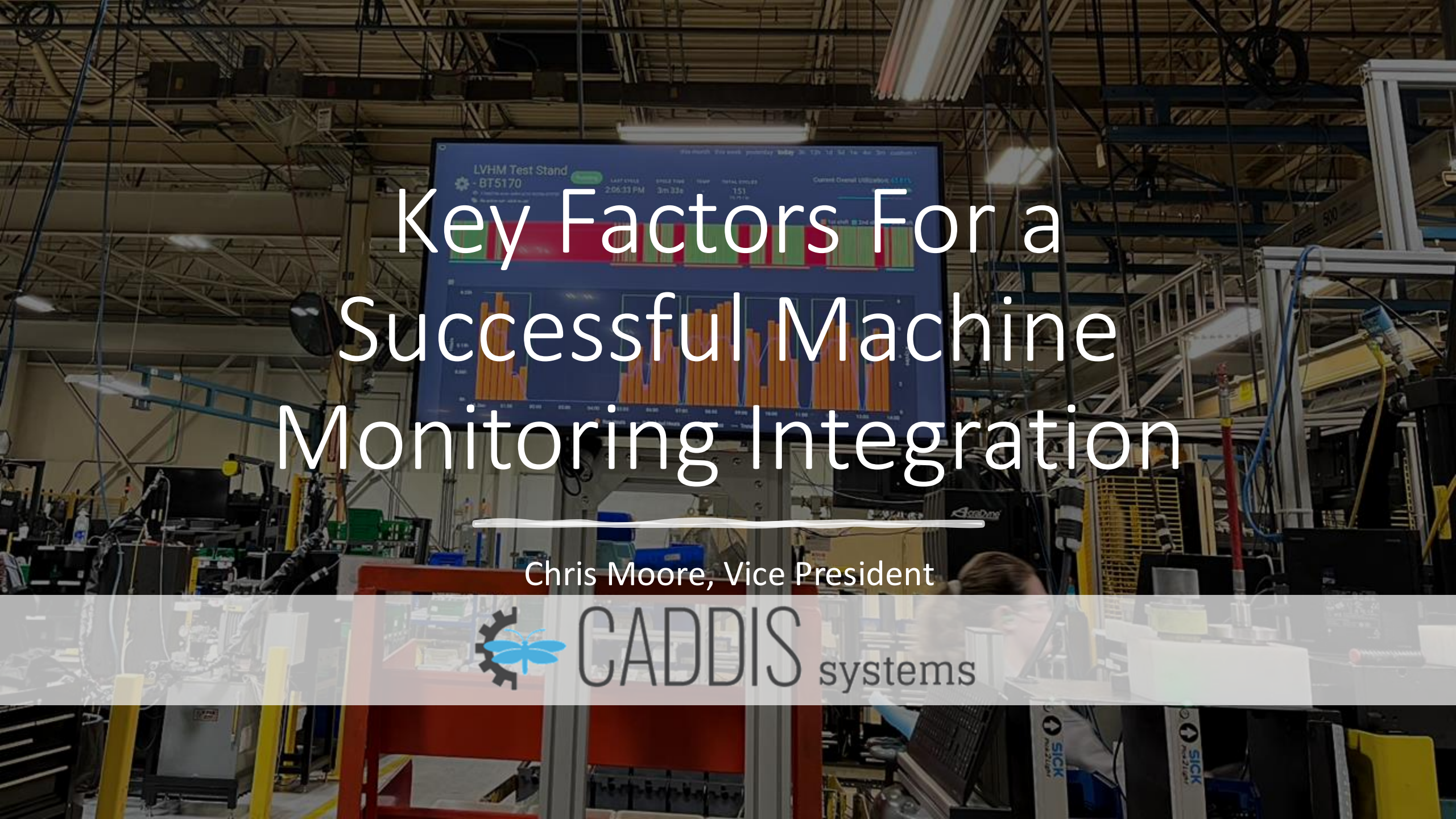


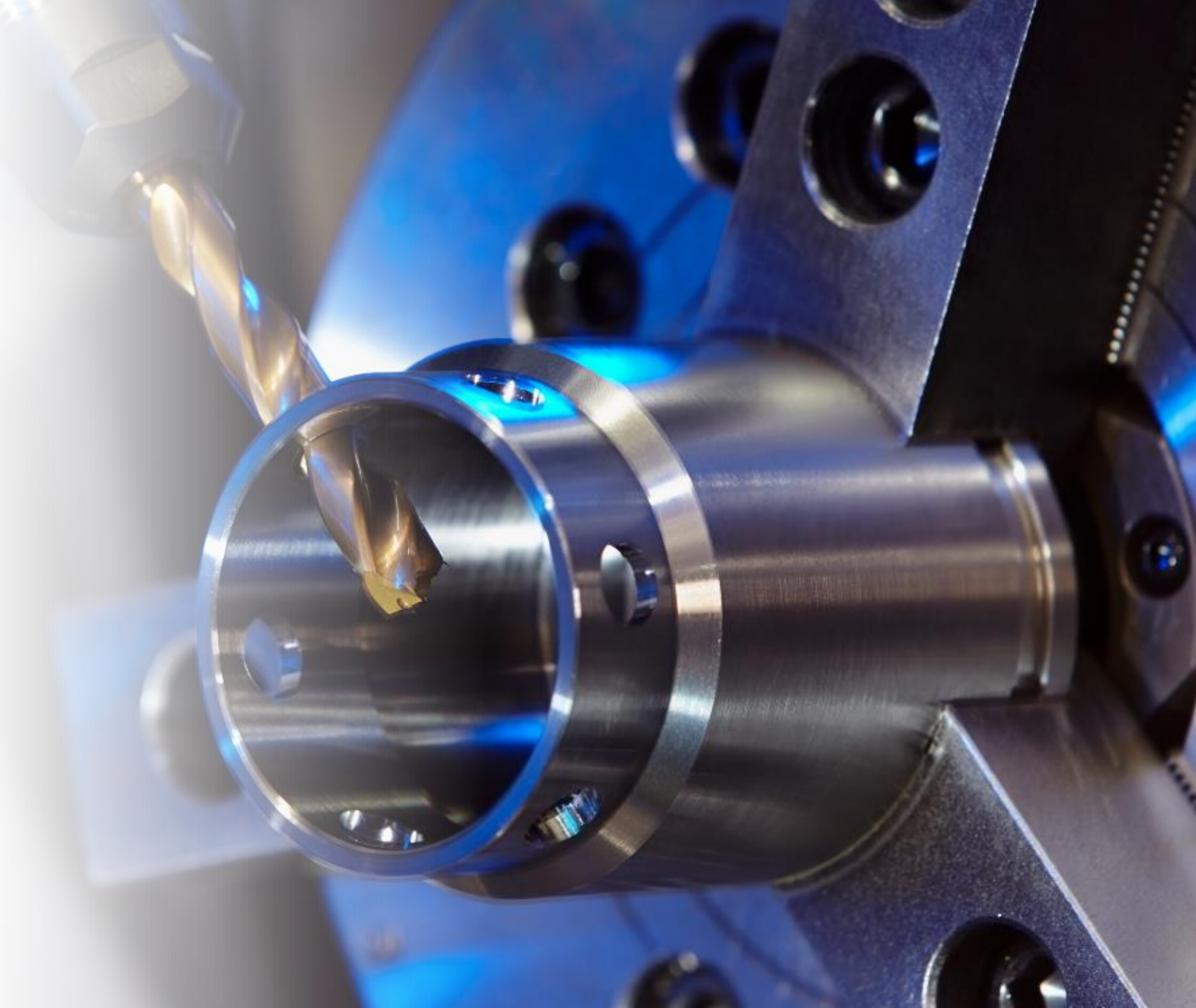
Key Factors For a Successful Machine Monitoring Integration

Chris Moore, Vice President

CADDIS systems

What You Need To Know

- Principles of Machine Monitoring
- Barriers to Entry
- Critical Factors for a Successful Integration
- Success Story- LeClaire Manufacturing



CADDIS systems

Manufacturing 4.0

Let The Machines Do The Talking

- Real-time visibility
- NO second guessing on why machines are down
- Actionable data anywhere and at any time

CADDIS systems

Barriers To Entry

- Management hesitance
  - Things are ‘good as they are’
  - Cost (misconceptions)
- Lack of acceptance / participation
  - Resistance to another technology
  - ‘Big brother’ fear
- Misunderstanding data
  - Not a clear plan on what to do with the data?

CADDIS systems

Three Key Factors For Overcoming Barriers

Management Buy In

Operations And Maintenance Team Participation

Good Data

CADDIS systems

Management Buy In

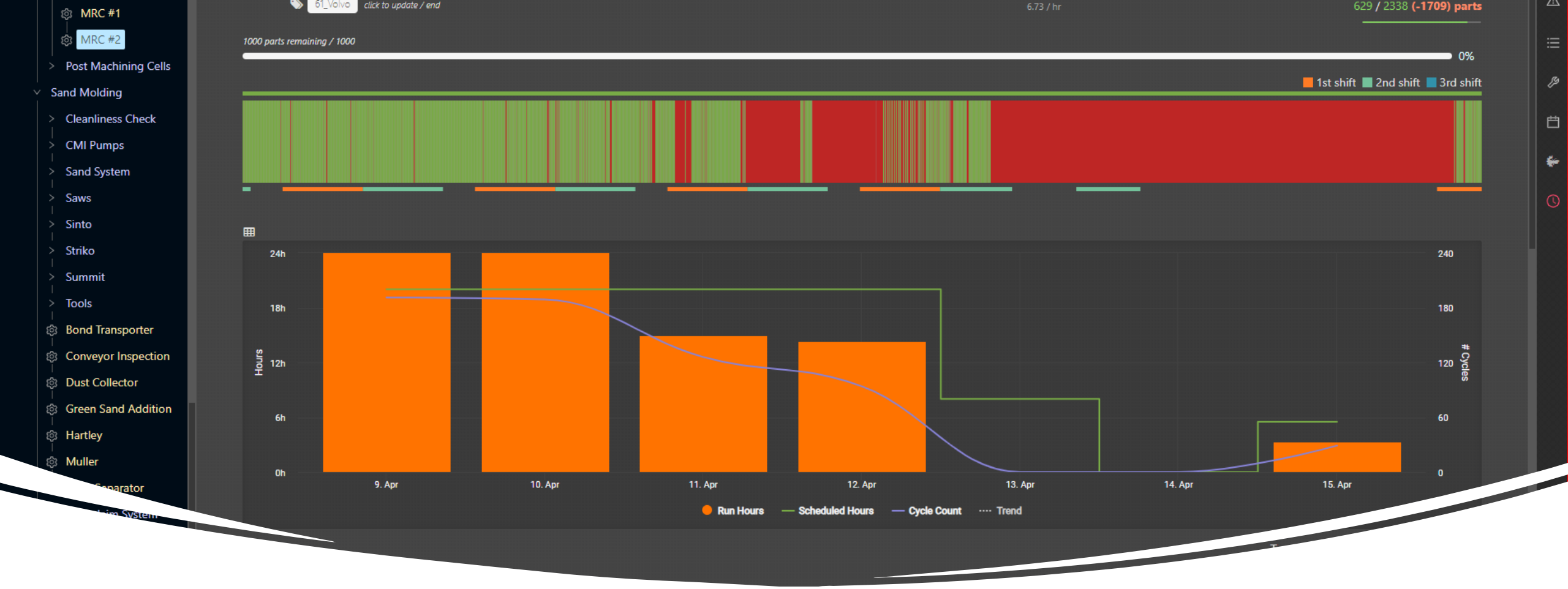
- Make this a priority.
- Set a budget: What is total cost for implementation? Are you leasing or purchasing hardware. Verify any reoccurring fees?
- Define launch timeline.

CADDIS systems

Operations And Maintenance Team Participation

- Maintenance Team install support. Hardware needs to be installed before data can be captured.
- Must have participation of all employees to see full value.
- Generate an incentive program for increased uptime & decreased downtime.

CADDIS systems



Good Data

- Make sure the signal that you are using to populate dashboard is truly indicative of the machine powered on and cycling. Additional sensors like one used for vacuum pump pressure must be calibrated.

CADDIS systems

What To Do With All That Data

- Increase Overall Production
- Decrease Downtime
- Better schedule and manage Preventative Maintenance Tasks.
- Asset Management

CADDIS systems

Success In The Market

LeClaire Manufacturing

CADDIS systems

Aluminum Casting Foundry and Machine Shop

LeClaire Manufacturing is a family-owned sand and permanent mold aluminum casting supplier:

- Agriculture
- Marine
- Recreational vehicles
- Numerous other industries

- Design and engineering
- Tool building
- Heat treating
- Core making
- Real-time x-raying
- Impregnating
- Anodizing
- Machining

CADDIS systems

Vertical and Horizontal Machining

Goal = Tightening up performance metrics during a time of growth.

- Thirty machines, growing by six total in the three-year period:
  2021 – 2022 - 2023

CADDIS systems

Vertical Machining Department

Year	# Of Machines	Utilization Rate	Production Hours	Production Dollar Equiv.
2021	5	10%	4,177	$626,550
2022	7	44%	16,784	$2,517,600
2023	7	48%	21,188	$3,178,200
	+2	+38%	+ 17,011	+ $2,551,650

Horizontal Machining Department

Year	# Of Machines	Utilization Rate	Production Hours	Production Dollar Equiv.
2021	19	33%	48,694	$7,304,100
2022	20	50%	54,409	$8,161,350
2023	23	52%	69,937	$10,490,550
	+4	+19%	+21,243	+ $3,186,450

CADDIS systems

What it means for the business

An increase in production hours of **38,254**

An increase of production dollars of **$5,738,100**

CADDIS systems

Thank you

For additional questions on machine monitoring integration,

please contact Chris Moore at:

chris.moore@caddissystems.com

Mobile: 323 229-6346