

Operational Excellence with QRM



Agenda

- ▨ Kooima: A practical example
- ▨ Operational Excellence: QRM
- ▨ Physical POLCA
- ▨ Digital POLCA
- ▨ Results



KOOIMA
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TURNER
COMPOSTER

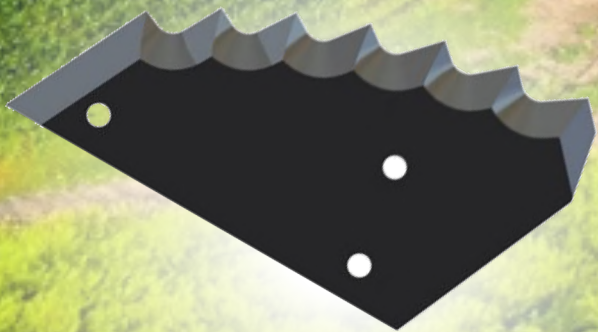
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COMPOSTER

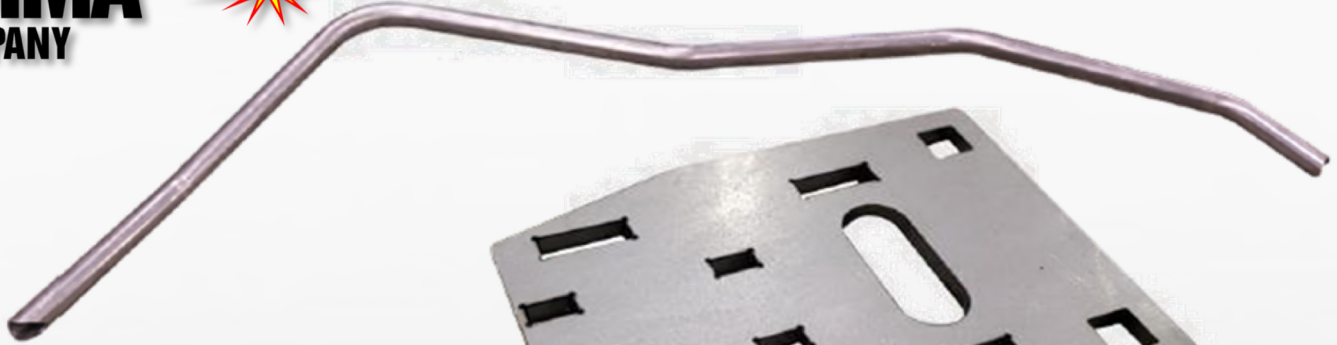
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KOOIMA
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PROPOS
optimal flow





Laser Flat

Bend Flat

Laser Tube

Bend Tube

Grinding

Machining
(Horizontal/Vertical/
Large)

Assembly

Welding

Shipping

Outsourcing

Reaming

Knife Cell

Laser Cladding

Lathe

Water Jet

3D Laser



GOAL

> 30%

Reduce
lead times

> 10%

Increase
on time
delivery



5S: Clean makes clear

-  Sort
-  Shine
-  Set in order
-  Standardize
-  Sustain

THE 8 DEADLY WASTES

-  Over-production
-  Transportation
-  Excess inventory
-  Defects
-  Over-processing
-  Wasted motion
-  Waiting time
-  Wasted talent



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KOONMA

THE 8 DEADLY WASTES

- Over-production
- Transportation
- Excess inventory
- Defects
- Over-processing
- Wasted motion
- Waiting time
- Wasted talent

KOONMA

Before: cluttered

5S: Clean makes clear

- 🗑️ Sort
- 🧹 Shine
- 📏 -IFT Set in order
- 📏 Standardize
- 🔄 Sustain

THE 8 DEADLY WASTES

- 🏭 Over-production
- 🚚 Transportation
- 📦 Excess inventory
- 👤 Defects
- ⚙️ Over-processing
- 🚶 Wasted motion
- 🕒 Waiting time
- 🧠 Wasted talent



After: clean










5S: Clean makes clear

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KOIMA

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KOIMA



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Operational Excellence

Operational Excellence is the execution of the business strategy more consistently and reliably than the competition.

OPERATIONAL EXCELLENCE



Six Sigma

Flow

LEAN

Mass Customization

QRM

Customer Specific

Other

(TOC, Agile, etc.)

ENVIRONMENT

FOCUS

TOOLS

LEAN



Waste Reduction

8 Wastes
5S
SMED
Poka Yoke
KanBan

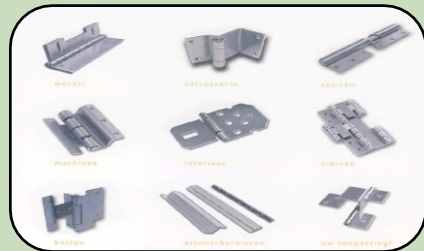
Six Sigma



100% quality
No variation

Six Sigma
Gage R&R
FMEA
ANOVA

QRM



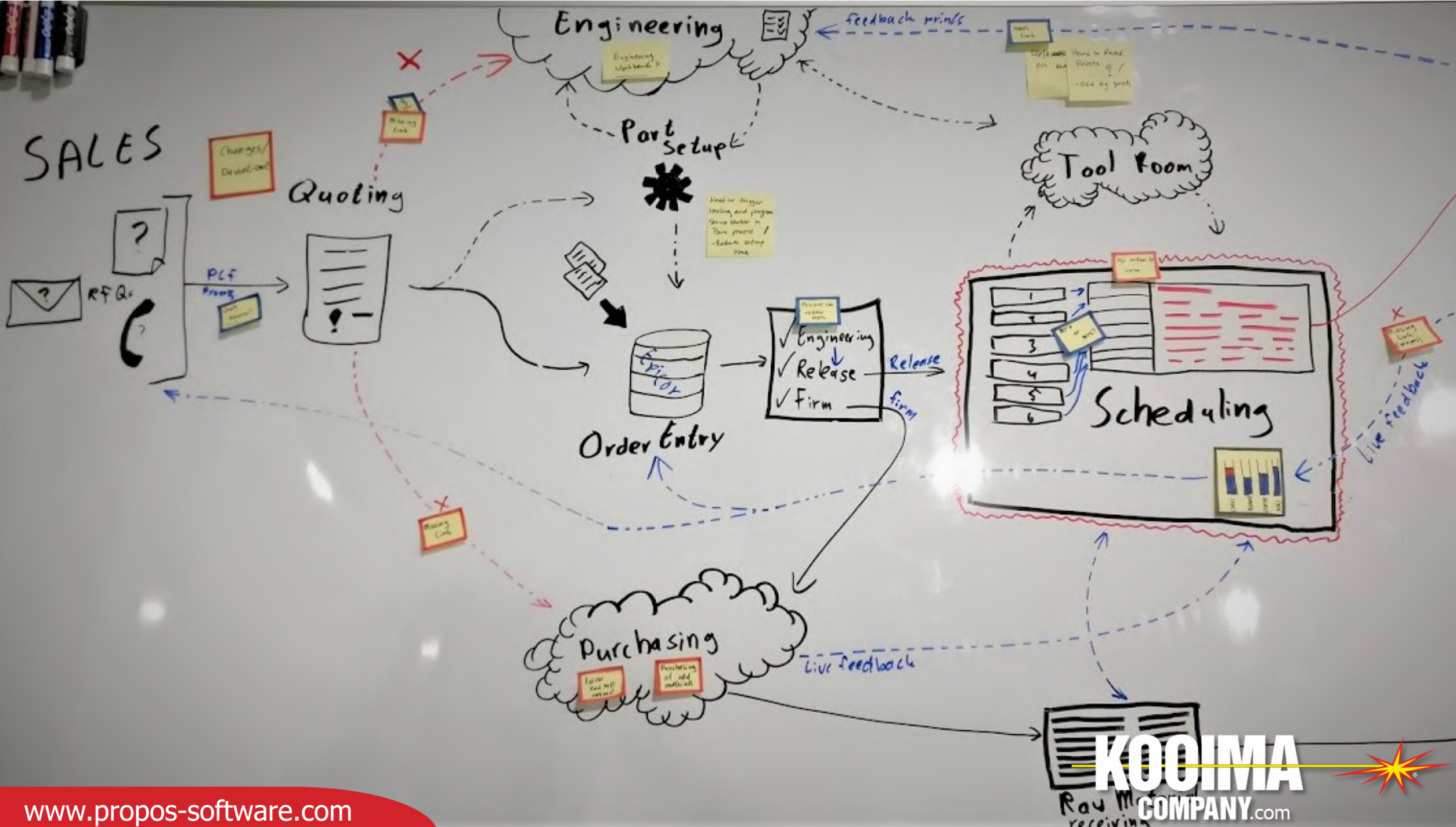
Lead time
reduction

MCT
POLCA
FTMS
Q-ROCs

The background of the slide shows a close-up of a CNC machine's cutting head on the left, with a bright yellow laser or cutting light illuminating a metal plate. The metal plate has several circular and rectangular holes cut into it. A large red oval is centered on the slide, containing the text.

LESSON LEARNED

Know what environment you're working in, before diving into the details





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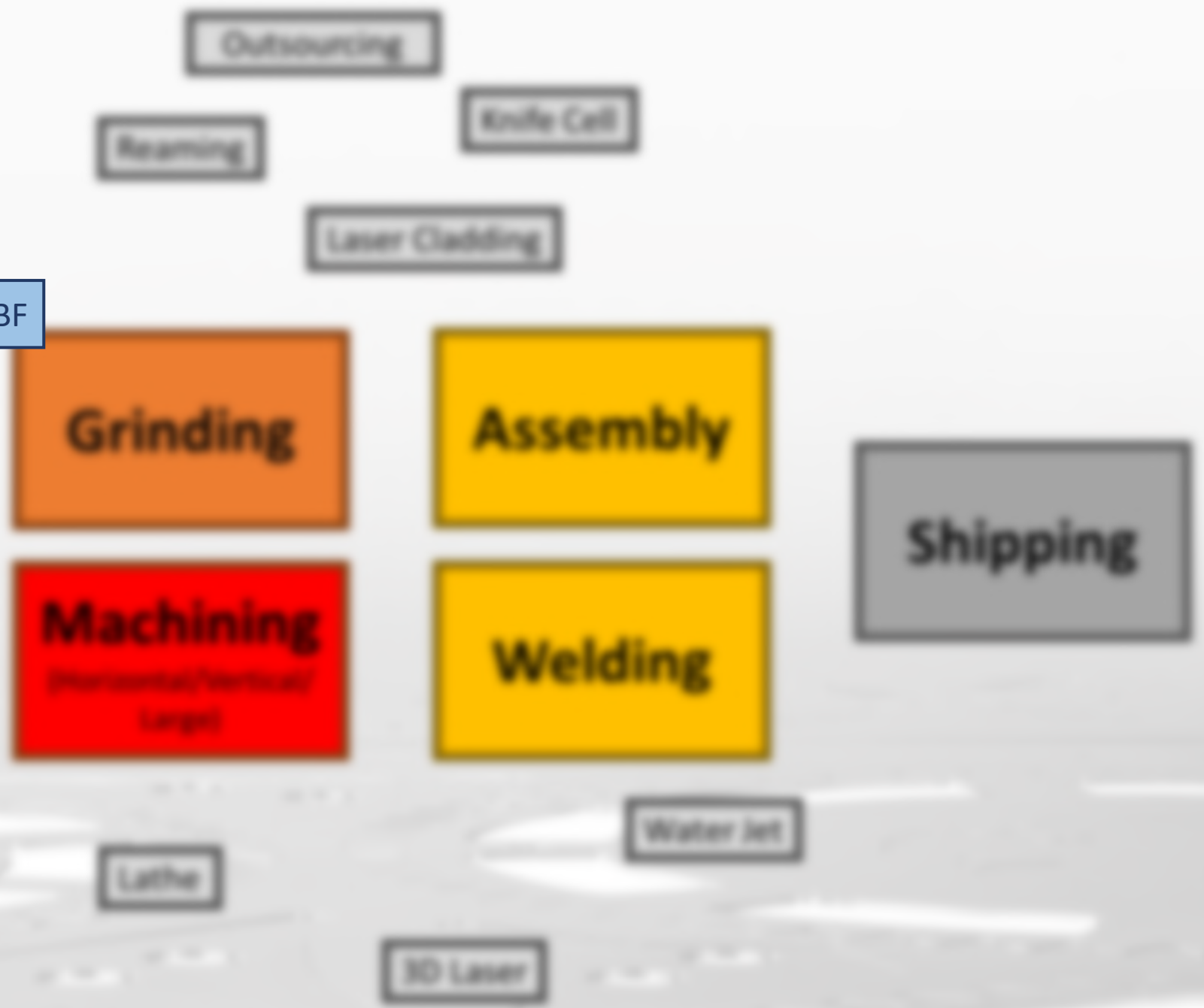
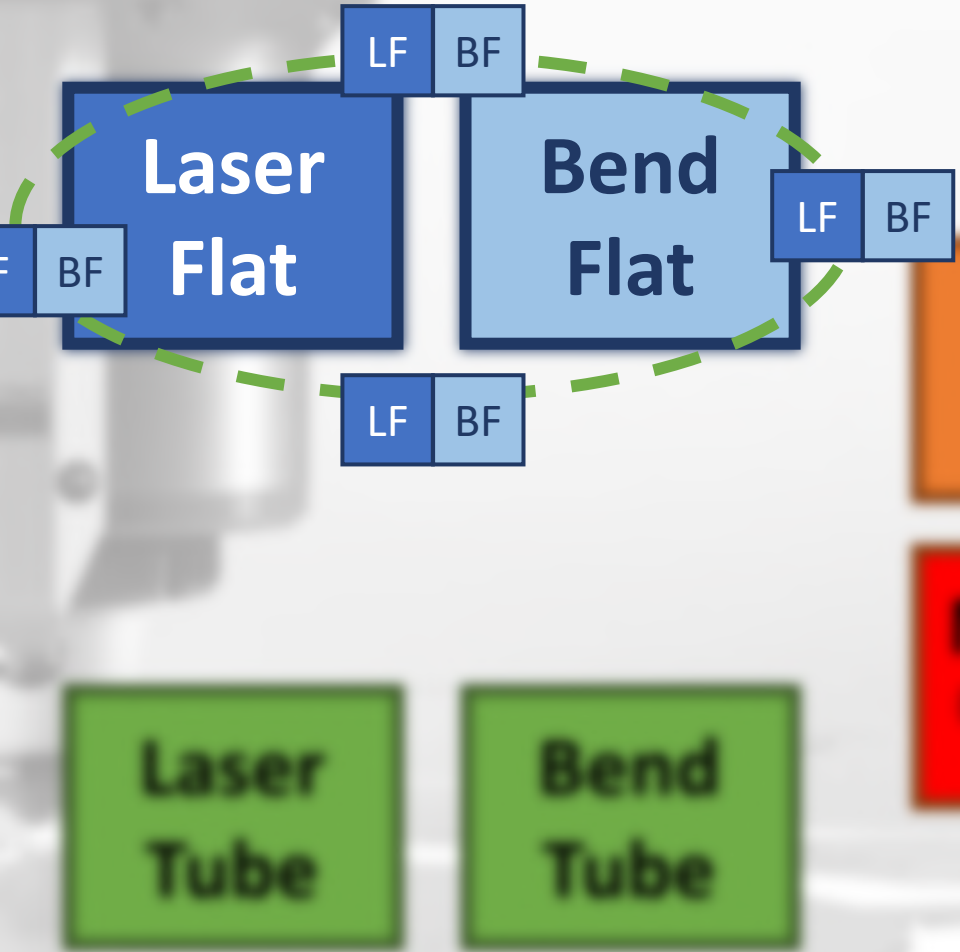
Knife Cell

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In process		Total	Item	Operation	Due date	Remarks
Work order	Part Steel Metal 12643		1.1	Machine 1	11.000	
Work order	Hardware Polishing 12779		1.2	Machine 2	11.000	
Work order	Working Steel Metal 12763		1.1	Machine 1	11.000	
Work order	Working Steel Metal 7642		1.1	Machine 1	11.000	
In buffer		Total	Item	Operation	Due date	Remarks
Work order	Van Smith Construction 12832		1.1	Machine 1	11.000	
Work order	WIP No 1 12895		1.2	Machine 2	11.000	
Work order	Johnson Tooling 14264		1.1	Machine 1	11.000	
Work order	Radio Systems Plus 15128		1.1	Machine 2	11.000	
Work order			1.1	Machine 1	11.000	
Expected		Total	Item	Operation	Due date	Remarks
Work order			1.1	Machine 2	11.000	
Work order			1.1	Machine 2	11.000	
Work order			1.1	Machine 1	11.000	
Work order			1.1	Machine 1	11.000	
Work order			1.1	Machine 1	11.000	
Work order			1.1	Machine 1	11.000	

	ORANGE
	ORANGE
	GREEN

Digital POLCA

Card	Available
	0 /100
	25 /75
	15 /62
	45 /103



Call steps





Ease of
work

Less
WIP

Lead time
reduction
by 40%

OTD
increased by
45% in just 3
months

RESULTS

PROPOS
optimal flow

Thank You!

KOOIMA
COMPANY



Thank You!