


Customer Segment

 **Customer Jobs:**

Building Owner:

- Reduce HVAC operational cost,
- CAPEX Investment decisions in highly efficient HVAC equipment purchases
- Hire specialized HVAC personal.

Building Operation's Manager:


- Improve HVAC operational strategy for cost reduction,
- Resolve daily HVAC ops. problems to facilitate smooth operation,
- Explain large HVAC OPEX costs.

Building HVAC Engineer:


- Make decisions to improve low efficiency HVAC operation,
- Resolve problems associated to HVAC system low capacity operation,
- Monitoring performance [explain lack of it].

HVAC Technicians:


- Maintain HVAC equipment,
- Adjust/fine-tune equipment operation,
- Repair HVAC faulty equipment,
- Resolve tenant's comfort issues.

 **Gains:**


- Most economical/inexpensive HVAC system operation,
- Highest NPV, ROI, payback on energy efficient retrofit [Lowest CAPEX],
- Reduced Natural Gas bill [lowest possible],
- Reduced GHG emissions [**lowest possible**],
- Lowest possible Carbon tax penalty,
- Lowest HVAC electricity bill [by 20%],
- Improved Bldg. heating and DHW capacity at reduced CAPEX,
- Improve building comfort level at lowest CAPEX,
- Improve process output at lowest CAPEX for Industrial-Light thermal processing.

 **Pains:**


- Outdated inefficient HVAC system w/ costly operation,
- Low energy-efficiency performance [including modern HVAC system and ZCB certified Bldgs.],
- Costly Carbon Levy [high CO2e emissions],
- Expensive technologies for Carbon emissions offsetting [Bldg. toward ZCB certification],
- High HVAC electricity bill,
- Costly Domestic Hot Water [DHW] production,
- Failing/Reduced building heating and DHW capacity,
- Oversize design of Heating & cooling HVAC systems,
- Thermal bottlenecking on processes lines,
- High NG and electricity bills.

 **Gain Creators:**

- ZERO-MIXING Heating/Cooling process,
- HVAC System max temperature differential operation platform,
- Constant Bldg. Low Water temperature return,
- Added HVAC-system Thermal Mass,
- Hydronic hot/cold water split process,
- Reduced water/air flows operation [50%],
- Improved Heat/cooling-source capacity [Double],
- Improved building heat/cooling delivery [AHU and DHW output capacity Doubling],
- Improve building comfort level @ extreme conditions.

 **Pain Relievers:**

- Elimination of WATER-MIXING HVAC-System operation platform, impairing/limiting output on heating/cooling sources [such as cond.-boilers, CHP, Geothermal, solar panels, chillers].
- Elimination of increasing building water return temperature operation killing boiler condensation,
- Improved Low system thermal mass causing continuous boiler short-cycling,
- Improved Hydronic hot/cold water split process limiting proper Bldg. Mgmt. System controlling,
- Reduced water-pumping/air-ventilation flow operation causing higher electricity bills,
- Doubling boiler/DHW capacity, augmenting standby period with less NG consumption.

 **Products and Services:**

ENGINEERING & CONSTRUCTION:

- Bldg. HVAC Energy Efficient Retrofits,
- Light Industrial Batch Processing Optimization,
- Building HVAC Design,
- Industrial Waste Heat Recovery
- Energy Audits,
- Construction/installation support

MANUFACTURING:

- Split Buffer Tank [SBT]/ZERO-MIXING,
 - For condensing boiler application,
 - For Domestic Hot Water apps,
 - For CHP applications,
 - For Geothermal applications
 - For Solar-thermal applications,
 - For Chilled water system apps.

PRODUCT MANUFACTURING + TRAINING:

- SBT Manufacturing technology support [to regional tanks manufacturers],
- Licensing [for the right to install, repair and provide customer service],
- Engineering training and consulting assistance.

Value Proposition