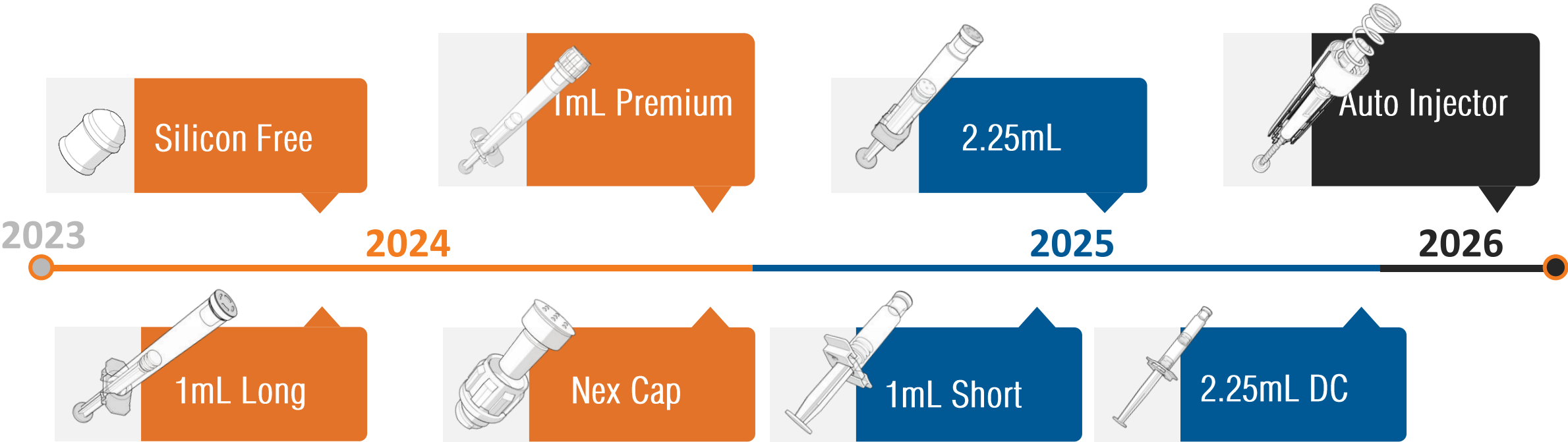




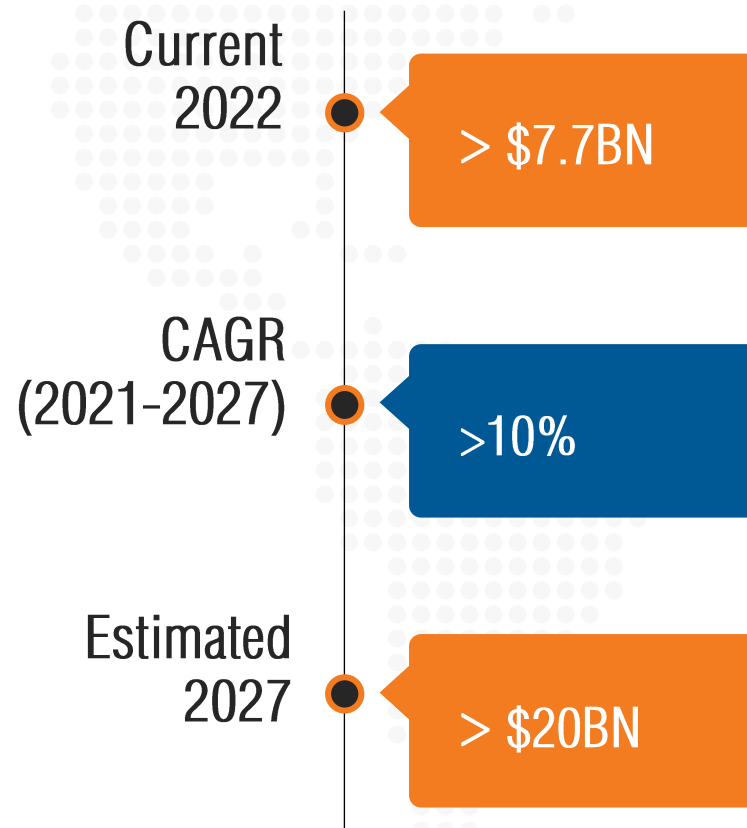


# Prefillable Syringe Division

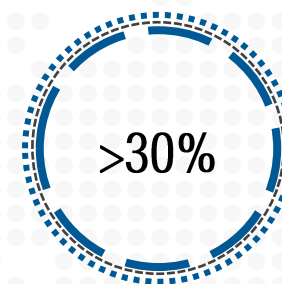
## Product Launch Schedule



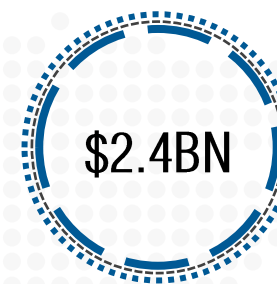
# Prefillable Syringe Division



## Plastic Segment



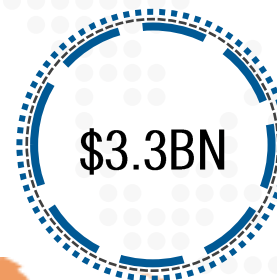
Market 2023



CAGR 2017-2026

Estimated 2026


## Dual-Chamber Segment




NA Market CAGR  
(2021-2027): 12%


Europe Market CAGR  
(2021-2027): >10.5%


# Prefillable Syringe Division



Cold Chain Vaccines
1mL Long
<b>\$30 million</b>



BOTOX®
Dual Chamber
<b>\$12-15 million</b>


IALURIL®
50mL
<b>\$15 million</b>


Hyaluronic Acid
2.25mL
<b>\$12-15 million</b>


Multiple Biologics
Small Volume Syringe
<b>\$35 million</b>


Diluents
10mL
<b>\$5-7 million</b>


Multiple Biologics
Small Volume Syringes
<b>\$35 million</b>

# Sharps Smart Safety Syringes Offer Solutions to Global Healthcare Crises

- The World Health Organization (WHO) announced a potential **shortage of more than two billion syringes** related to global need, beginning in 2022. This shortage could impact routine immunizations and undermine needle safety. Manufacturers are needed to make more single-use disposable syringes.
- Sharps Technology offers solutions for U.S. and global healthcare by offering safety syringes that comply with WHO's requirements for both needlestick injury and syringe reuse prevention, while also reducing the amount of medicine wasted by inefficient syringe systems.



“

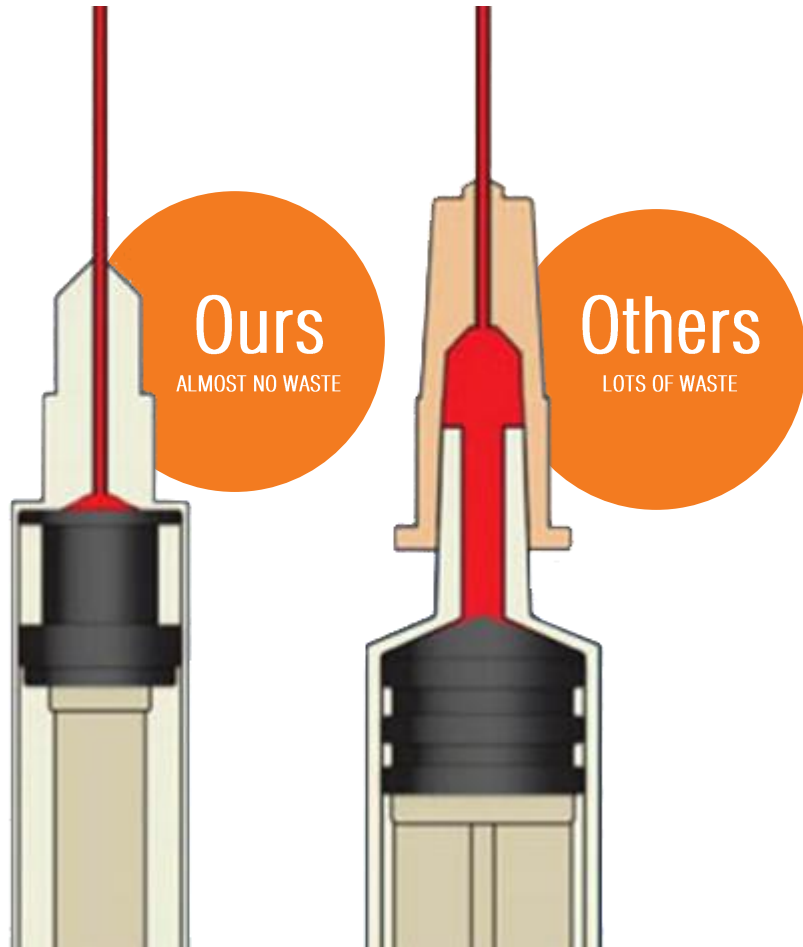
“When you think about the magnitude of the number of injections being given to respond to the pandemic, this is not a place where we can afford shortcuts, shortages or anything short of full safety for patients and healthcare staff.”

Lisa Hedman

*Senior Advisor, World Health Organization*

# Vial Over-filling

Why is it a **BIG** Problem?



- Pharmaceutical companies must overfill their vials or prefilled syringes to compensate for syringe dead space.
- Dead space is the amount of medicine that doesn't get injected and is thrown away with the used syringe.
- Depending on the dose and the syringe dead space, the pharma company may have to overfill with twice the amount needed for the patient. This leads to decreased availability and higher cost of vital vaccines and medicines.
- Reducing dead space increases the number of doses that can be given to people.
- Hard to manufacture drugs can be made available to patients more quickly.

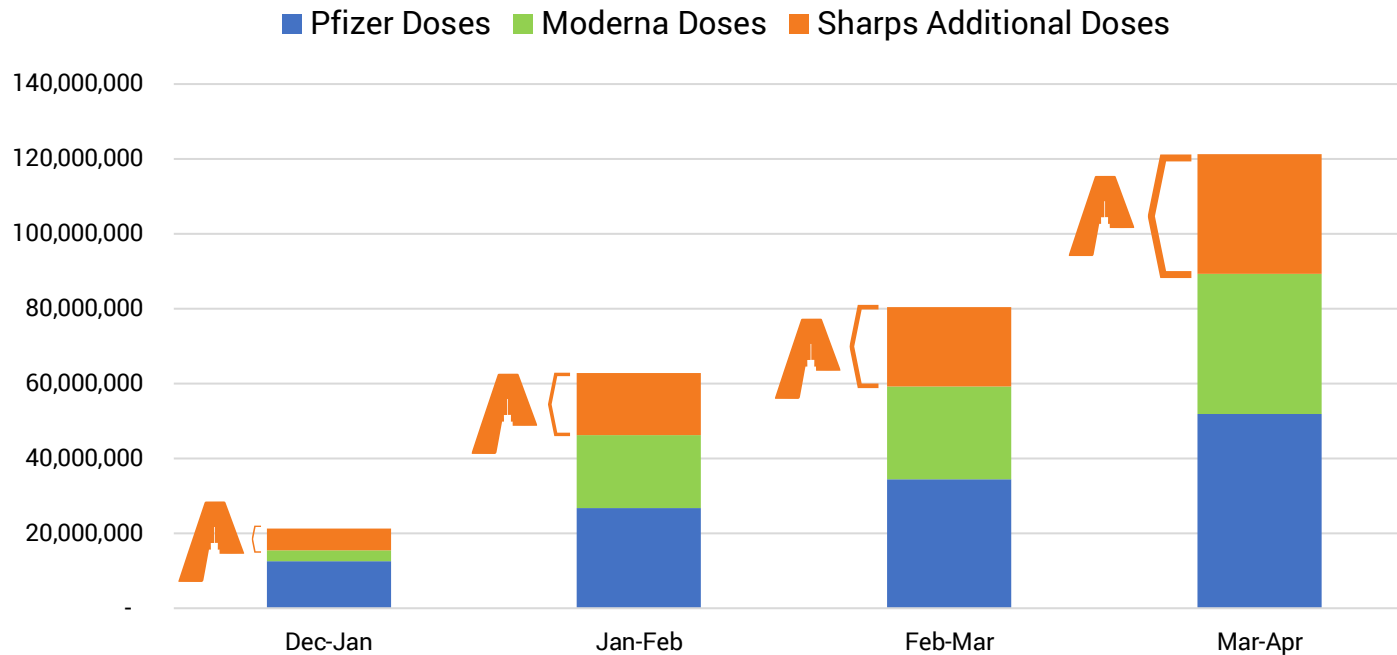


# Advantage of Ultra Low Waste Syringes

Less waste means more available doses



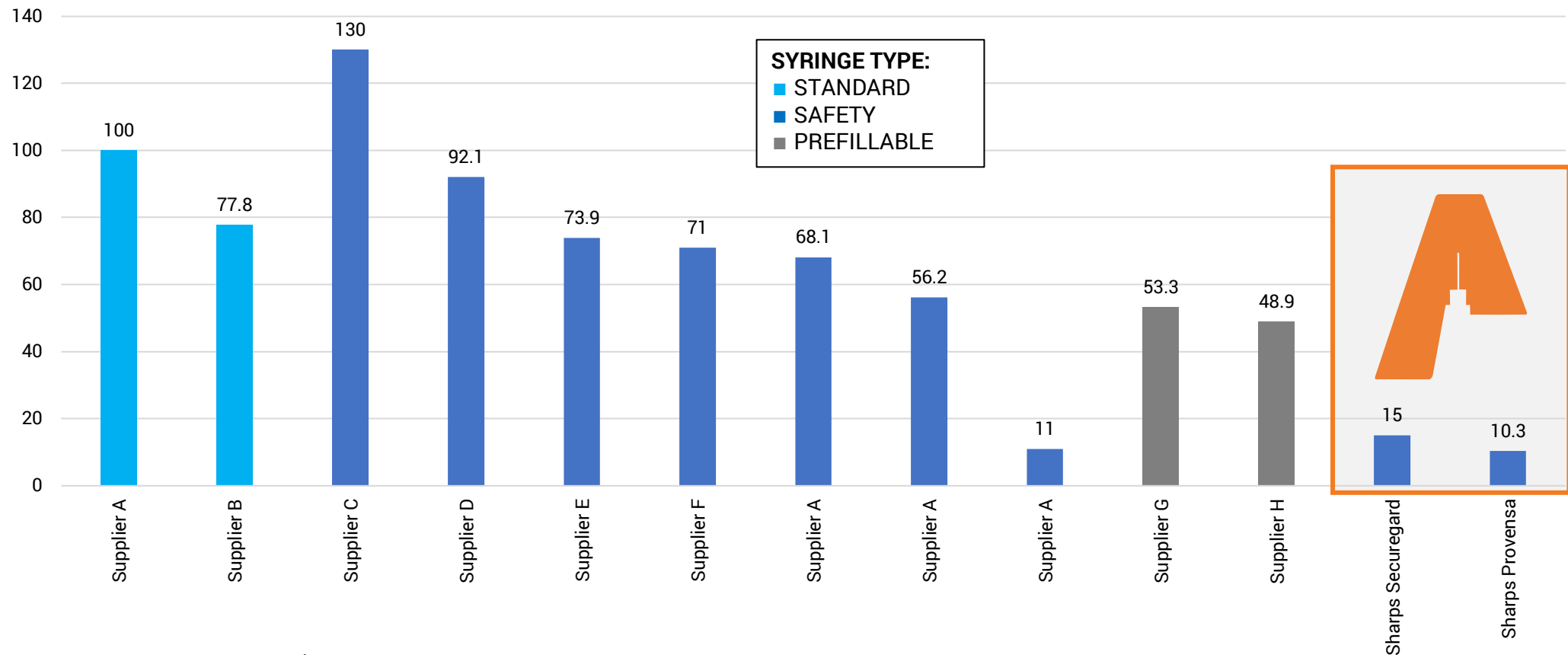
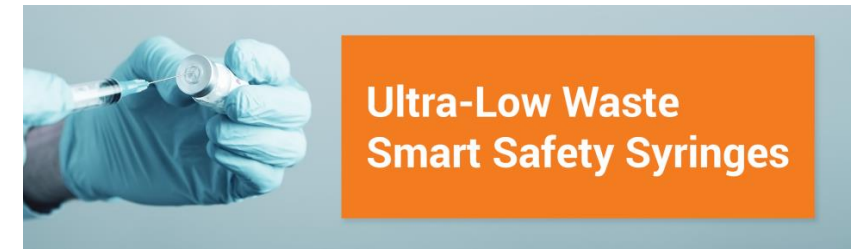
**Pfizer-Moderna Doses Delivered in US: 12/14/2020 - 4/13 2021**  
**Showing Additional Availability with 7-dose/13-dose**  
**Sharps Ultra-Low Waste Syringe**



Data source: CDC - COVID Data Tracker  
covid.cdc.gov

- 75+ MM additional injections were possible with Sharps Technology products, using the same vial and level of vaccine production
- 332+ MM people in the US in 2021
- 22%+ additional treatments using the Sharps Ultra-Low Waste Technology

# Average Waste/Dead Space (μL) for Sharps Syringes vs. Other Branded Syringes



Source: Whitehouse Labs/AMRI, Whitehouse, NJ

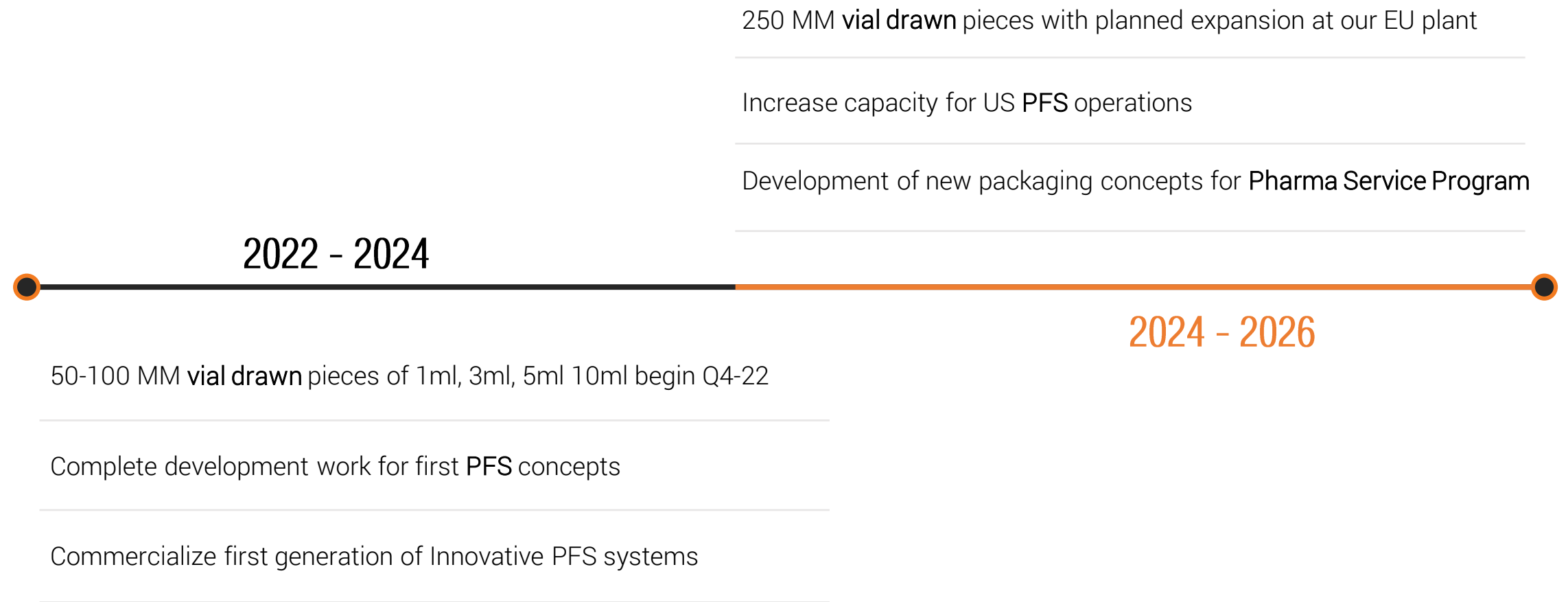
# Manufacturing Capabilities



Facility	Hungary	South Carolina
Size	~40k sq ft	100k sq ft
Capacity (2023)	~50 million	~10-20 million
Potential Annual Capacity (2024)	~200 million	~50 million
Types of Products	Disposable Syringes	Prefillable Syringes
Clean Room	✓	✓
Custom Injection Molding	✓	✓
Clean Room Automation	✓	✓
Pharma Water Systems (WFI)		✓
On-Site Sterilization	✓	
Warehouse	✓	✓



# Manufacturing Plan



# Leadership Team



**Robert Hayes**  
Chief Executive Officer & Director

25 years of healthcare experience including drug delivery and syringe development. Former Sr. Director with Gerresheimer and leadership positions with Baxter, Cardinal Health, Covidien, Boston Scientific and Fresenius Healthcare. Previous experience in Manufacturing, Product Innovation & Global Sales.



**Soren Bo Christiansen, MD**  
Chairman

Former Merck President, Europe, Canada, Middle East & Africa and SVP for Merck Vaccines. P&L responsibility for \$10 B in business.



**Andrew Crescenzo, CPA**  
Chief Financial Officer

Served in various finance roles from 2006 to 2019 in biotech, manufacturing and distribution, including, CFO of United Metro Energy; Senior VP of Finance of Enzo Biochem (NYSE:ENZ). Prior to 2006, he was an Executive Director from 2002 to 2006 and a Senior Manager from 1997 to 2002 at Grant Thornton LLP.



**Steven Hertz, MD**  
Chief Medical Officer

Dr. Hertz divides his time with a continuing role as Chief of Vascular Surgery at Saint Barnabas Medical Center and Site Director of the Vascular Fellowship teaching program. He has extensive consulting experience for medical devices and previously served as President of the Vascular Society of New Jersey.



# Management Team



**Filippo Filippi**  
General Manager and Plant  
Director

More than 35 years experience in manufacturing and supplying safety syringe technology to Europe, Asia, Africa, and the Americas. He has designed syringes and has built and managed syringe factories on several continents. General Manager of the current Sharps facility in Hungary for more than 20 years.



**Justin Page**  
Vice President of Technical  
Operations

20 years experience in technical injection molding and manufacturing of specialty packaging within the medical device industry. Plant Manager and manufacturing operations oversight at Silgan. He previously managed injection molding processes at Amcor Plastics, for large scale medical device tool manufacturing.



**Braden Miller**  
Director of Product and Program  
Development

Over 15 years experience in the pharmaceutical industry in engineering and management roles with branded and generic drug manufacture. Former Sr. Manager with Gerresheimer focused on developing and commercializing parenteral container and delivery systems, and sterilization operations.



**Jill Alznauer**  
Director of Commercial  
Quality

More than 25 years of experience in managing and supporting customer focused Quality Systems for specialty packaging for the pharmaceutical industry. Validation oversight at Amcor Plastics and managed the Field Quality Engineering Program for Gerresheimer Glass.

# Key Statistics

<b>Listing</b>	Nasdaq: STSS
<b>Market Cap</b>	~\$10M
<b>Common Shares Outstanding (STSS: \$0.84)</b>	11.7M shares
<b>Float</b>	~9.8M shares
<b>Warrants and Options</b>	13.7M
<b>Fully Diluted Shares Outstanding</b>	25.3M
<b>Institutional Ownership</b>	~40%
<b>Insider Ownership</b>	16%
<b>Revenue</b>	Pre-rev with sales expected end of Q2 2023 & beyond
<b>Cash</b>	~\$4.1M - as of 12/31/22
<b>Recent Raise</b>	\$3.2M through Aegis on 2/6/22
<b>Debt</b>	0
<b>Manufacturing Capabilities</b>	Hungary (STSS) & S.C. (Nephron)
<b>Employees</b>	~60
<b>Headquarters</b>	Melville, NY

# In Conclusion

- **Strong commercially available** product line of patented smart safety syringe products that are FDA, WHO and CE Mark approved and cleared for use by Pfizer and Moderna.
- **Nephron collaboration** *accelerates near-term path for (PFS) commercialization and expanded manufacturing*
  - ✓ Transformative manufacturing agreement to produce with a state-of-the-art manufacturing facility.
  - ✓ Pharma Services Program to develop a pipeline for future growth w/specialized packaging opportunities to support fill / finish projects for industry customers
  - ✓ Specialized distribution and sales agreement for Sharps products with access to 3000+ customers
    - ✓ Revenue expected to begin at end of Q2, 2023
  - ✓ Opportunity to expand manufacturing capabilities for growth initiatives w/100 million additional PFS products
- **Growing specialty syringe market** that includes all applications targeting healthcare and pharma customers
- **Strong management** team with extensive experience in drug delivery manufacturing and product development