



Process Raised By The Power of People



Process raised by the power of people



The P² Team

Assessment

Implementation

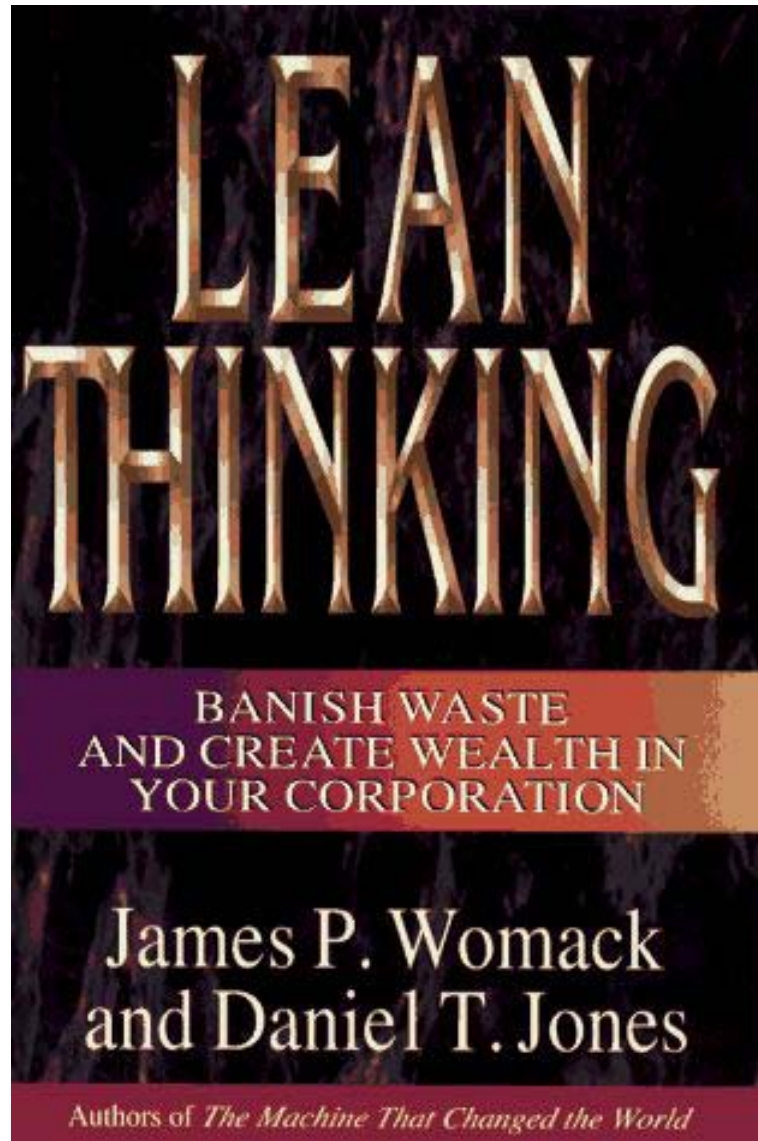
Training

Coaching



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WHO'S AHEAD IN THE GLOBAL AUTO WARS AND WHY:
JAPAN'S REVOLUTIONARY LEAP FROM MASS PRODUCTION
TO LEAN PRODUCTION—AND WHAT INDUSTRY
EVERYWHERE CAN LEARN FROM IT

THE
MACHINE
THAT
CHANGED
THE
WORLD

Based On
The Massachusetts Institute of Technology
5-Million-Dollar 5-Year Study On The
Future Of The Automobile



JAMES P. WOMACK, DANIEL T. JONES & DANIEL ROOS



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Lean Manufacturing

***Production of
goods and services
without waste***

***Waste: Anything
your customer would
not gladly pay for,
were you to bill them
for it separately***



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INVOICE	
Your Product	\$\$\$\$
PLUS:	
Down Time	\$\$\$
Make Ready	\$\$\$\$
Waste	\$\$\$\$
Missing Tools	\$\$\$\$
Coffee Breaks	\$
Training	\$\$\$
Paperwork	\$\$
TOTAL COST	\$\$\$\$\$

Profit



Cost

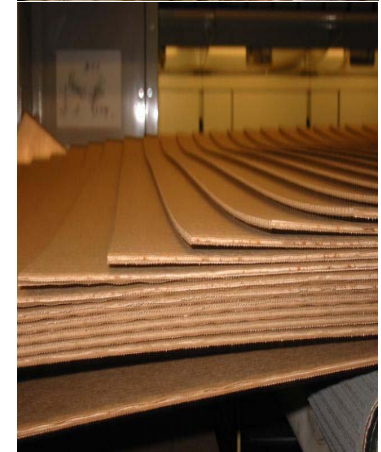


Price

Price

Price

Price



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Ideals of Lean

Value: *Provide what the customer wants*

Value Stream: *Order to Cash without waste of resources*

Flow: *Moves thru the system without constraint*

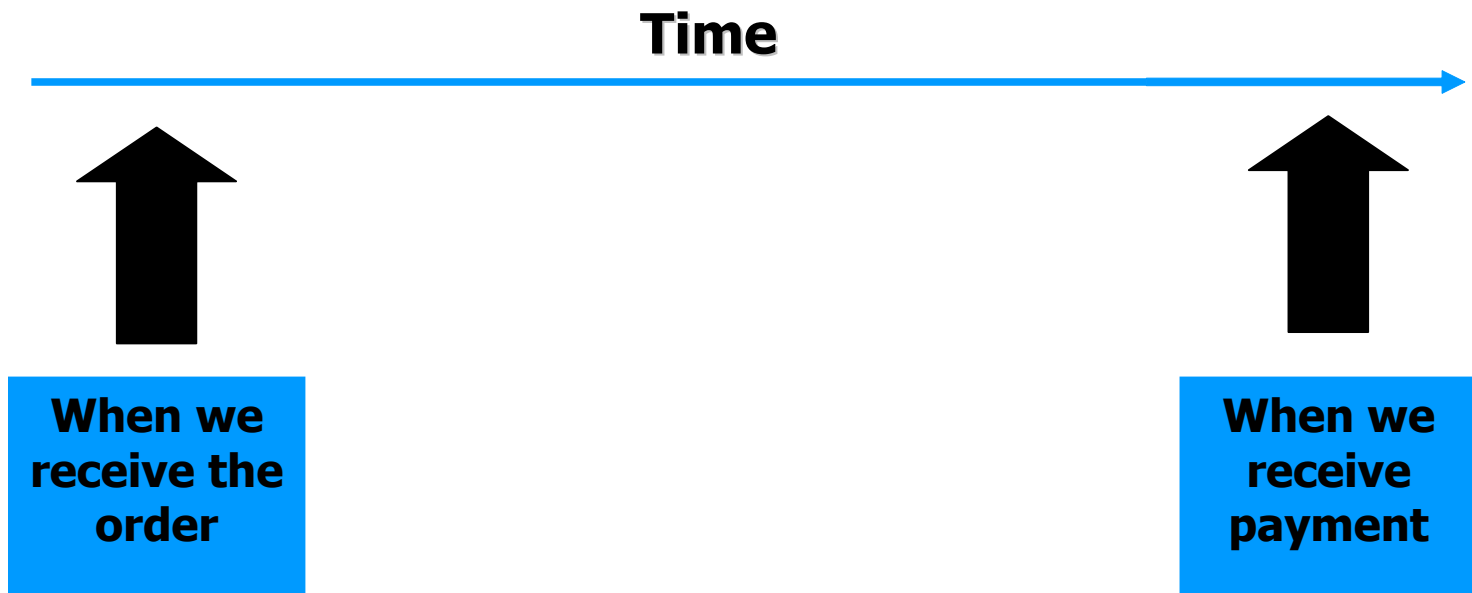
Pull: *Produced at the speed of customer demand*

Perfection: *Continual Improvement*



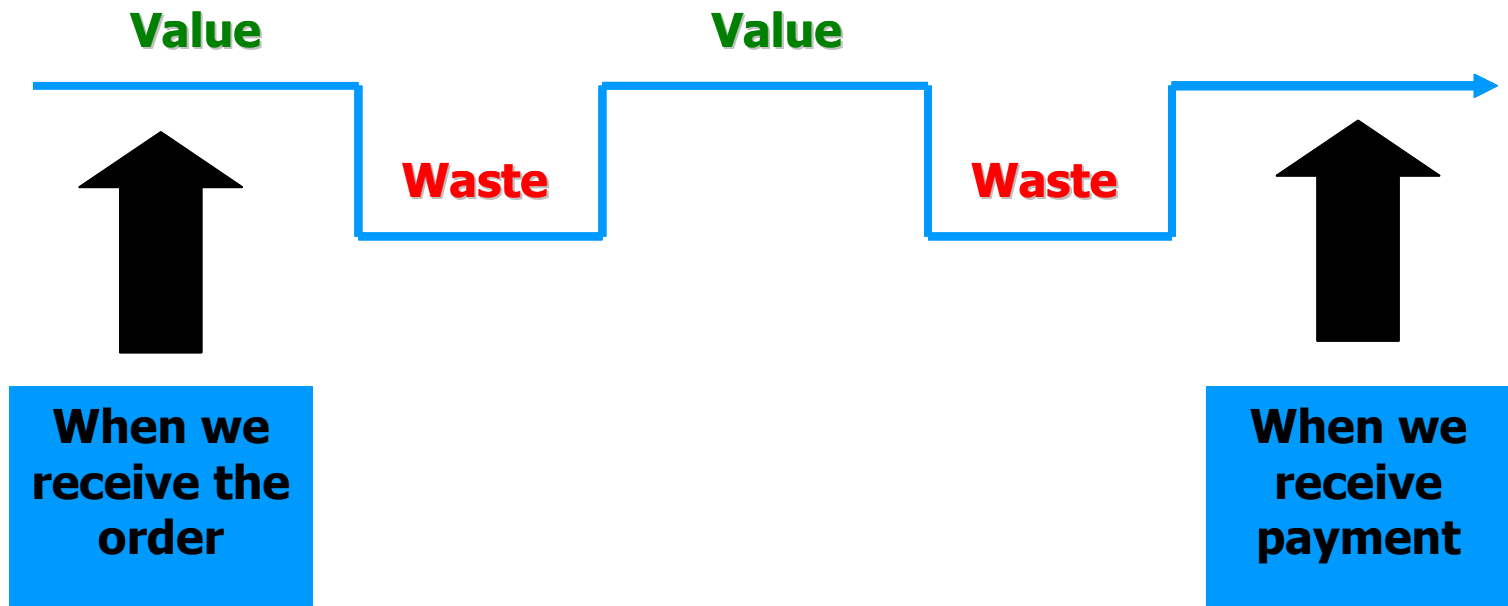
The Practice

Toyota's Simple Picture



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The Value Stream



Declare War on Waste

Waste is a symptom - not the root cause

Waste points to problems within the Value stream



Classifications of waste

Administration

Order to Cash

Production Floor

Raw Material to Finished Product



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Relentless pursuit of waste Office Environment

1. **Errors** - in service transaction, defects, goods
2. **Delays** - on the part of the customer, queues, response
3. **Duplication** - re-entering data, copy information, re-enter data
4. **Unnecessary movement** - queue several times, lack of one stop
5. **Unclear communication** - need to ask more than once
6. **Incorrect inventory** - out of stock, substitution
7. **Opportunity lost** - to win new customers, losing existing customers, ignoring customers



7 service wastes described by John Bicheno

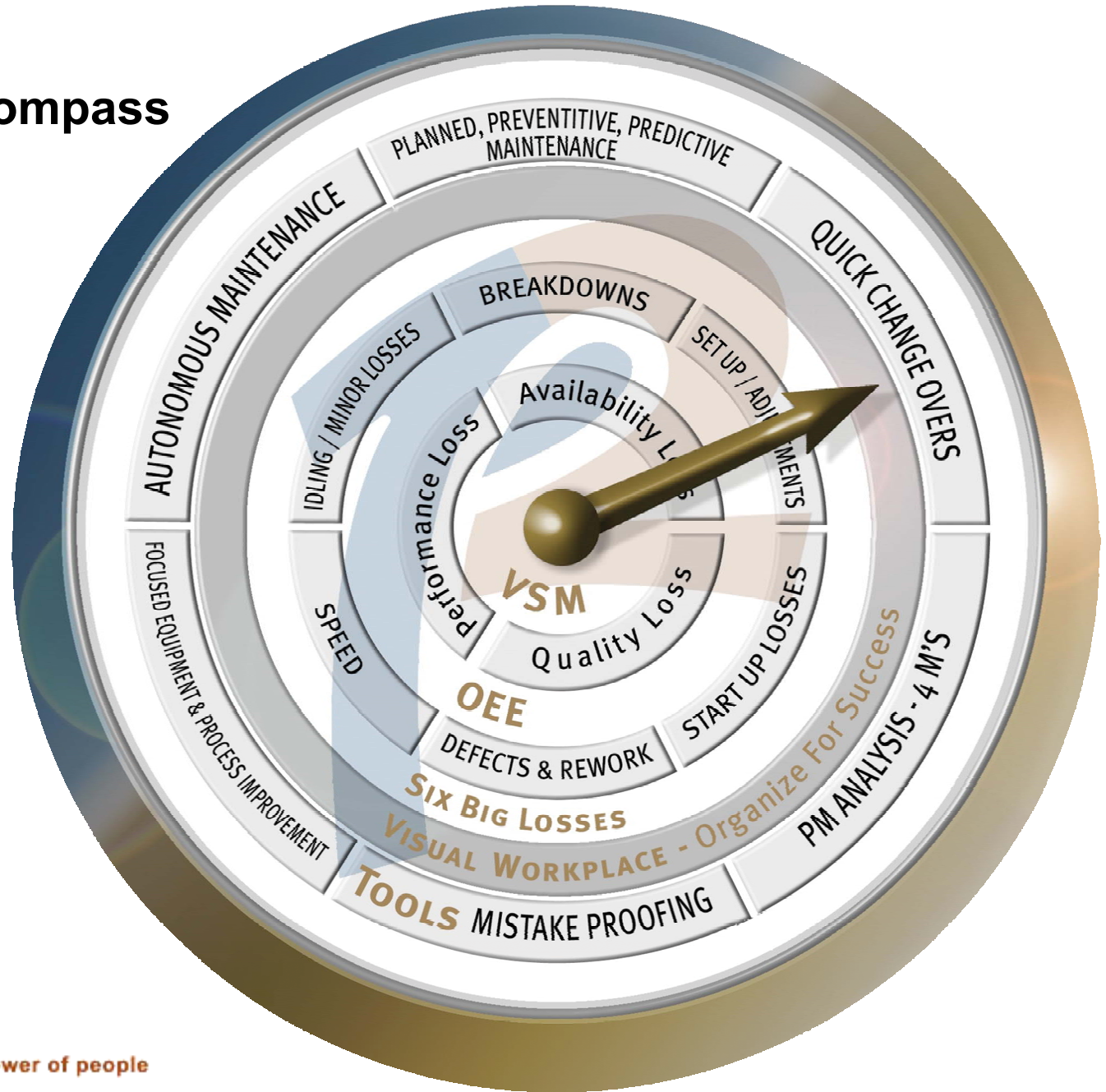
Relentless pursuit of waste Production Floor

1. Over Production
2. Waiting
3. Conveyance (moving more than once)
4. Processing
5. Inventory
6. Motion
7. Processing Failures (rework)
8. Administration (conflicting information)
9. Abuse of Technology (overuse)
10. Creativity
11. Space



The Lean Compass

*Follow the
Data to the
Right Tool*



Senior Toyota Executive...

- “ We get brilliant results from average people managing brilliant processes ”

“ We observe that our competitors often get average (or worse) results from brilliant people managing broken processes ”



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Case Study: Benefits of Lean

Internal Benefits to the FPPA Member

Benefits to their Customers

Lasting Partnership with Customers



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Lean Champion Training

Fox Valley Technical College

May 2006



**Printing & Packaging
Professionals**

**Learning & Applying
Lean Tools**



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Lean Champion Training

Fox Valley Technical College

May 2006



Classroom

Hands-On Application at FVTC



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Lean Champion Training Fox Valley Technical College May 2006



Meeting and Sharing Best Practices with Lean Champions From Around the World



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Lean Champion Training

Fox Valley Technical College

May 2006



Tours of Lean Plants

And those that want to be Lean ...



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Case Study: Printron



**Participated in Training
& Hosted a Tour**

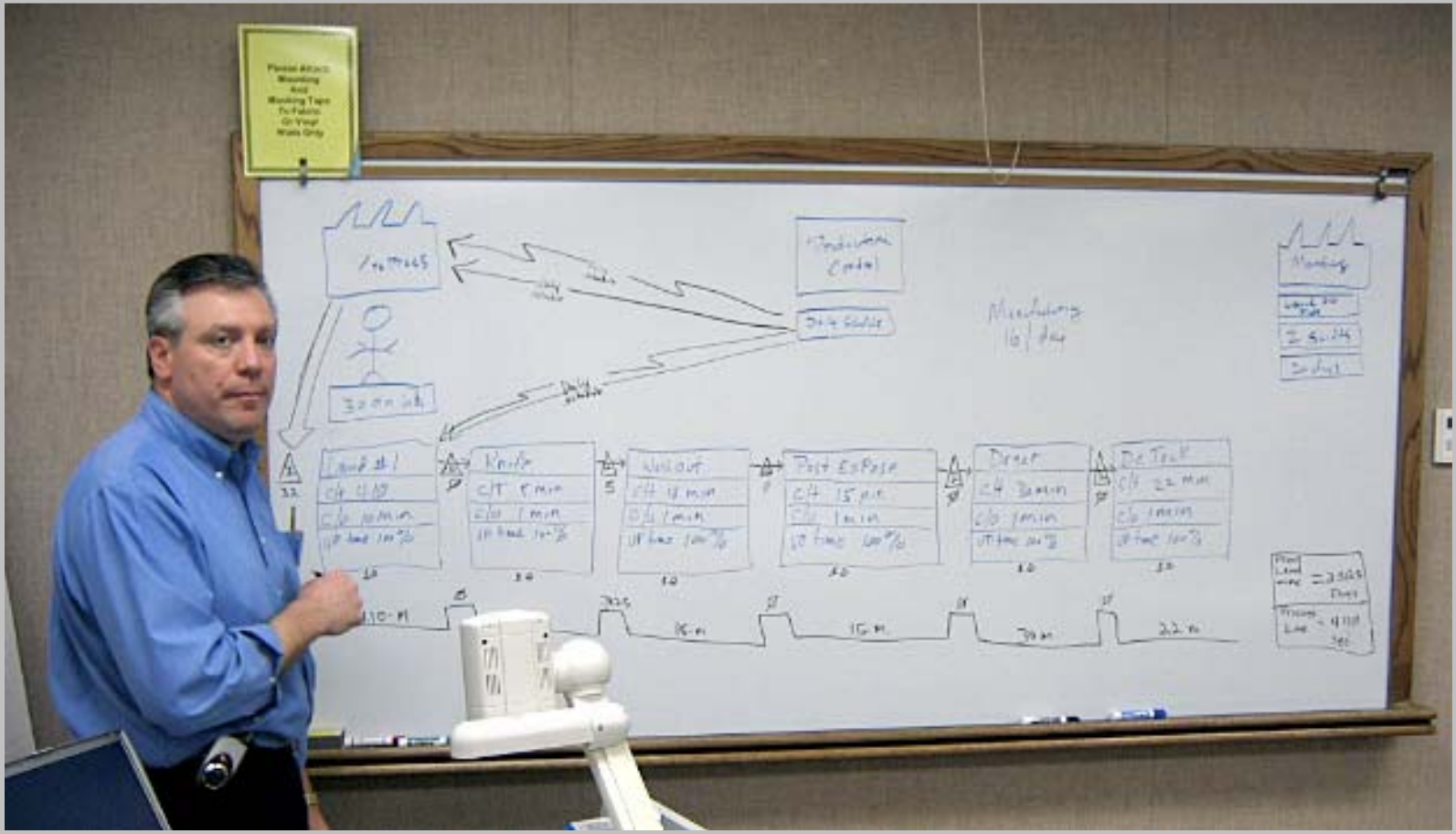


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Value Stream Mapping



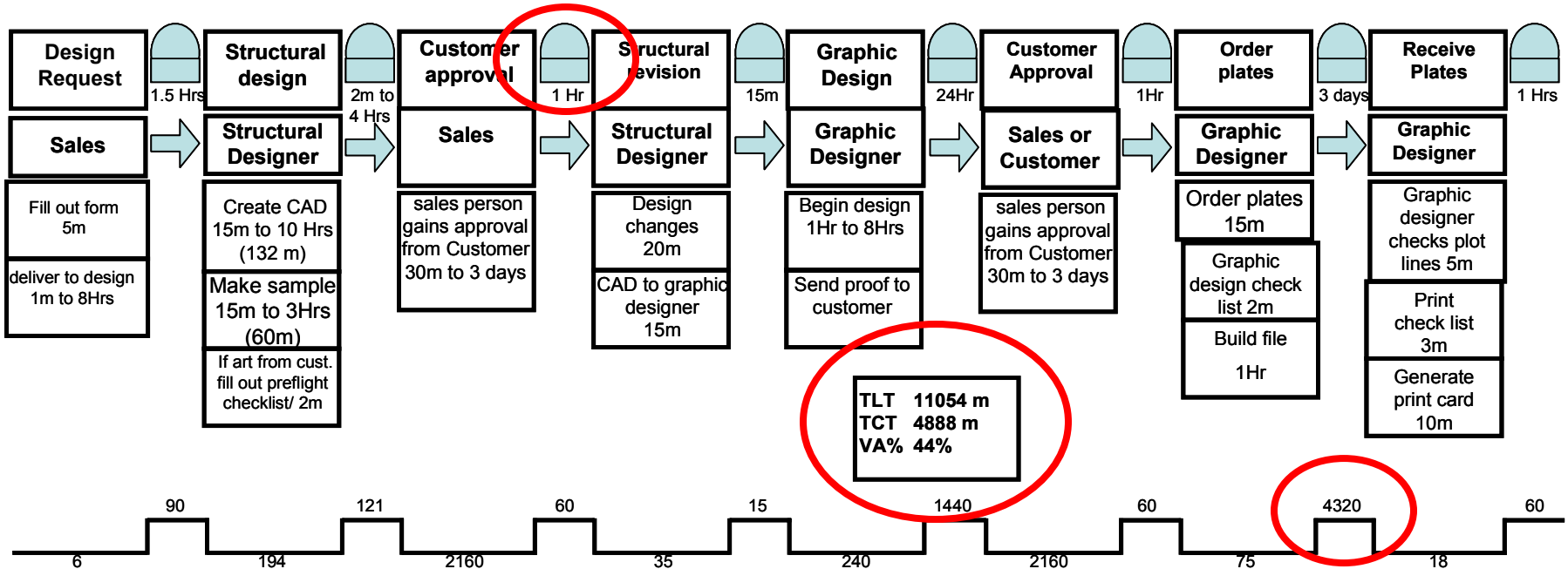
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Value Stream Mapping Of:

1. All the Steps & Processes

2. All the wait times

3. The Value Ratio



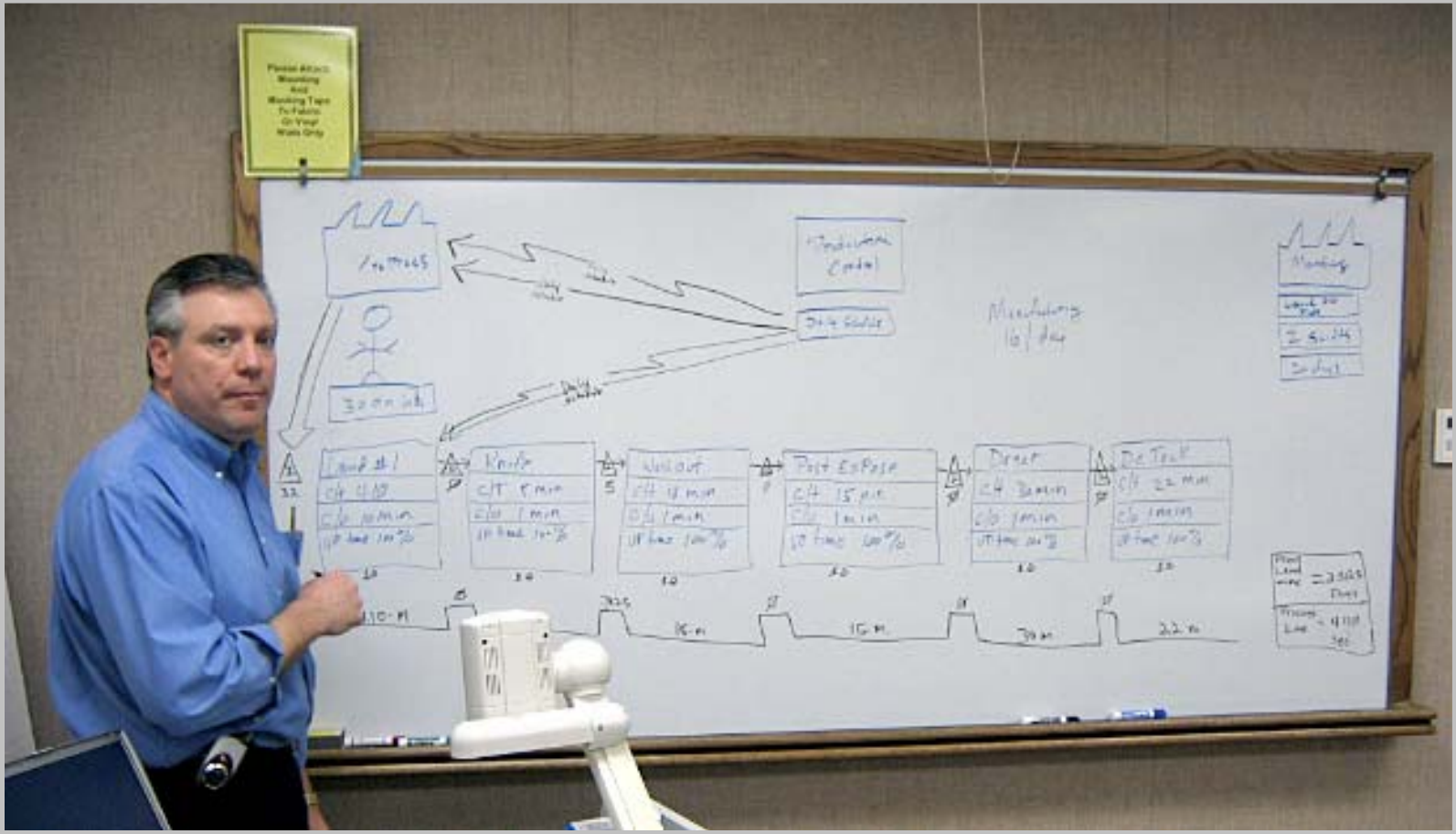
4. The Bottlenecks



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Value Stream Mapping

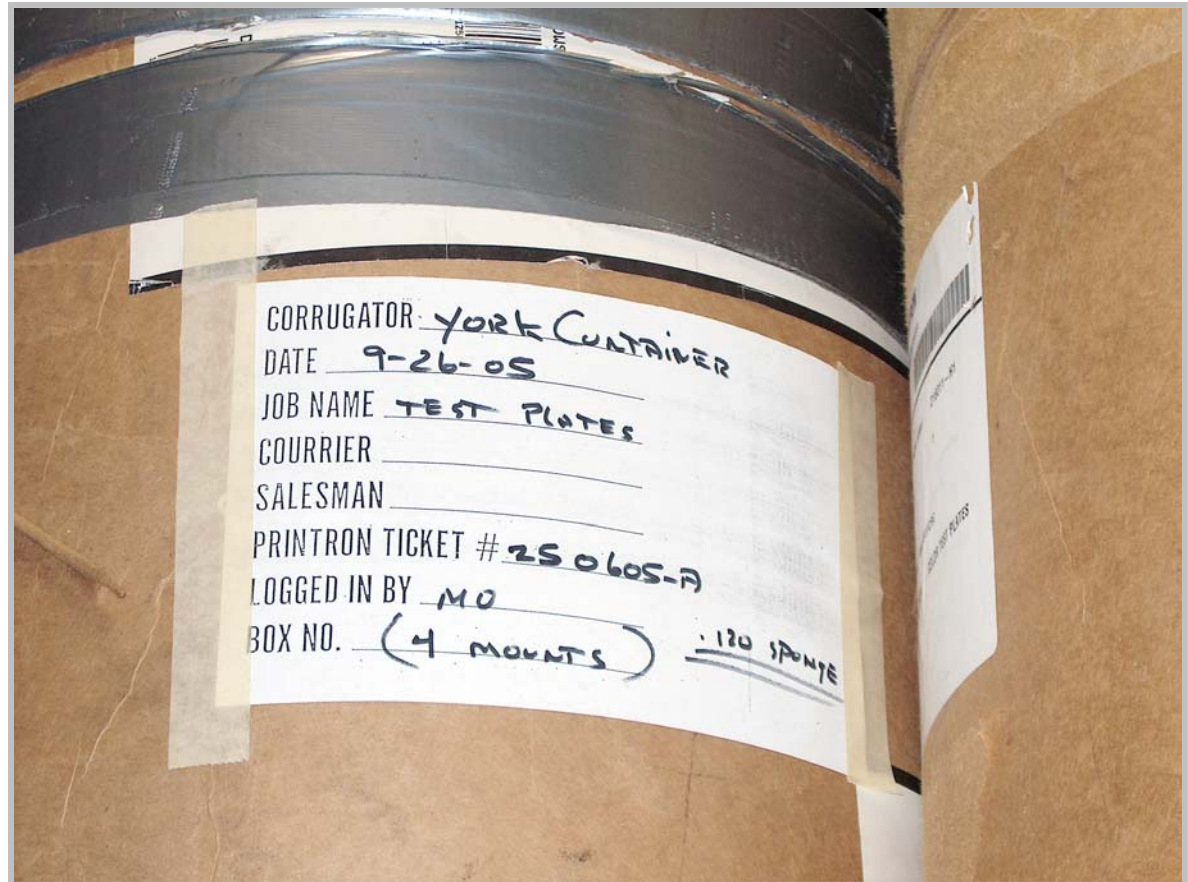


Case Study: Printron

Visual Workplace at the Bottleneck

Incoming Mount Storage Area

- Disorganized
- Too Much Look Time
- Customer Risk
- Unwanted Job



Case Study: Printron

Visual Workplace at the Bottleneck

Incoming Mount Storage Area

7S



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Visual Workplace at the Bottleneck

Incoming Mount Storage Area

Workplace Plan

a working document capturing the goals and the progress being made in the improvement process



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Visual Workplace at the Bottleneck

Incoming Mount Storage Area



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AS IS

Old Mount Storage Process

1. Record in coming mount on log sheet found inside the mount log book. (See attached).
2. Tape a copy of the form on the mount tube.
3. Move tube in the storage area.

Old Form

Date: 6-14-06

Corrugator: MCN

Job Description:

Logo:

Box Number:

Ticket Number: 236730

Number of Mounts: 2

Backing: GT.030

Plate Material: .250 LIA

Platemaker: Printron

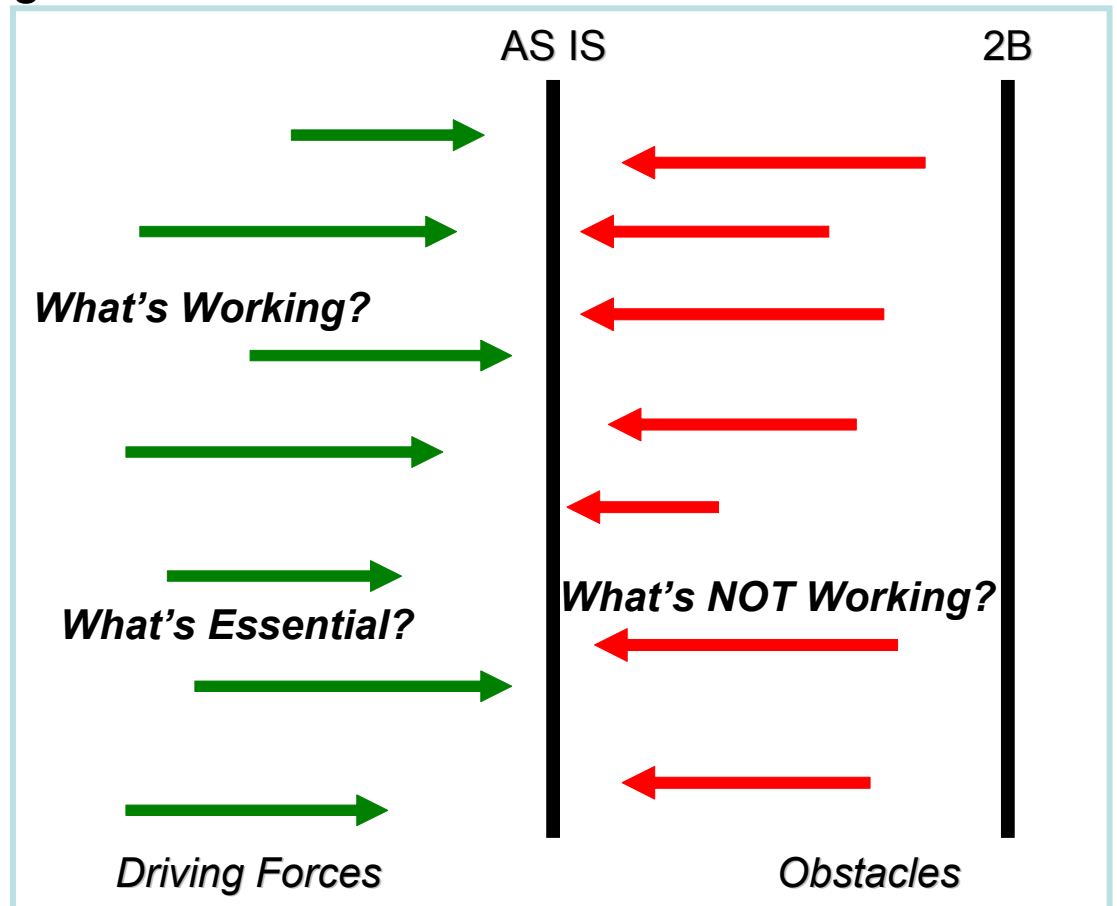
Other Information:

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Visual Workplace at the Bottleneck

Incoming Mount Storage Area

Force Field



Case Study: Printron

Visual Workplace at the Bottleneck

Incoming Mount Storage Area

•What is working?

•What is not working?

•What parts of the process are essential?



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Force Field

AS IS Questions

1. What is working?
 - We are recording incoming mounts that arrive in our building.
2. What is not working?
 - Mounts that are checked in are stored unorganized.
 - It takes too long to find what you are looking for.
 - The whole storage area is too confusing.
 - We are not capturing enough useful information in the check in process.
 - People have to leave their work area and look in the log book to see if a mount is checked in. This takes too much time.
3. What items are essential to us?
 - Easy access to look up information by everyone.
 - Be able to look up information right at their desk or at any computer.
 - We want a clean organized area.
 - We want to save time in the process.

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Visual Workplace at the Bottleneck

Incoming Mount Storage Area

- All participants assigned tasks & due dates

- All participants build a vision of the Future State

- All participants recognized

Task List

1. Move all mounts out of the existing area.
2. Move all current inventory out of the existing area.
3. Scrub concrete clean.
4. Move inventory to new location.
5. Paint box square and numbers on concrete.
6. Redesign incoming mount log sheet.
7. I.T. department to make a new shared folder on server to store new mount log form. This will be a read only file but viewed by everyone.
8. Define who will be responsible for filling out form for mounts that come in.
9. Purchase plastic sleeves to hold log document. The sleeve will be attached to the mounting tube.
10. Communicate new process to sales/customer service/mounting departments.

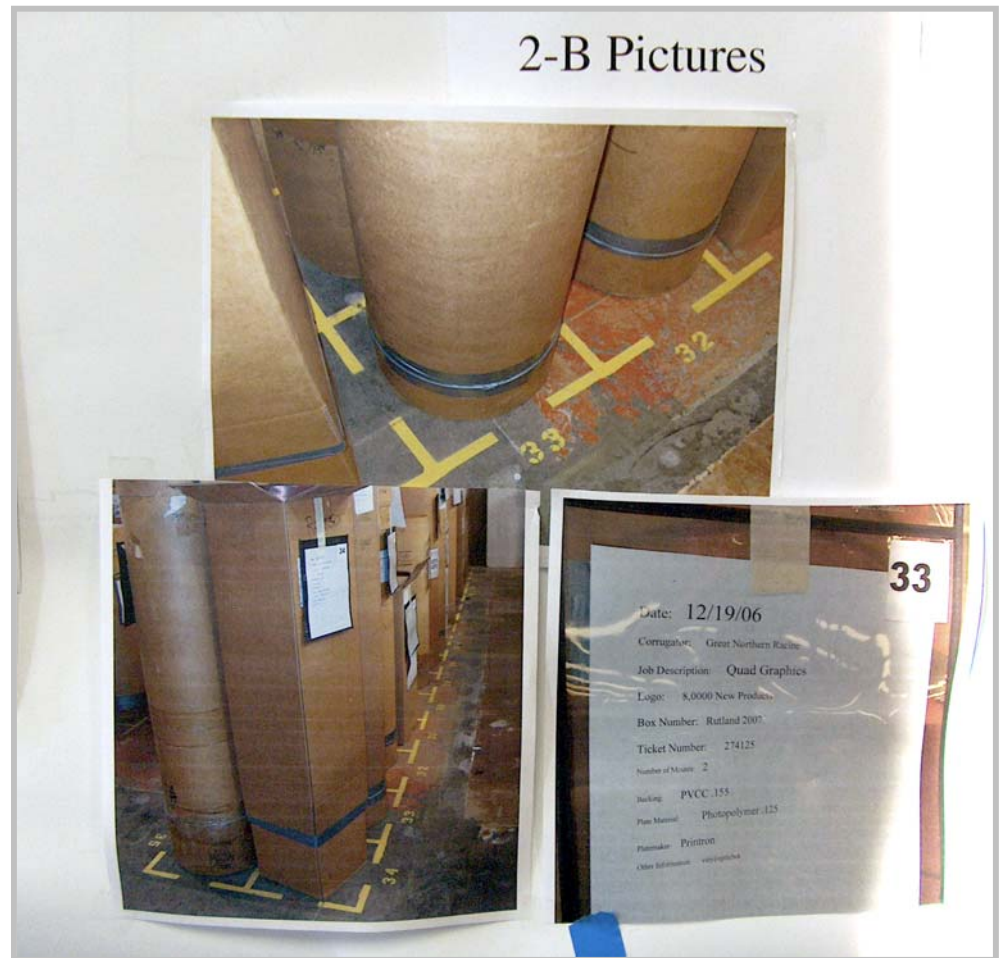


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Visual Workplace at the Bottleneck

Incoming Mount Storage Area

“You wouldn't believe the excitement that this new process created. It is now simple, quick and easy to find a mount”



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Visual Workplace at the Bottleneck

Incoming Mount Storage Area

“The best part; anyone can look up this information without leaving their desk using the new mount log form”

ID	Date	Name	Location	Status	Other Info
1	2/24/02	Bob Jones	Mount In Log	Completed	
2	2/24/02	Jane Smith	Mount In Log	In Progress	
3	2/24/02	John Doe	Mount In Log	On Hold	
4	2/24/02	Jane Smith	Mount In Log	Completed	
5	2/24/02	John Doe	Mount In Log	In Progress	
6	2/24/02	Jane Smith	Mount In Log	On Hold	
7	2/24/02	John Doe	Mount In Log	Completed	
8	2/24/02	Jane Smith	Mount In Log	In Progress	
9	2/24/02	John Doe	Mount In Log	On Hold	
10	2/24/02	Jane Smith	Mount In Log	Completed	
11	2/24/02	John Doe	Mount In Log	In Progress	
12	2/24/02	Jane Smith	Mount In Log	On Hold	
13	2/24/02	John Doe	Mount In Log	Completed	
14	2/24/02	Jane Smith	Mount In Log	In Progress	
15	2/24/02	John Doe	Mount In Log	On Hold	
16	2/24/02	Jane Smith	Mount In Log	Completed	
17	2/24/02	John Doe	Mount In Log	In Progress	
18	2/24/02	Jane Smith	Mount In Log	On Hold	
19	2/24/02	John Doe	Mount In Log	Completed	
20	2/24/02	Jane Smith	Mount In Log	In Progress	
21	2/24/02	John Doe	Mount In Log	On Hold	
22	2/24/02	Jane Smith	Mount In Log	Completed	
23	2/24/02	John Doe	Mount In Log	In Progress	
24	2/24/02	Jane Smith	Mount In Log	On Hold	
25	2/24/02	John Doe	Mount In Log	Completed	
26	2/24/02	Jane Smith	Mount In Log	In Progress	
27	2/24/02	John Doe	Mount In Log	On Hold	
28	2/24/02	Jane Smith	Mount In Log	Completed	
29	2/24/02	John Doe	Mount In Log	In Progress	
30	2/24/02	Jane Smith	Mount In Log	On Hold	
31	2/24/02	John Doe	Mount In Log	Completed	
32	2/24/02	Jane Smith	Mount In Log	In Progress	
33	2/24/02	John Doe	Mount In Log	On Hold	
34	2/24/02	Jane Smith	Mount In Log	Completed	
35	2/24/02	John Doe	Mount In Log	In Progress	
36	2/24/02	Jane Smith	Mount In Log	On Hold	
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38	2/24/02	Jane Smith	Mount In Log	In Progress	
39	2/24/02	John Doe	Mount In Log	On Hold	
40	2/24/02	Jane Smith	Mount In Log	Completed	
41	2/24/02	John Doe	Mount In Log	In Progress	
42	2/24/02	Jane Smith	Mount In Log	On Hold	
43	2/24/02	John Doe	Mount In Log	Completed	
44	2/24/02	Jane Smith	Mount In Log	In Progress	
45	2/24/02	John Doe	Mount In Log	On Hold	
46	2/24/02	Jane Smith	Mount In Log	Completed	
47	2/24/02	John Doe	Mount In Log	In Progress	
48	2/24/02	Jane Smith	Mount In Log	On Hold	
49	2/24/02	John Doe	Mount In Log	Completed	
50	2/24/02	Jane Smith	Mount In Log	In Progress	



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Visual Workplace at the Bottleneck

Incoming Mount Storage Area

“The new mount form has much more information on it including the floor storage number. We have it on a server and it is a shared document in a read only format. Awesome!”



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Visual Workplace at the Bottleneck

Incoming Mount Storage Area

Cost Reduction

- Labor savings per mount of at least 10 minutes.
- The number of times per day of looking for a mount is 20 times.
- 3.3 hours per day.
16.6 hours per week.



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Visual Workplace at the Bottleneck

Incoming Mount Storage Area

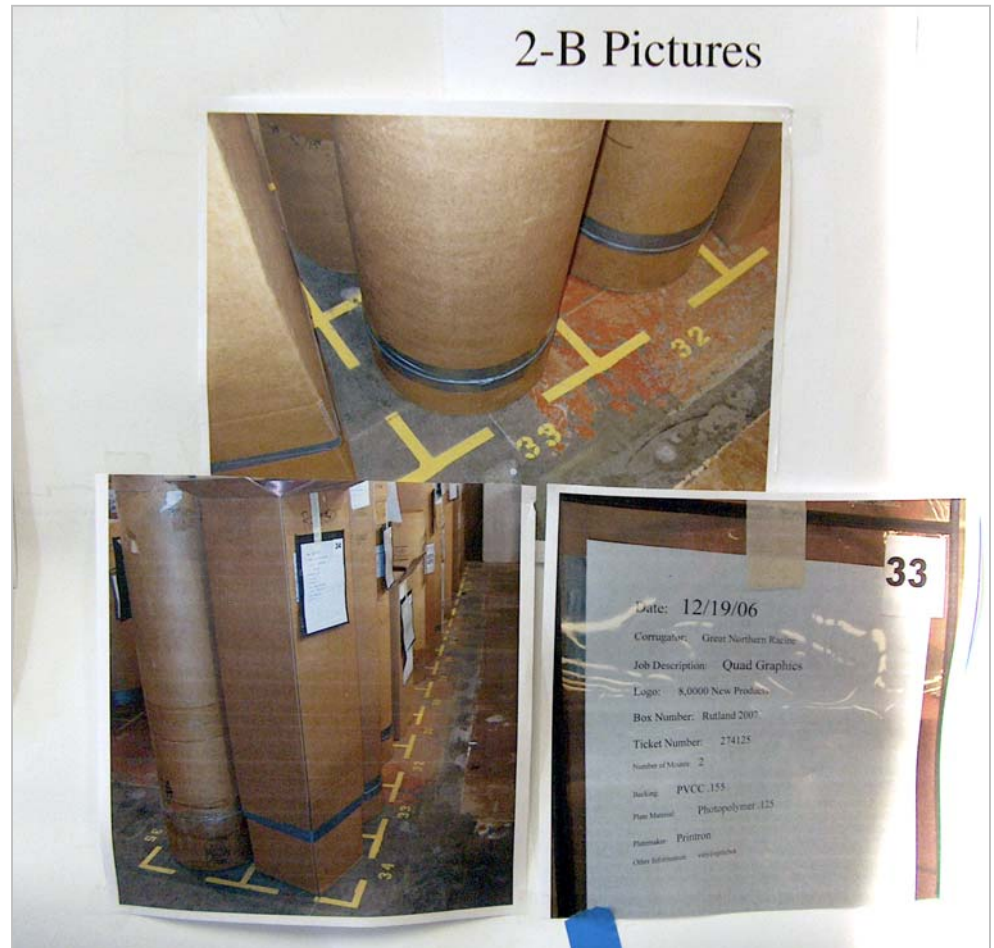
Cost Reduction

- 16.6 hours times an average of \$15.00/hr. = \$249.00 per week.

Annual savings of \$12,948



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Visual Workplace for Safety

While we are working on it...

- ~~250 lbs rolls of “ten”~~ **The Old Way** steel backing for use on magnetic cylinders on press
- **Steel stored on shelf**
- **Two big guys**
- **Slit off sheets and put them back on the shelf**



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Case Study: Printron

Visual Workplace for Safety

While we are working on it...

The New Way

• ~~This steel coil~~
~~sits on the~~
~~roller~~ and can
be rolled out
effortlessly



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Visual Workplace at the Bottleneck

Mounting Department

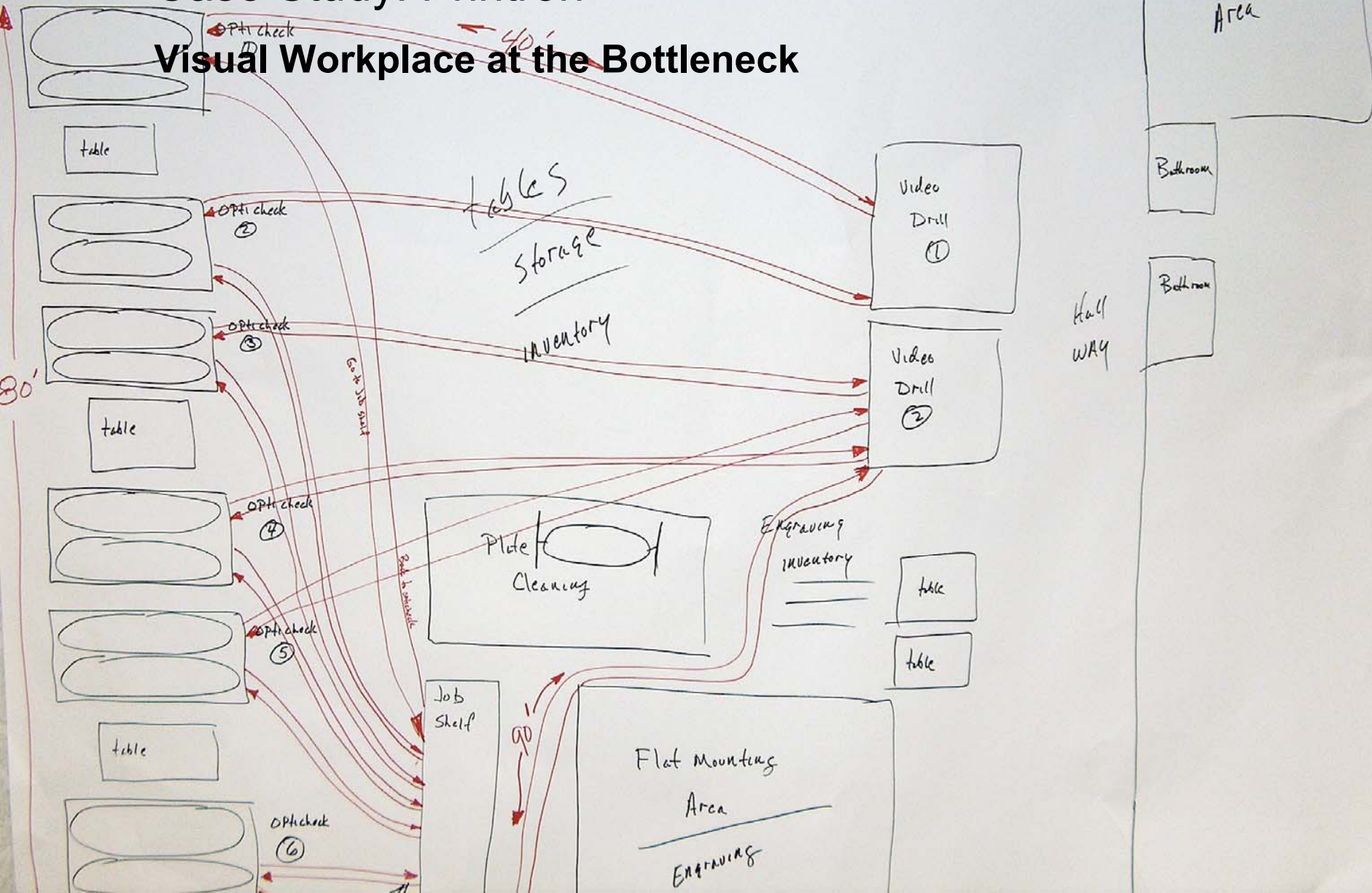
- Opti-checks were on one side of the room in a row.
- Job shelf was on the other side of the room



Mounting Department
B-y Spaghetti Diagram

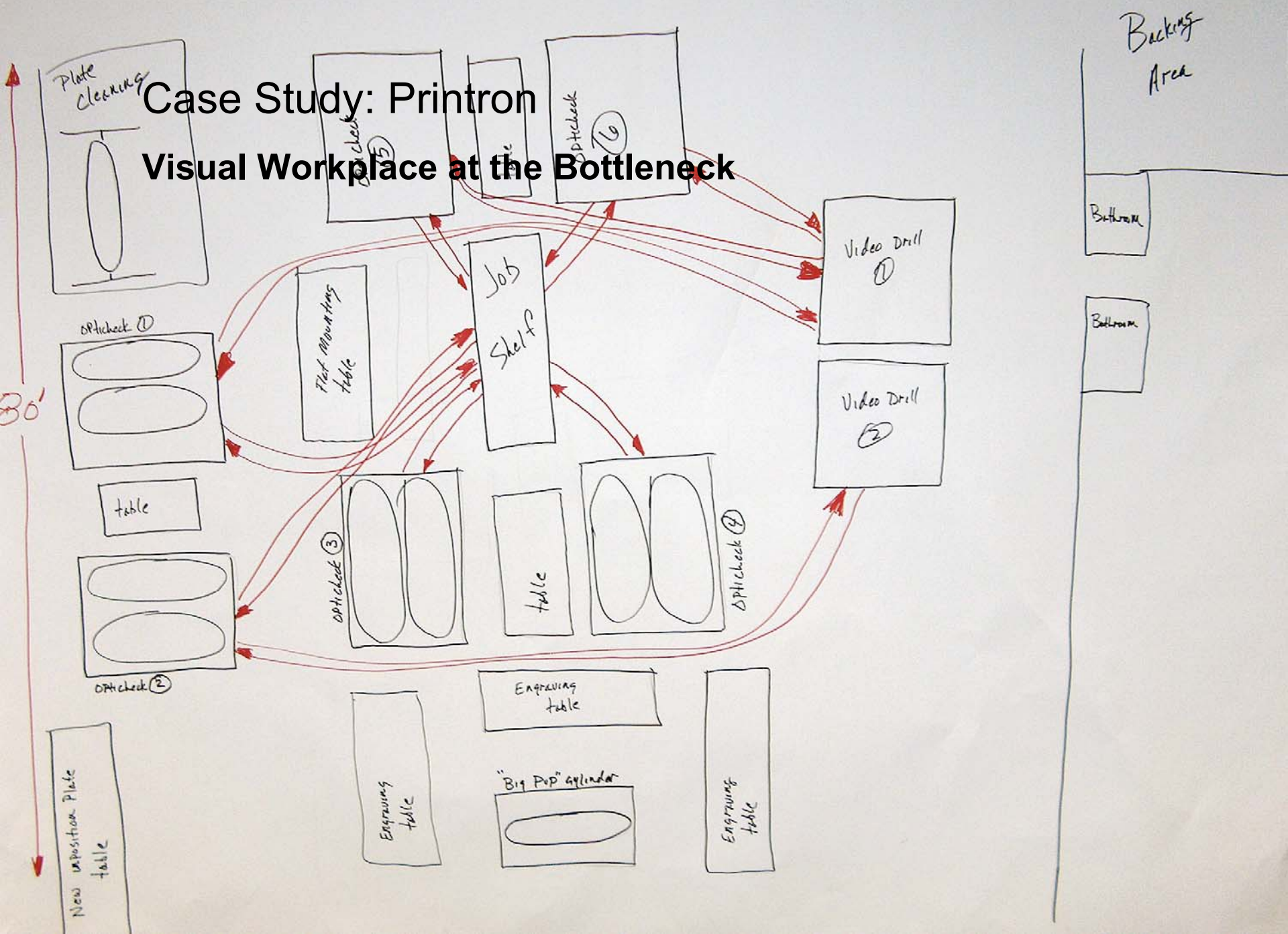
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Visual Workplace at the Bottleneck



After Spaghetti Diagram

Case Study: Printron Visual Workplace at the Bottleneck



Case Study: Printron

Visual Workplace at the Bottleneck

- More efficient layout
- Opti-checks at 90°
- Benches centrally located
- Everyone was involved with total buy in

Case Study: Printron



Participated in Training
& Hosted a Tour

Small investment of Time & Dollars....

- **Improved employee ownership & buy-in**
- **Improved safety**
- **Less waste of motion, time, & hassle**
- **Savings of at least \$20,000**

**Experience Printron
can use with
customers..... Priceless!**



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Consultative Sales

- Customer wants a better mouse trap!



- Help customers understand their problems, issues, and opportunities...and to arrive at new and better solutions...than they would have discovered on their own
- To act as an advocate within the supplier organization, ensuring the timely allocation of resources to deliver customized or unique solutions that meet the customer's needs
- Sales function is best performed by Sales people trained as problem solving professionals



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Become Irreplaceable!

Lean for Consultative Sales

- Lean expert Sales people become a resource to their customers
- Requires that supplier go Lean first!



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Lean for Consultative Sales

Lean Supply

- Assist with organization & purge process
- ✓ Identify obsolete tooling
- ✓ Date your tools



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Lean for Consultative Sales

Train internal pre press personnel & operators in best practices



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Lean for Consultative Sales

One Cart One Job



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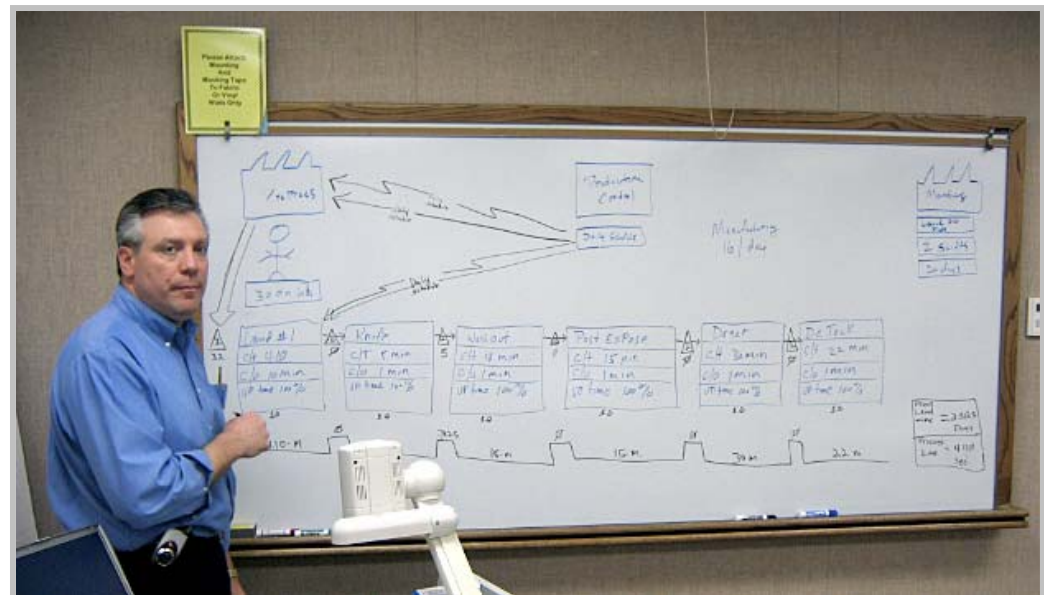
Lean for Consultative Sales

Value Stream Map your customer's experience

Lean Supply

•Speed!

- ✓ Decrease distance
- ✓ Decrease turnaround Time



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Printron's Partnership at Calpine Corrugated

Printron's Partnership at Calpine Corrugated



All suppliers In-house

Timely delivery of tooling, materials, & information



Help to build a Visual Workplace

**As a Lean Supplier
the goal is to become
irreplaceable!**



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We must all do more with Less



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Process Raised By The Power of People



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Thank You!