

John Henry Foster

To foster passion and create opportunity
for people to achieve the incredible

Tyler Ostmann

Aftermarket Product Manager



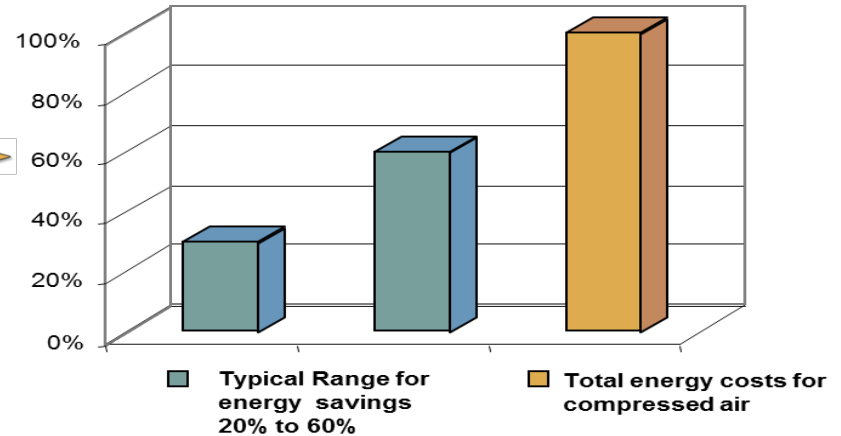
Department of Energy Report

About 8hp of fuel is used to generate the electricity required for 1hp of compressed air, making it the least efficient and sustainable plant utility

Typical savings opportunities in the 20% to 60% range

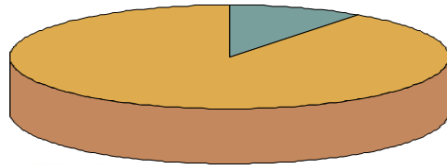


Typical opportunity for Energy Savings



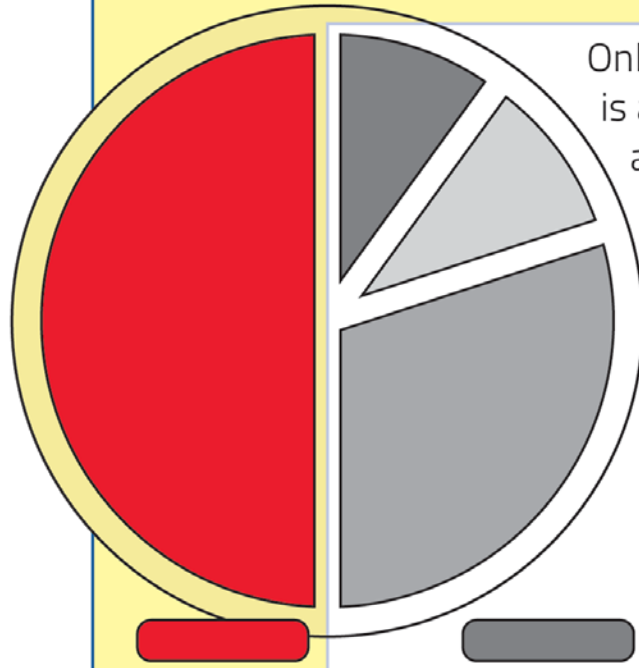
Awareness of Energy Savings Potential

■ Aware of Opportunities ■ Not Aware of Opportunities



Less than 10% of plants have awareness of opportunities for savings

On average **50%** of compressed air is wasted



Only 50% of the compressed air produced is appropriately utilized based on national averages. The remainder is lost to:

- ✘ Improper Use
- ✘ Improper Application
- ✘ Inadequate Piping and Storage
- ✘ Improper Pressure Settings
- ✘ Compressor & Control Selections
- ✘ Piping Leaks
- ✘ Multiple Compressor Schemes
- ✘ Compressor Room Environment
- ✘ Lack of System Maintenance
- ✘ Inappropriate Contaminant Removal Systems

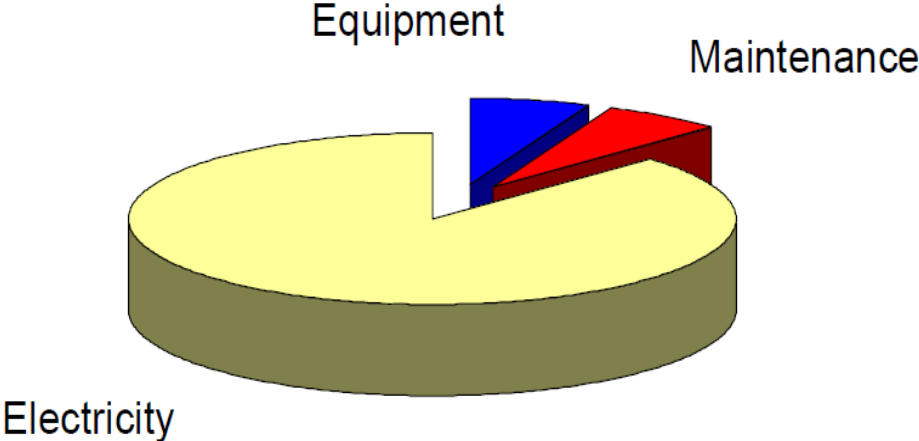
Production

Inappropriate Uses

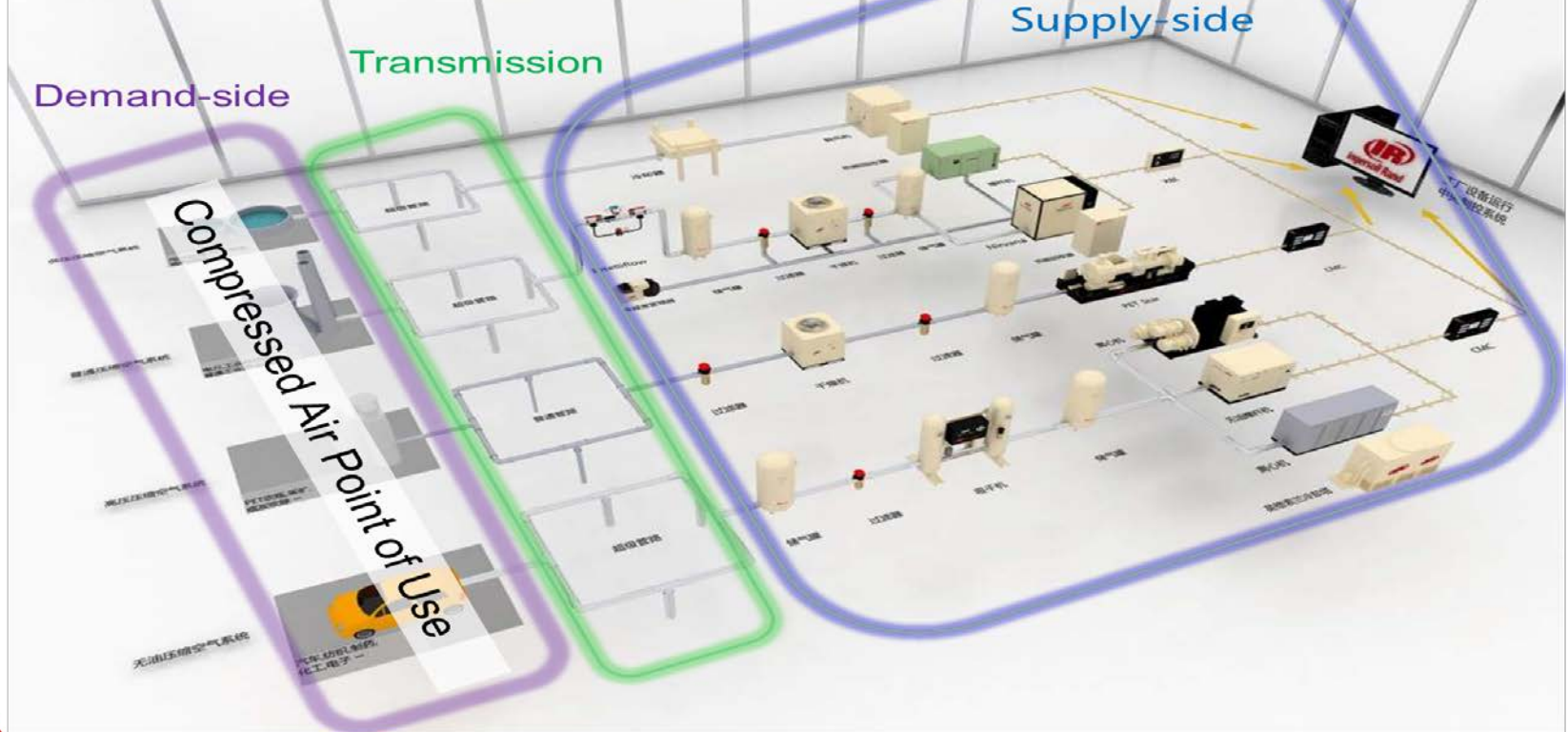
Artificial Demand

Leaks

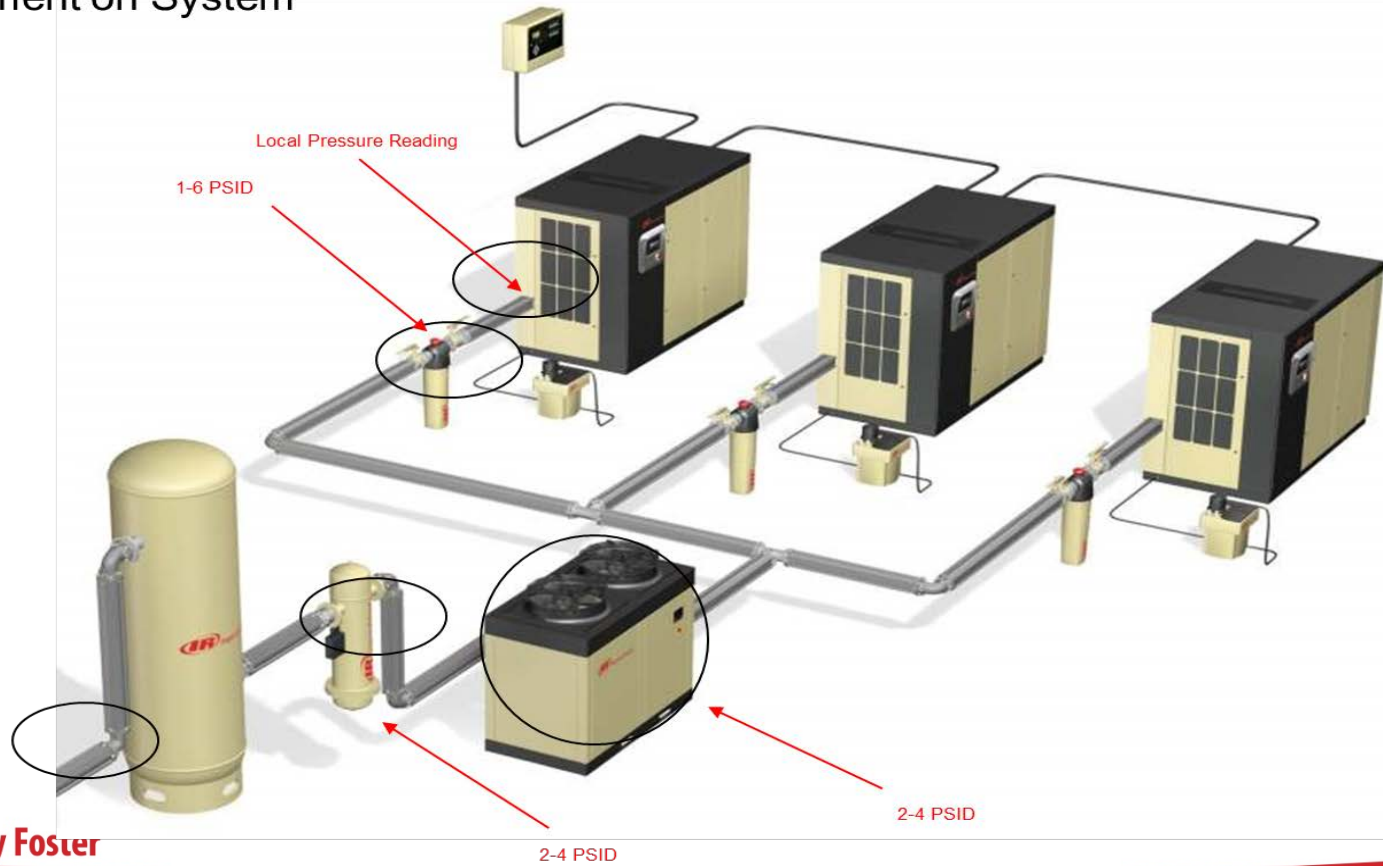
Life Cycle Cost of an Air Compressor



The Utility of Compressed Air



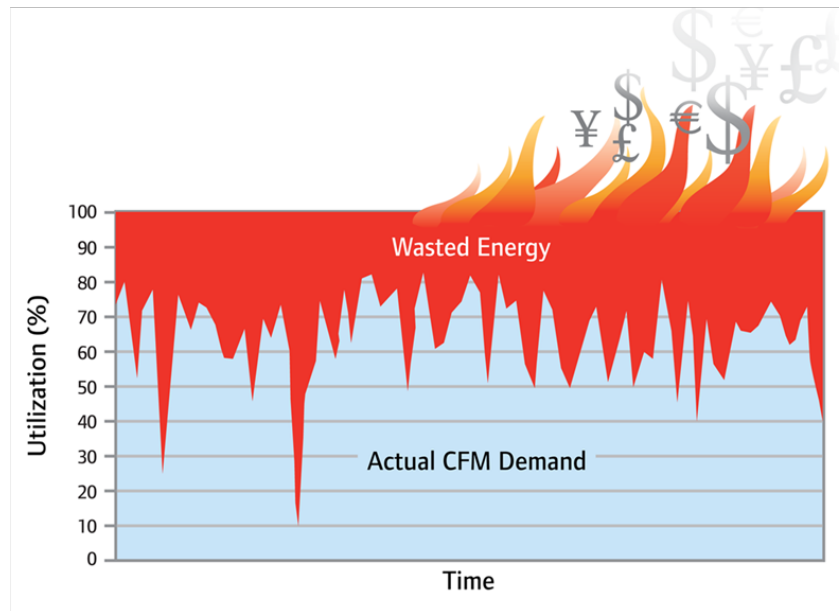
Impact of Cleanup Equipment on System



Compressed Air Leaks

- 15-20% Leak rate is low
- Before a leak study its not uncommon to have a 30-50% leak rate
- If you can hear the leak, it needs to be repaired
 - 104cfm or 25hp worth of air can go through a ¼" leak at 100psi

System Automation



Common findings with “unmanaged “ systems:

- More compressors are running than required
- The wrong combination of compressors are running
- System pressure is much higher than required

As much as 20%-60% of the energy used to operate typical compressed air systems...is wasted!

System Automation

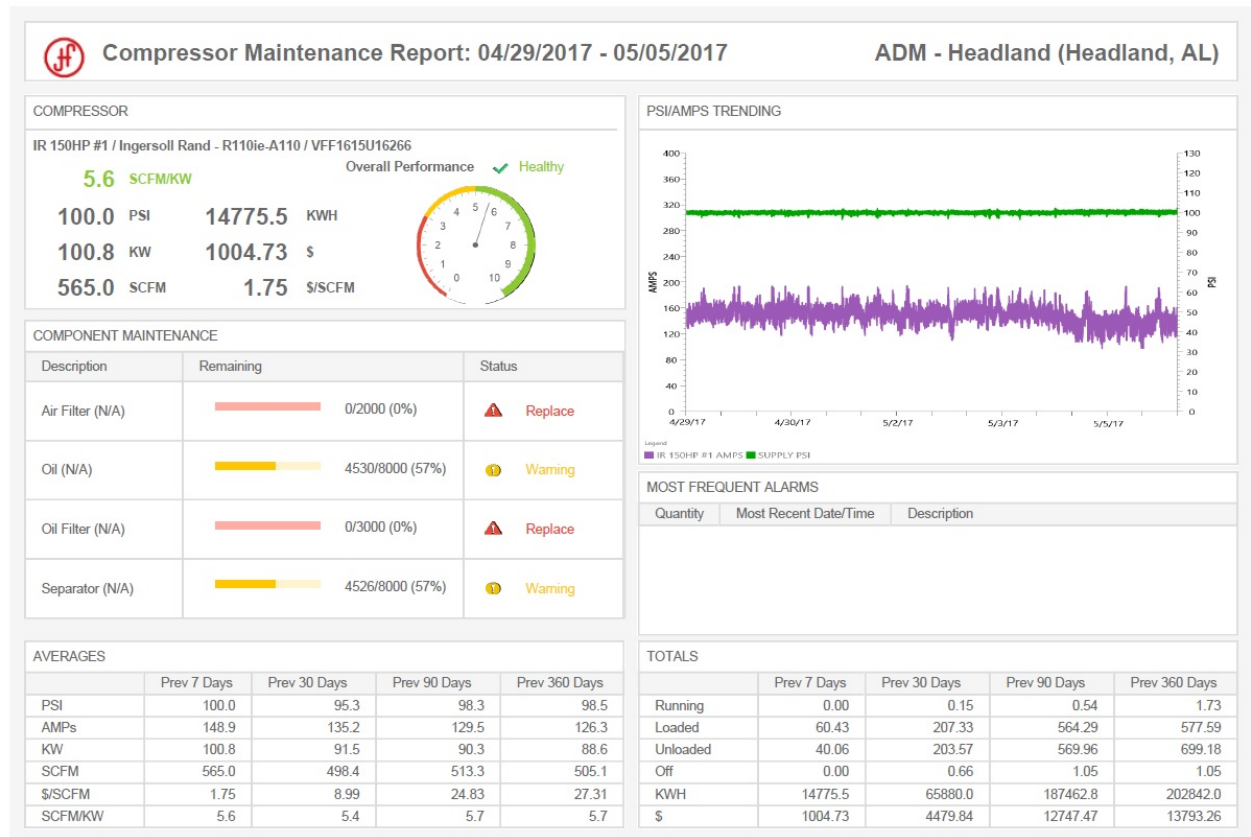
Four things a system controller can do to solve your customers problems...

1. Operate compressors only as needed
2. Manage the compressed air system at your minimum required pressure
3. Dynamically match the most efficient set of compressors for the load at the moment
4. Operate one or more variable speed compressors in a “trim” role



Sustainment

Maintenance Reports are generated for each compressor to show the status and develop predictive maintenance.



Sustainment

Using the raw data, entered conditions and imbedded formulas, we have developed the "Dashboard".

This displays each compressor's health and operation at a glance.



Compressor Dashboard Report: 04/29/2017 - 05/05/2017

ADM - Headland (Headland, AL)

COMPRESSOR SUMMARY

All Compressors

5.5 SCFM/KW

Overall Performance ✓ Healthy

100.0 PSI 15167.0 KWH

104.6 KW 1031.36 \$

578.4 SCFM 1.78 \$/SCFM



MAINTENANCE SUMMARY

Compressor	Component	Remaining	Status
IR 150HP #1	Oil Filter (N/A)	0/3000 (0 %)	▲ Replace
IR 150HP #1	Air Filter (N/A)	0/2000 (0 %)	▲ Replace
IR 75HP #2	Air Filter (N/A)	0/2000 (0 %)	▲ Replace

TRENDING SUMMARY



KW/\$ SUMMARY

Compressor	KW	Hours	Cost
IR 150HP #1	100.8	168.00	1004.73
IR 75HP #2	1.1	168.00	10.85
Quincy 200HP #3	1.5	168.00	15.78

ALARMS SUMMARY

Compressor	Critical	Warning	Informational	Total
IR 150HP #1	0	0	0	0
IR 75HP #2	2	0	0	2
Quincy 200HP #3	0	0	0	0

UptimeRMX



UPTIMETM
RMX
More Efficiency. More Uptime

UptimeRMX provides cloud-based diagnostics and analytics for dependable wireless remote system monitoring – delivering greater reliability, improved air quality and lower overall costs of operation. This patent pending system was uniquely developed for, and by, dedicated compressed air service professionals.

**ANY
QUESTIONS?**