

SUMITOMO RUBBER THAILAND



Presented by

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Our Safety Motto



When I cross road, I point both side by fingers



I will always keep the rules during the operation

OUTLINE

Introduction of company

Finding Issues

KAIZEN

Conclusion

Introduction of company

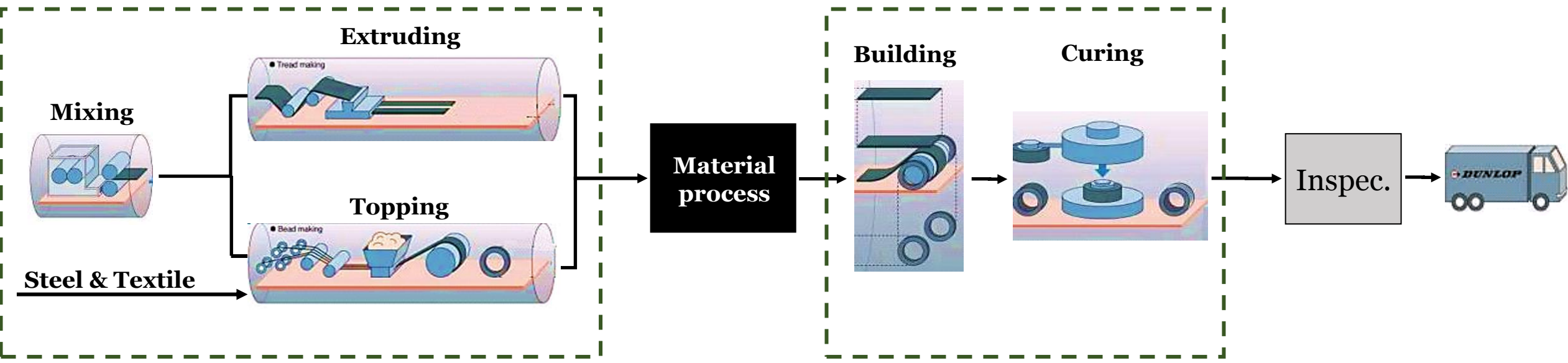
President	Mr. Toru Nagahata
Foundation	May 2005
Products	Tires
Capacity	78,150 pcs/day
Co-workers	6354 including 35 Japanese



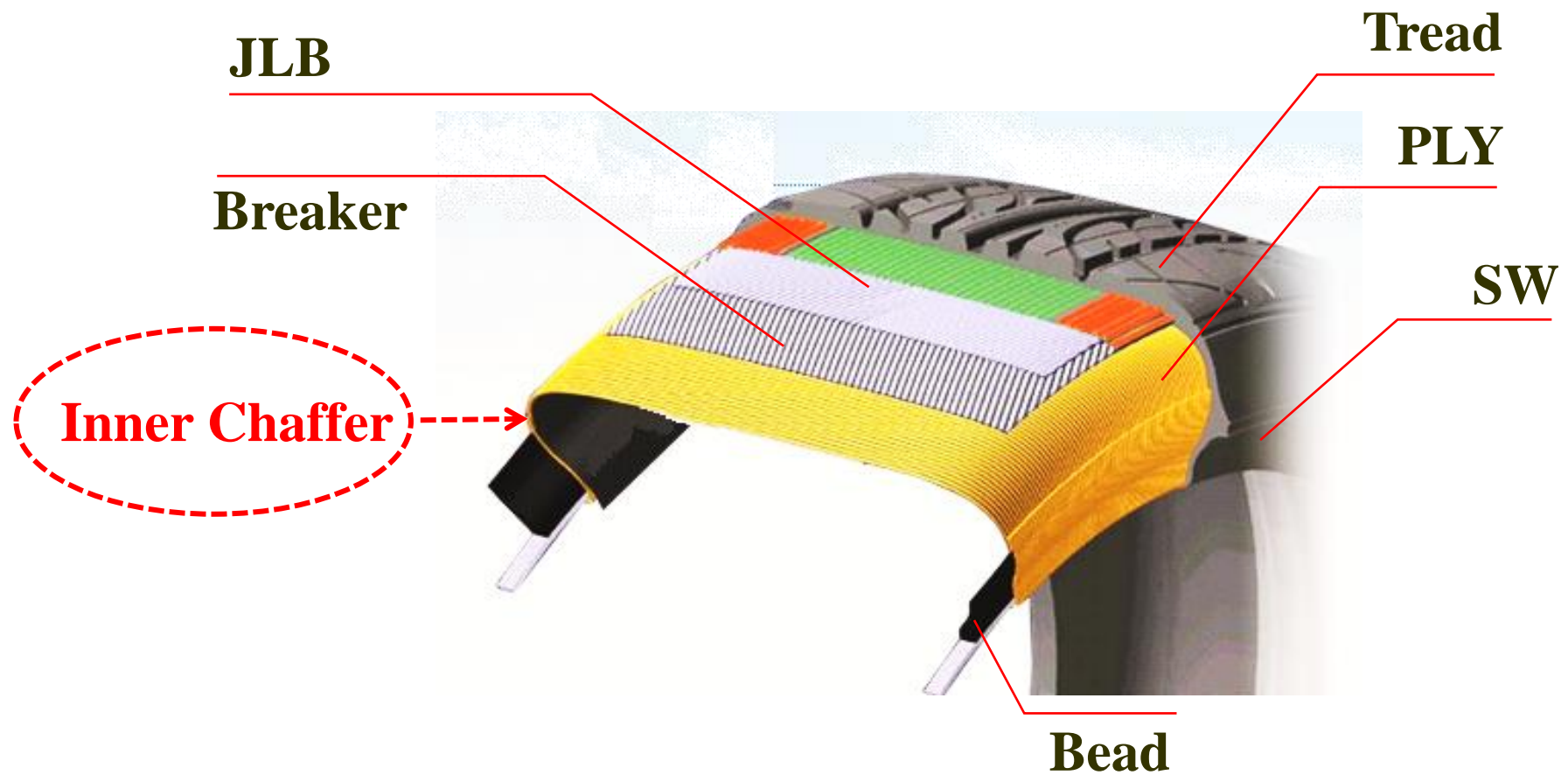
Tire production process

Primary

Production



Tire components



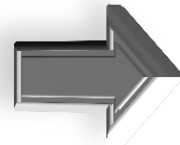
How to do WOA

WOA=WORK OBSERVE ACTIVITY

Study of
KAIZEN



Observe
Check
time

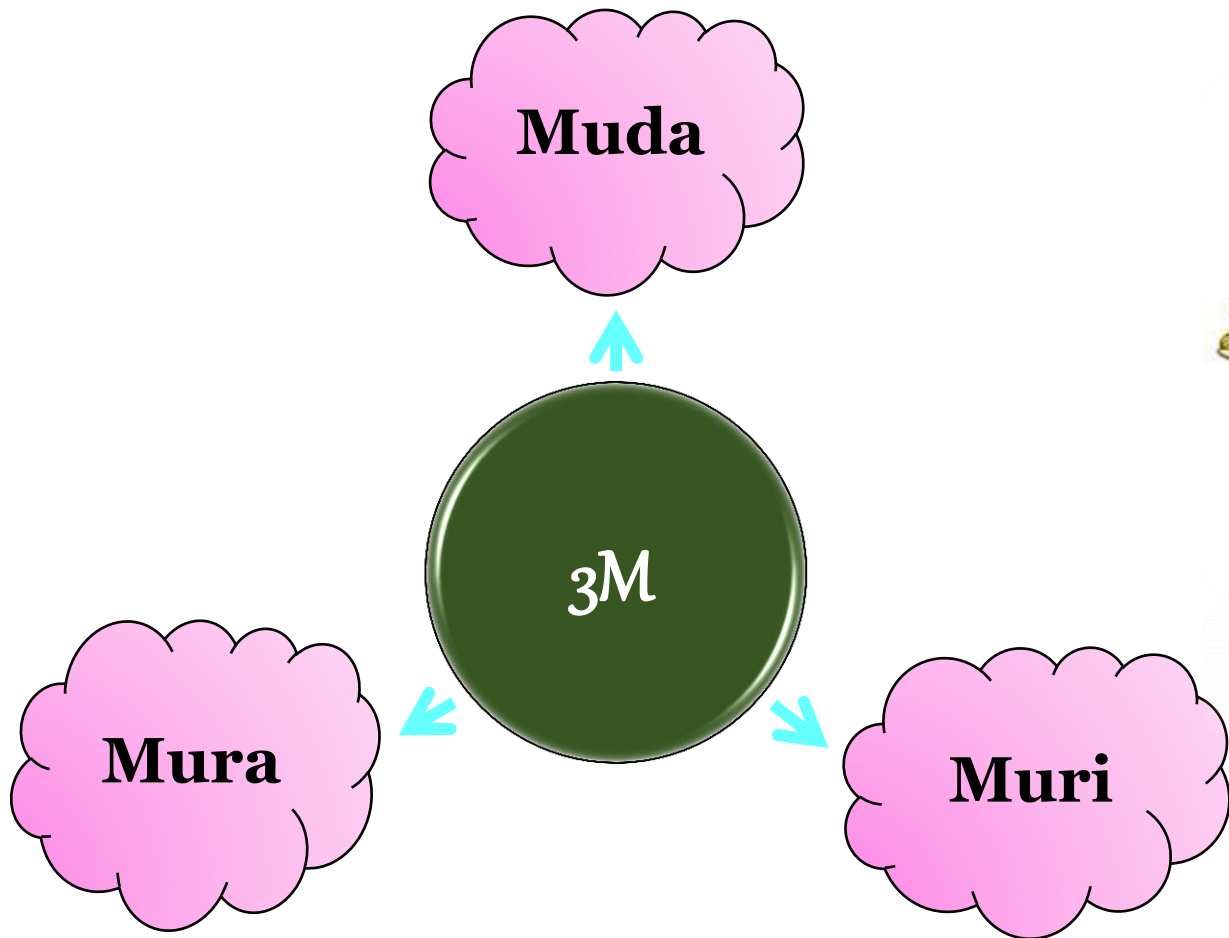


Analyze
Data

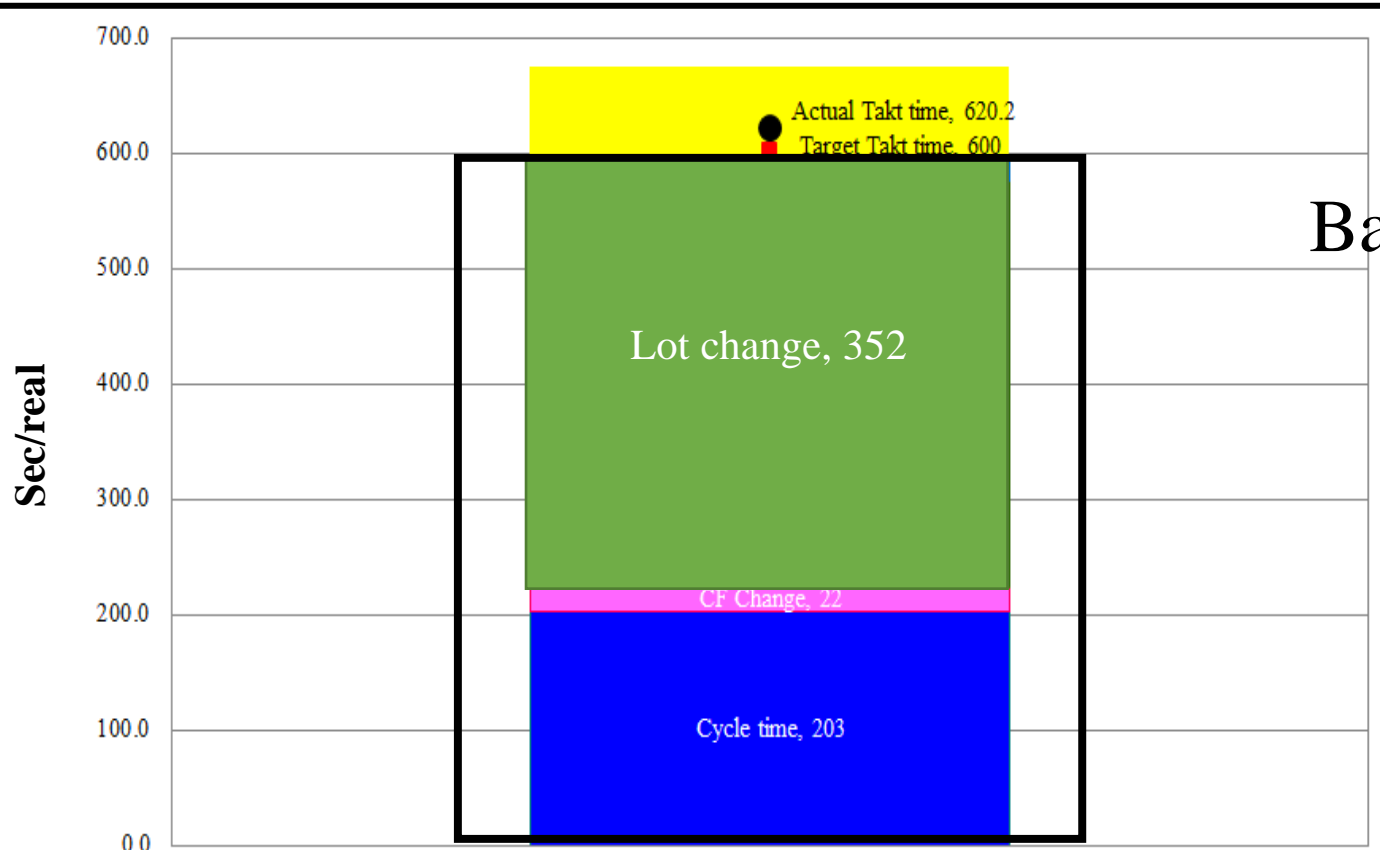


Discussion
Find KAIZEN
Points

How to find KAIZEN

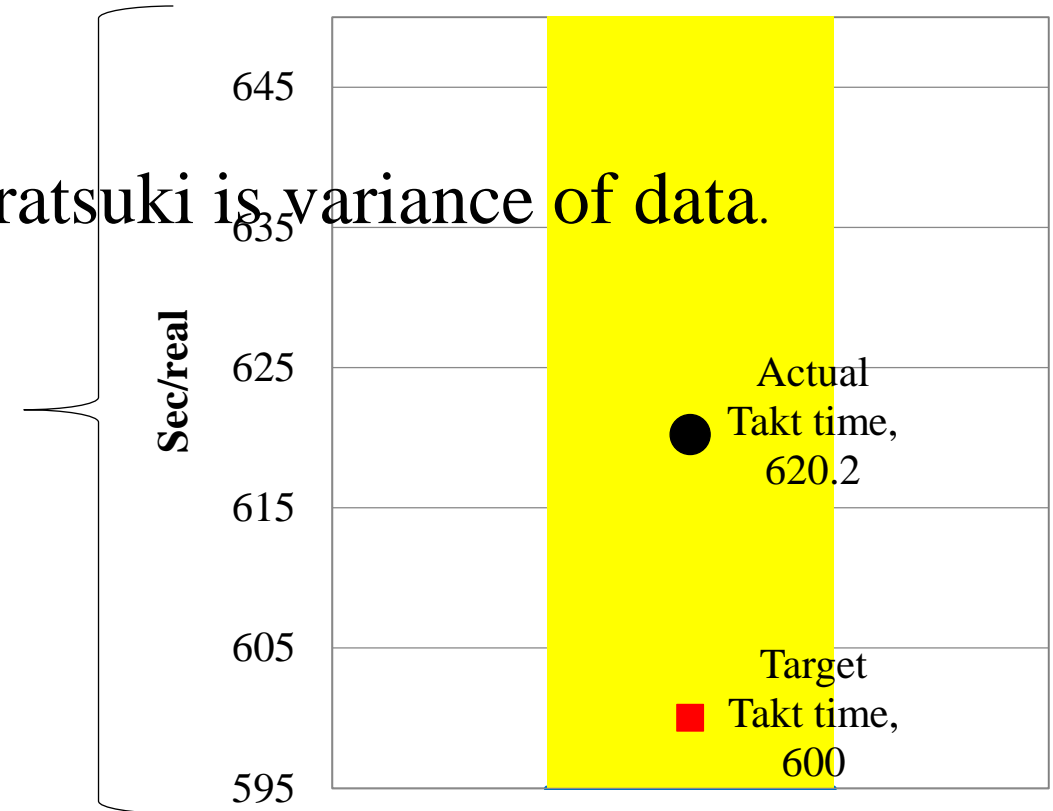


Yamazumi chart of Inner Chaffer #1



Max. Baratsuki	80
Lot Change	352
CF Change	22
Cycle time	203
● Actual Takt time	620.2
■ Target Takt time	600
Avg. Baratsuki	25.2

Baratsuki is variance of data.

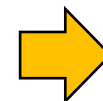


How to reduce
Baratsuki

Data analysis

STD Time		Baratsuki	% Loss
Cycle time	203	17.2	74%
CF Change	22	0.8	3%
Lot Change	352	5.2	23%
Total (sec)	577	23.2	100%

Baratsuki cycle (sec)		
17.2 sec	Length/reel	9.2
	Operation	8.0
	Total	17.2 sec



KAIZEN

Finding KAIZEN

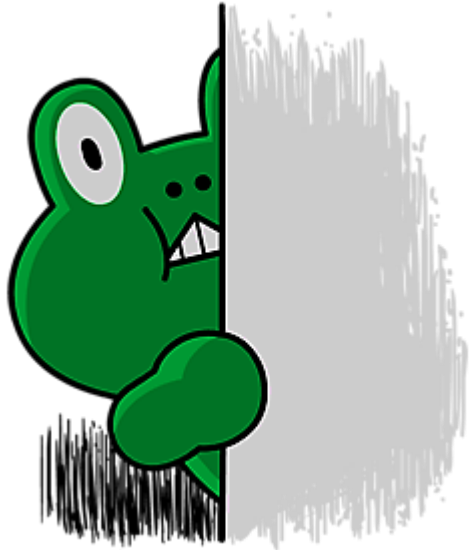
What is KAIZEN point?

× Manual doo
the width

Baratsuki

Timing of checking

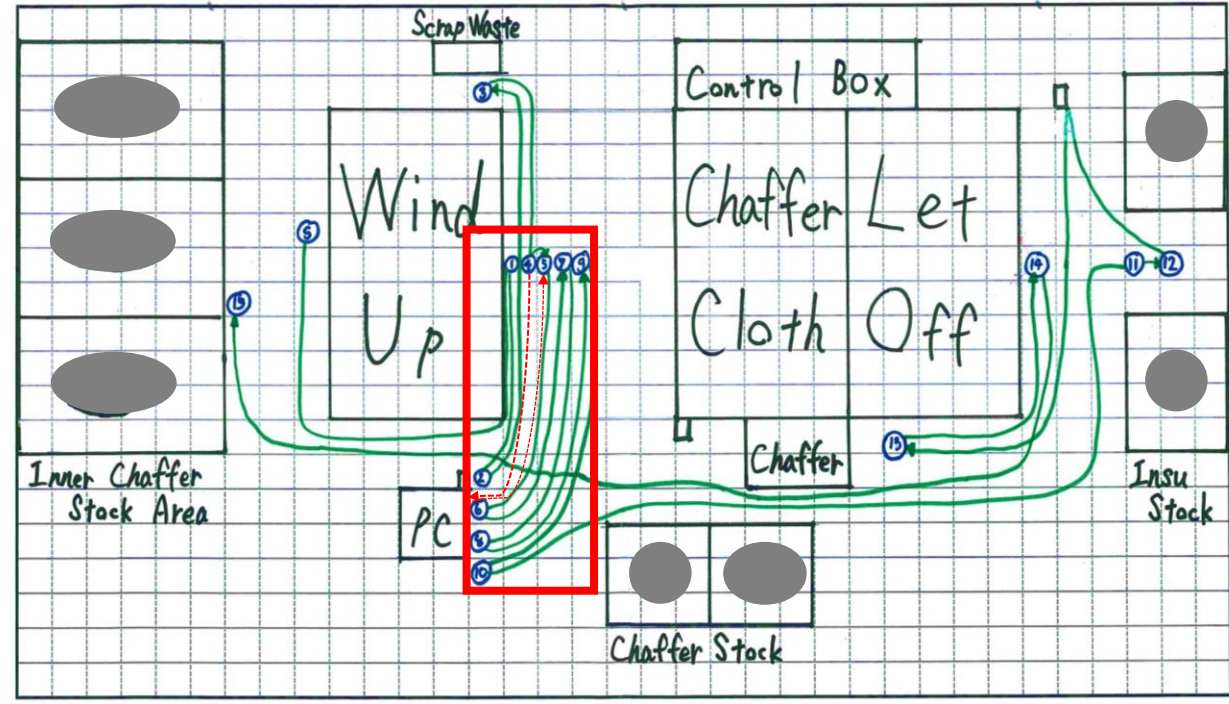
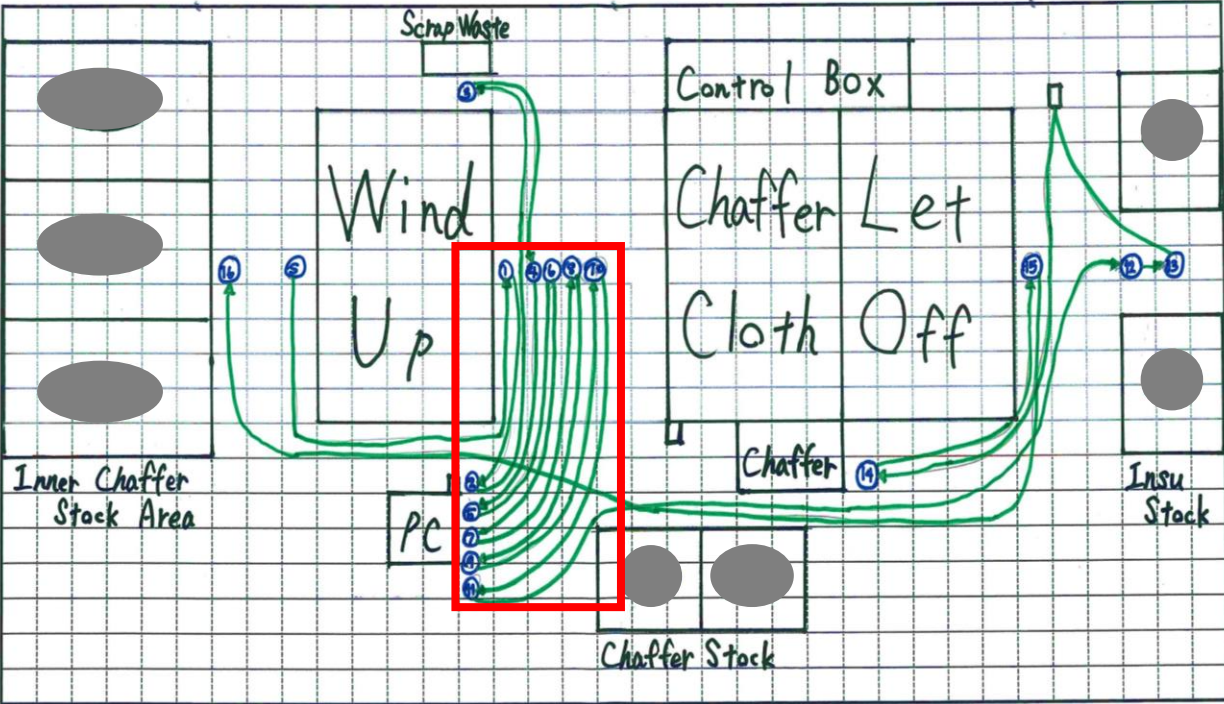
Timing is different depending on operators



Layout pathways of operator

A

B

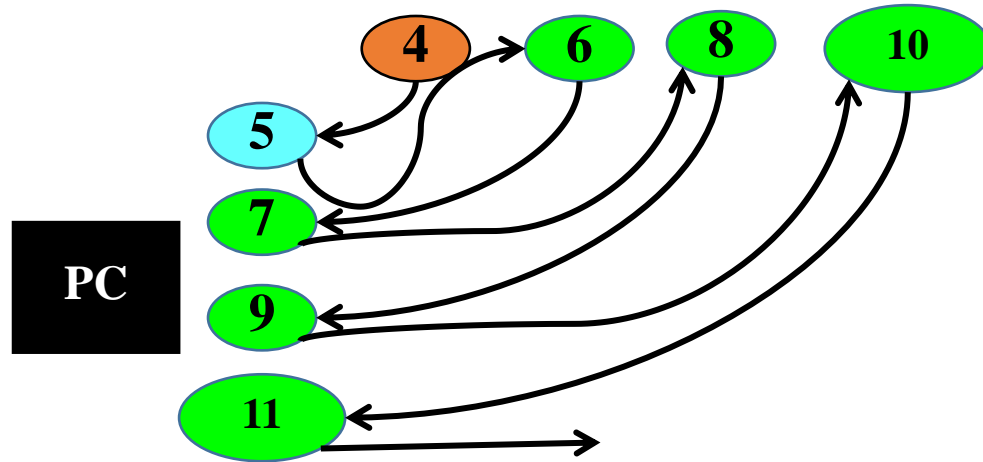


Starting : setting Liner
Finish : Stock Mat.

Quality	Safety	Stock
◆	+	●

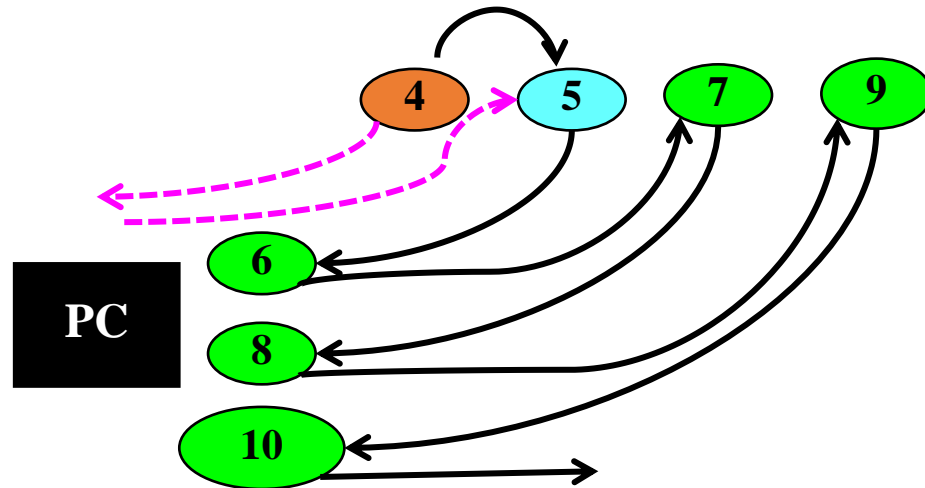
Comparison of layout pathways

A



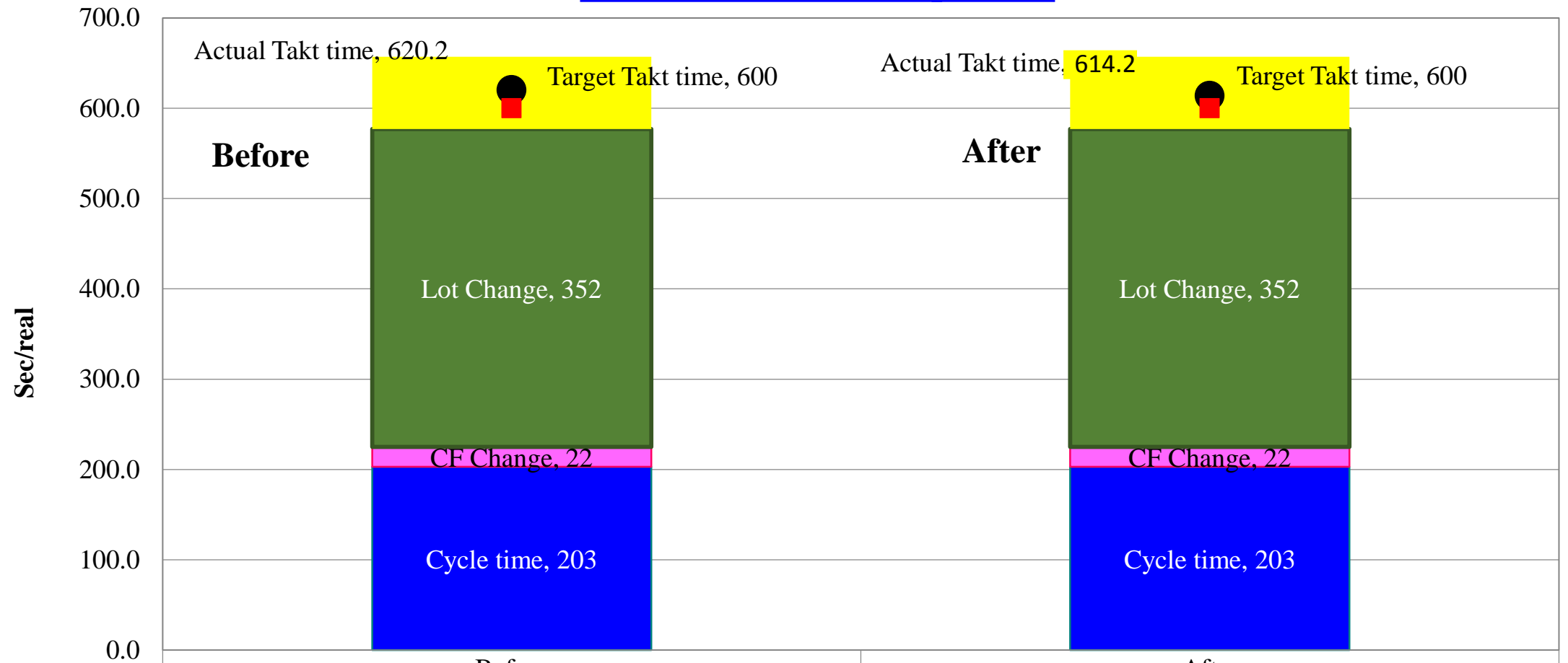
step	Pathway A	Hand	Auto
4	Setting CF		
5	Auto		21
6	Check WID#1	12	
7	Auto		59
8	Check WID#2	12	
9	Auto		92
10	Check WID #3	13	
Total		37	172

B



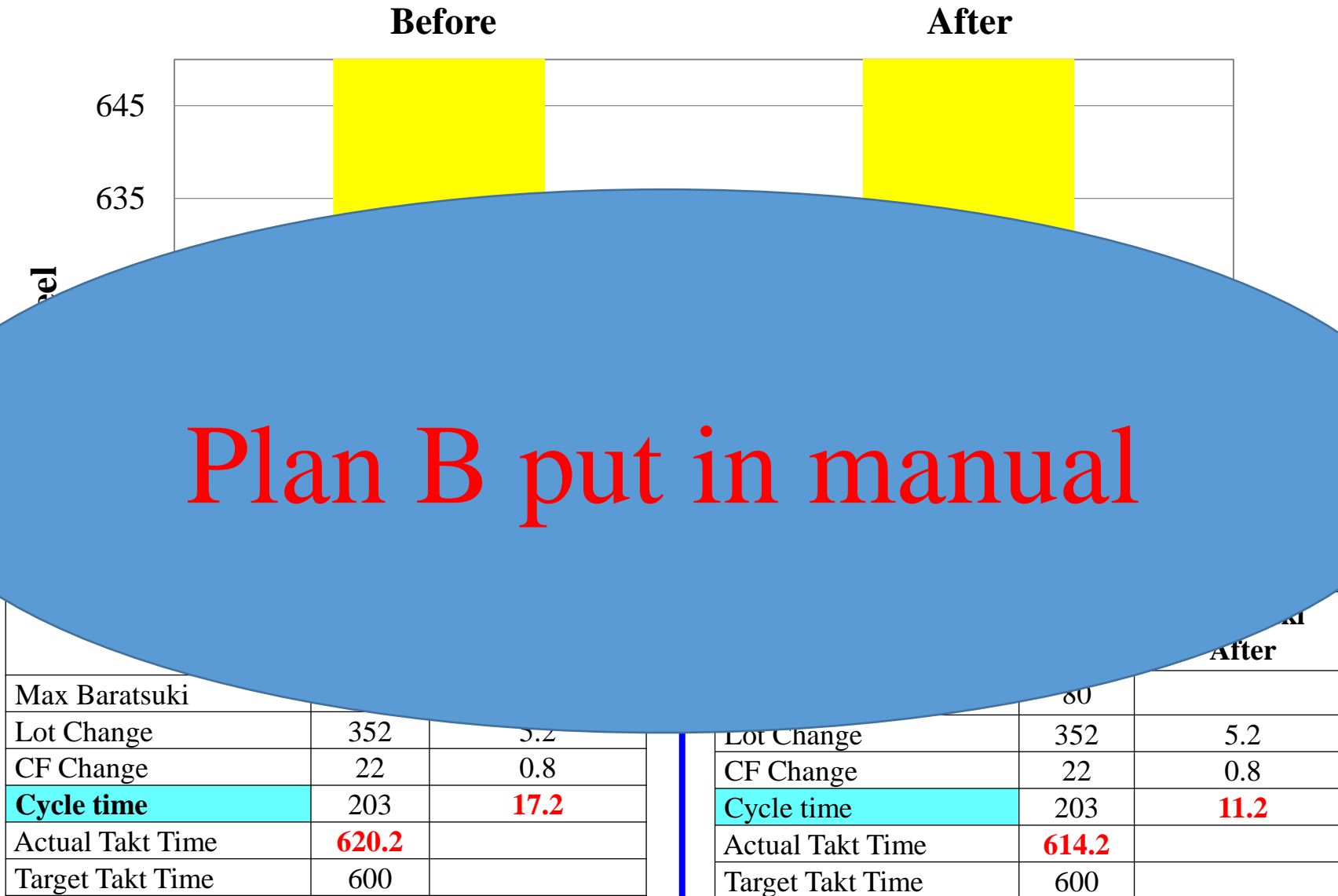
step	Pathway B	Hand	Auto
4	Setting CF		
5	Check WID#1	6	
6	Auto		99
7	Check WID#2	12	
8	Auto		73
9	Check WID #3	13	
Total		31	172

Yamazumi chart comparison



	Before	After
Max.Barastuki	80	80
Lot Change	352	352
CF Change	22	22
Cycle time	203	203
● Actual Takt time	620.2	614.2
■ Target Takt time	600	600
Avg.Baratsuki	25.2	19.2

Yamazumi chart comparison



$$\text{Actual Takt Time} = \text{Necessary loss} + \text{Ave. Barasatki} + \text{Cycle Time}$$

SAKDA's impression

Standard Quality



Kindness



Team work



TORU's impression

Communication

Safety

Keep rules

TORU's impression

Find
problem

improve

Feedback

Product Development of Food

Thank you
for your
attention

