



# Hypertherm Flow-First Operating System

## Challenge

Privately held Hypertherm (Hanover, NH) designs and builds advanced plasma-cutting systems on a vertically integrated, high-mix campus. Early lean tool use wasn't the constraint; leadership wanted an operation that grew the business, not one that required daily management heroics. Specific pressures included:

- End-to-end flow across shared machining, assembly and test without production control.
- A tight local labor market for skilled CNC operators.
- Supply-chain fragility (notably electronics) and a "no-layoff" people philosophy, including through recessionary demand shocks.

## What We Did

Designed a value-stream operating system that lets associates "see flow with their eyes" and correct abnormalities at the source.

Core moves:



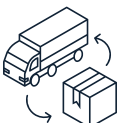
Flow from receiving > fabrication > assembly > shipping with visual signals (green/yellow/red "thermometer boards"), FIFO lanes and standard responses for abnormal flow.



Removed central production control; work is authorized on the floor.



Reorganized the office into business teams (Ops + R&D + Sales/Marketing per product line) to couple market signals to execution.



Tightened supplier links (more frequent deliveries by signal; line-ready kitting and crate design led by shop-floor associates).

## Why it Worked

- Flow before tools: Clear normal and abnormal flows defined, visual control, and standard responses made performance self-managing.
- Associate ownership: Skills, trust, and shared rewards created fast local problem-solving and innovation.
- Tight market-operations coupling: Business-team structure and HTTI turned operational reliability into a growth engine.

**7x** Sales Growth  
over 5 years

## Implementation Highlights

- Self-healing value streams: Associates initiate fixes (no meetings/approvals) and keep flow on time.
- Office flow by design: Cross-functional business teams speed decisions and eliminate rescheduling churn.
- People first, even in downturns: No layoffs; “excess” capacity redeployed to CI, lab/testing, and insourced facilities work-accelerating improvement.
- Supported the building of Hypertherm’s capability engine: HTTI graduates feed machining, shorten development loops, and free engineers for product/tech work.



## Results

- 7x sales growth over 5 years, and rapid rebound after external economic shocks, returning to prior peaks roughly a year ahead of plan.
- Resilience in steep economic downturns: revenue down 36%, yet R&D investment up 20% with more products launched than any prior year, and profit-share paid.
- Market outperformance: Post-recession growth roughly 2x Public peers; moved to 24/5 production with extra weekend shifts.
- Global delivery from NH: 25% of output to Asia and 30% to Europe with minimal pipeline inventory.
- Management time unlocked: Operations run without daily intervention; leaders focus on customers, strategy, and new products.
- Enabled the establishment of the Hypertherm Technical Training Institute (HTTI) to create CNC talent in 10-week, full-time cohorts; added autonomous maintenance.

## Contact Us

We believe we must earn our place by accomplishing results. We don't lock you into contracts. If you don't think we're delivering value, don't keep us as a partner.

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