



# INTRODUCING ETI

YOUR PARTNER IN METAL PRODUCT MANUFACTURING



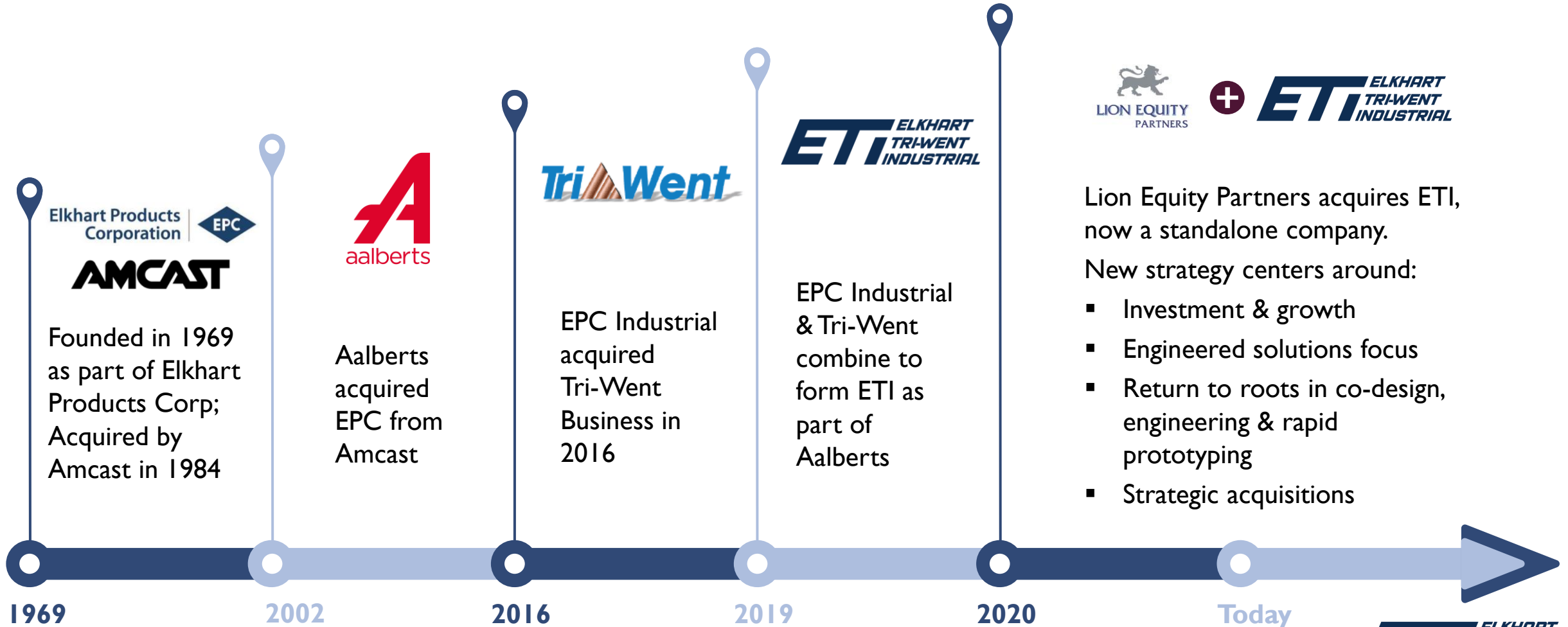


## Introductions & History

ETI Products and Capabilities

New Business & Follow up

# HISTORY OF ETI



# GENEVA, IN



Founded & Original Facility Constructed in 1969

130,000 sq-ft Manufacturing Facility on 25 Acres

Manufacturing, Tool Building, Engineering,  
Sales & Finance

Manufactures a wide variety aluminum and  
copper products

ISO:14001 / ISO:9001 Registered

# KNOXVILLE, TN & AJAX, ONT (CAN)



Ajax, Ont



Knoxville, TN

1973 – Tri-Went was founded in Toronto, Canada

1991 – Knoxville, TN facility opened

Tri-Went Acquired by ETI in 2016

ISO:9001 Registered

# OUR VALUE PROPOSITION















We specialize in working with our partners to provide **Engineered Solutions** in complex extrusion, brazing, fabrication, and tube bending applications, using copper, aluminum and steel.

We collaborate closely with customers to **Design, Engineer, and Prototype** mission-critical components

**Distinctive Capabilities** include:

- Specialized Tooling Development
- CNC, prototyping, and testing
- Complex Bending, Brazing & Assembly
- Impeccable Quality Record

# WIDE PRODUCT ARRAY SERVING DIVERSE MARKETS

|  | Selected Products   | Representative End Markets  |
|--|---|---|
| <br>Brazed Assemblies |    | <ul style="list-style-type: none"> <li>✓ Water Systems</li> <li>✓ HVAC &amp; Refrigeration</li> <li>✓ Industrial</li> <li>✓ Medical</li> <li>✓ Construction</li> <li>✓ Other</li> </ul> |
| <br>Coils             |    | <ul style="list-style-type: none"> <li>✓ HVAC &amp; Refrigeration</li> <li>✓ Industrial</li> <li>✓ Medical</li> <li>✓ Other</li> </ul>  |
| <br>Connectors        |    | <ul style="list-style-type: none"> <li>✓ Water Systems</li> <li>✓ HVAC &amp; Refrigeration</li> <li>✓ Industrial</li> <li>✓ Other</li> </ul>  |
| <br>Multi Bends      |   | <ul style="list-style-type: none"> <li>✓ Water Systems</li> <li>✓ HVAC &amp; Refrigeration</li> <li>✓ Industrial</li> <li>✓ Medical</li> <li>✓ Other</li> </ul>                         |
| <br>U-Bends         |  | <ul style="list-style-type: none"> <li>✓ Water Systems</li> <li>✓ HVAC &amp; Refrigeration</li> <li>✓ Industrial</li> <li>✓ Medical</li> <li>✓ Other</li> </ul>                         |
| <br>Extrusions      |  | <ul style="list-style-type: none"> <li>✓ HVAC &amp; Refrigeration</li> <li>✓ Industrial</li> <li>✓ Automotive</li> </ul>  |

Engineered solutions for Automotive, OEM, Medical, Building & Construction, Industrial and Defense markets

## Why ETI?

- Stellar industry reputation since 1969
- Deep manufacturing and R&D capabilities
- Expansive metal forming knowledge
- Partner attitude



# LONG TERM PARTNERS – MUTUAL SUCCESS



**Over 350 Customers**



**5 Continents**



**17 countries**



**47 states**

EaglePicher™  
Technologies, LLC



**MAHLE**  
*Driven by performance*



**Designed for...**



Lennox Corporation had an idea of using a known fitting for an application, but needed an alternative material to copper. ETI work with Lennox to design an ALUMINUM EXTRUDED RETURN BEND which had never been successfully produced in the past. Through ETI's experience in aluminum extrusion, we were able to work together to create an industry first product that has grown to Lennox's largest residential product with no signs of slowing.

**Rinnai**



**LYTRON™**  
*Total Thermal Solutions™*

**Prototyped for...**



AAON wanted to replace a CAST Winged Adapter with a copper version, unfortunately this did not exist. After working through a few dimensional issues, ETI was able to quickly prototype a copper alternative for AAON to prove out there design.

**MCC** Mobile Climate Control



**Hillphoenix**  
A DOWD COMPANY



**Solution for...**



*Making your vision come true!*

B2C had a problem. They needed to increase productivity of trac home copper water service with a shrinking skilled labor force? ETI offered a prefabricated copper soldered assembly that reduced the amount of solder joint by half, eliminated the need for fire watch and reduced the need for skilled labor.



# ALUMINUM / COPPER CAPABILITIES

## Aluminum



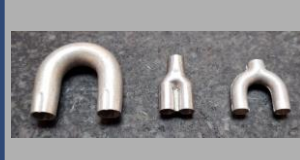
**Reciprocating  
Pistons**



**AC&R  
Manifolds**



**6 MM  
Manifold**



**Distributors &  
Return Bends**



**Master  
Cylinder**



**Hairpins**



**Mini  
Blocks**



**Mini  
Blocks**



**Solid Compressor  
Piston**



**Driveshaft  
Yokes**

## Copper



**Distributors/  
Connectors**



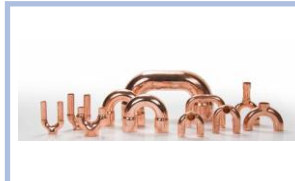
**Headers/  
Manifolds**



**Formed tubes/  
Multi Bends**



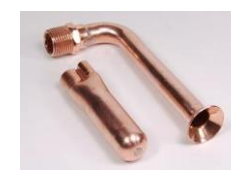
**Kitting  
Assemblies**



**Flat Bends/  
Return Bends**



**Brazed  
Assemblies**



**Spun  
Parts**

# EXTRUDED ALUMINUM TUBES & ASSEMBLIES

Can be designed for very high strength –  
metal is placed where needed

Forming results in  
superior material  
properties

Heat-Treatable

High Strength-to-  
Weight Ratio

No Porosity Issues

Reduced product  
weight

High Quality /  
Low Cost

Near Net Shape with  
excellent dimensional  
control

Low start-up  
cost

## Benefits of the Aluminum FORMCAST Process



# ETI HAS A FULL SUITE OF ENGINEERING CAPABILITIES

## R&D

- Full tool room capabilities - Complete design/build of tooling and prototypes
- EDM Machining
- High speed mills
- CNC Milling
- ID/OD machines - grinders, mills, surface grinders

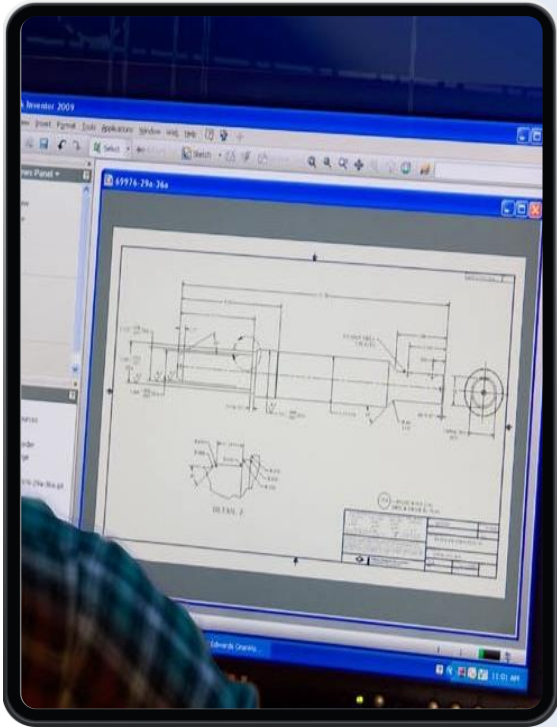
## Manufacturing

- Hot Forging Presses
- Cold Header Forming
- CNC Bending for complex tube forming
- Extruders
- Punch Presses
- Brazing / Soldering
- Production machining centers
- Sizers / Facers
- Automated Fab Center
- Annealing
- Friction Welders

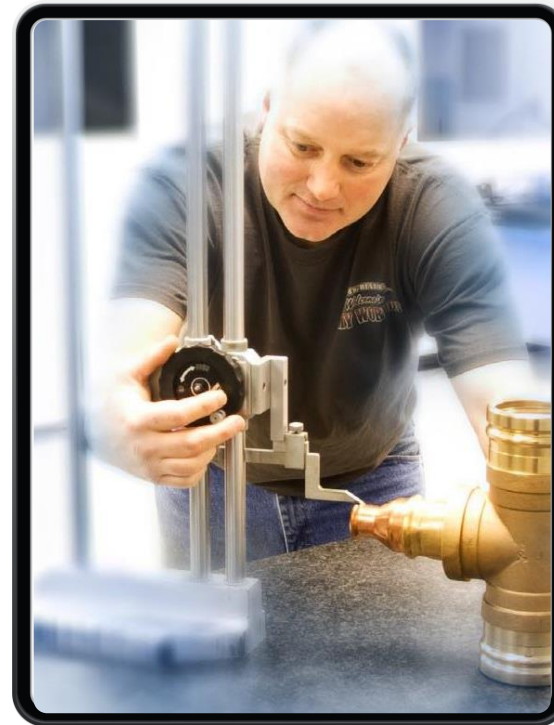
## Testing

- Geared for testing to B16.22 of standard wrought fittings
- Helium leak testing for brazed assemblies
- Majority of testing is done by a 3<sup>rd</sup> party lab “Element”
- Nikon CMM / Faro Arm for large part scale

# SUPPORT CAPABILITIES & PRODUCT TESTING



- ETI offers in-house tool design, technical support, and product development capabilities
- Benefits include:  
Quick lead time from concept to prototypes and design of formed parts to replace brazed assemblies



We are ISO:9001 Certified, and have raised our internal quality standards to fully meet our customers expectations

- Full dimensional testing capabilities
- Flow modeling simulations
- Just-In-Time delivery systems
- Capabilities in all non-ferrous metal forming
- Defined process control procedures
- Received quality awards from multiple customers

# THANK YOU

- Questions/Comments?
- New Business Opportunities
- Next Steps