QCP

X-Log

TAM – TMMIN QCC 2023

01. BACKGROUND

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a. Company Hoshin – CPD role to support Part Sales Achievement

COMPANY BUSINESS REVIEW

Customer Satisfaction

92%

NPS
[National Promotor Score]

Business Performance

34%

Market Share

60.3%

Service Share
[Unit Sales Vs Service]

4.3T

Part Sales

TAM - SPLD Role

Providing **Sustain** Lean Logistic Supply-ability
[Demand – Inventory – Warehouse]

MARKET CONDITION

Company Strategy

TAM – SPLD Role

Providing **Warehouse Capacity** to accelerate market condition

Division Hoshin 2022

[**AP1**] Optimize shikumi for created demand fulfillment

[**AP4**] High speed Operation (ship w/o binn ops.)

Novi S. - SPLD Div. Head

01. BACKGROUND (cont'd)

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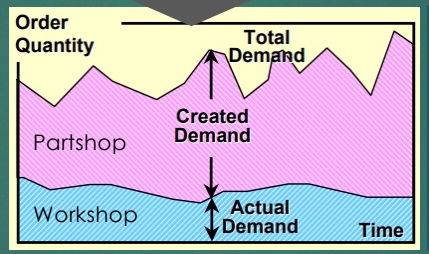
b. Customer Demand vs Expectation – Specific Treatment is required

Customer Demand + Sales Program [Boost up market]

Customer Expectation

Actual Demand	60%	Immediately supply
Created Demand	40%	Supply within 2 months



Optimal Demand Fulfillment + Capacity [WH storage]

IM - Inventory Management

WH - Warehouse

c. Balancing C/S vs Inventory Cost

Part Sales (**6.9T** by 2026)

Service Rate + Stock Month +

Target : < 80%

Providing best services with optimum cost and lowest WH space occupation

02. CHALLENGE

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SALES
6.9 T
[2026]

Fluctuated Demand for Campaign

Balance and Lean Logistic Operation

HAPPINESS for ALL

- ***CUSTOMER***
- ***SUPPLIER***
- ***COMPANY***

Achieving **Sales** Target by managing **fluctuated** demand with **balance & lean** logistic operation to deliver **Happiness for ALL**

03. PROBLEM IDENTIFICATION

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PROBLEM

IDEAL

a. Supply-ability Readiness

Fluctuated Demand (167%) impact to PO creation

Fluctuated PO creating **uncertain** operation level

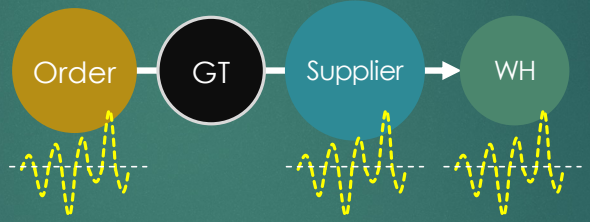
Supplier **unable to maintain** the supply ability

Long Supply LT
(Supplier – CPD – Cust.)

Create special treatment for fluctuated demand

b. System Readiness

PO managed directly w/ additional order



Created PO **directly passed** through to supplier with **unheijunka** condition

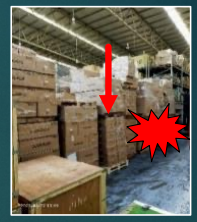
Create PO by following the heijunka concept

c. Capacity Readiness

WH running out of space (*)

Primary Loc.
74%

Reserve Loc.
104% *



Creating Ops. problem :
[S] part falling, [Q] incorrect stacking

Increase WH Capacity with lowest Investment

*) Target : < 80%

03. PROBLEM IDENTIFICATION

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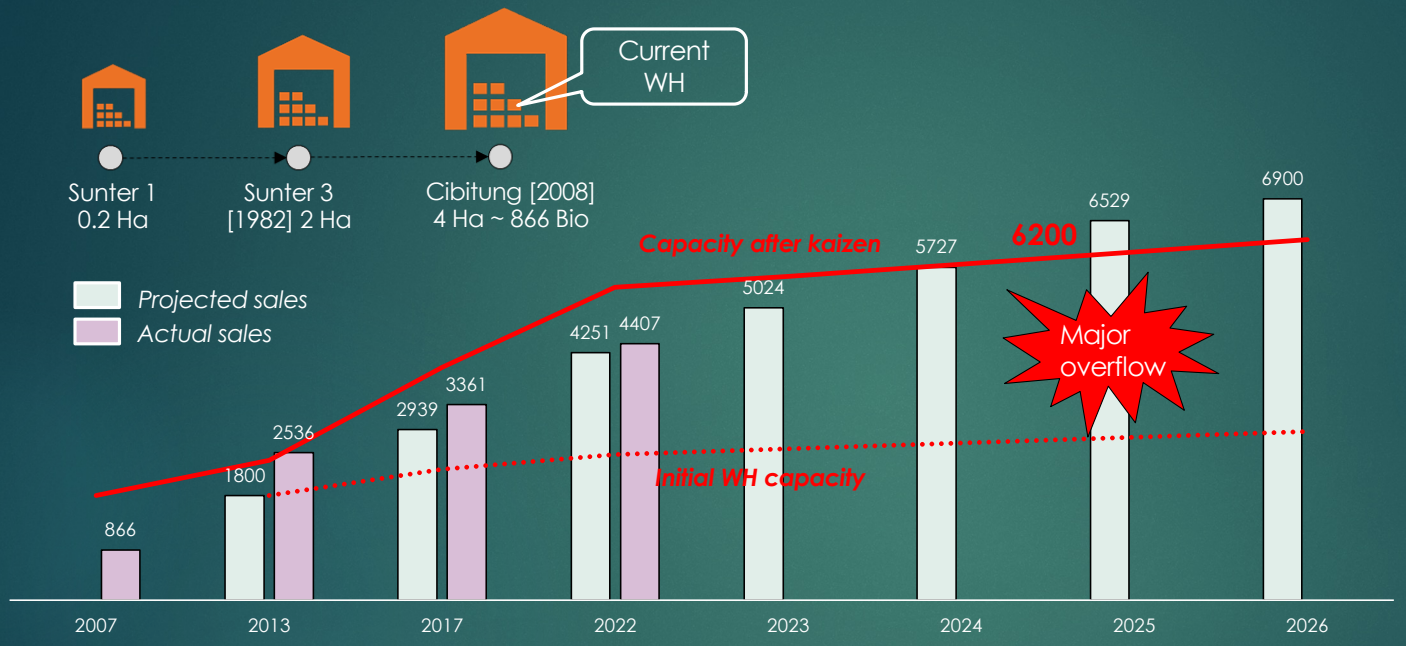

Year	2007	2013	2017	2022	2023	2024	2025	2026
Actual sales	866	2536	3361	4407				
Projected sales		1800	2939	4251	5024	5727	6529	6900
				491%				797%
Installed capacity *(modified by value of money)*		1800	2250	2500	2600	2700	2800	2900
Capacity after kaizen	1800	2400	4000	5376	5571	5773	5983	6200
Operation condition	O	O	O	O	O	O	Δ	X

Need action

(*) WH running out of space

Since moving to current WH (Cibitung) in 2008 sales has increase 508%. Current calculation shows that without significant kaizen we will run out of space by 2026.

04. THEME

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Modernized Logistic Operation through **Automation Technology** implementation for creating **Leveled** Purchase order with keeping fluctuated demand fulfillment and **Increasing Logistic capacity** by conducting shipping without binning concept (CrossDock operation)

05. OUR TEAM (**2** Division, **3** Department, **Supplier**)

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SPLD

NOVI S.

Warehouse Dept.

Iwan S.

Hutama P.

Dedi W.

Role : Physical Logistic Handling

ISTD

W. Darmadi

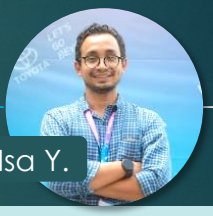
Inventory Management Dept.

Sapta P.

Guntur WNP

Didik H.

Clara P.T.



Isa Y.

Role : System Development

SUPPLIER (Sugity)

Wisnu

Yuda

Role : Inventory & Procurement

06. STRATEGY & SCHEDULE ACTIVITY

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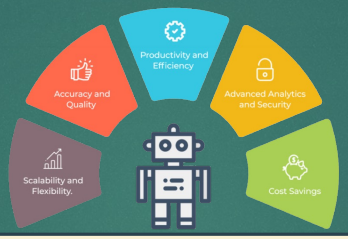
a. Strategy Activity : How to manage the issue?

I. SYSTEM PREPARATION

II. OPERATION PREPARATION



❶ Easy **<u>Communicate</u>** w/ Supplier
(Forecast vs Supplier Capacity)

INPUT

❷ Levelling Purchase Order by **<u>RPA</u>**

INPUT

❸ **<u>CrossDock Operation</u>** At Warehouse

To solve Issue a and b : fluctuated demand

To solve Issue c : capacity issue

07. STRATEGY & SCHEDULE ACTIVITY

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NO	ACTIVITY	AREA IN CHARGE				2022							2023
		TAM			Sup	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
		SPLD		ISTD									
		IM	WH										
❶	Easy Communicate to Supplier (Forecast vs Supplier Capacity Confirmation)	◉			○	System Enhancement		Socialization				Implementation	
❷	Levelling Purchase Order by **RPA** a. User Requirement, combine : - Supplier Capacity Confirmation - Customer Supply LT Expectation b. System Development	◉		◉		UR	System Development		System Test		Trial	★ Go Live.!!	
❸	CrossDock Operation at Warehouse **Step 1 :** a. Re-layout and Roller Installation b. SOP Making c. CrossDock Operation Trial **Step 2 :** a. Criteria CrossDock & Customer Selection	○	◉			**Step 1 :** Re-layout & Roller Installation		SOP Making			Trial	Implementation	
						Step 2 : Study Customer Demand		Selection					

08. COUNTERMEASURE ACTIVITY

QCP

Strategy Activity :

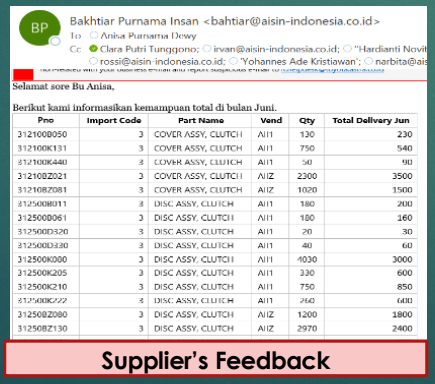
1. Easy Communicate with Supplier (Forecast vs Capacity Confirmation)
2. Levelling Purchase Order by RPA
3. CrossDock Operation

Before : done by manual (Via Email)

TAM SPLD → Local Supplier

Calculate Forecast to Supplier → Send Forecast by Email → Feedback by Email to TAM

TAM SPLD's Email

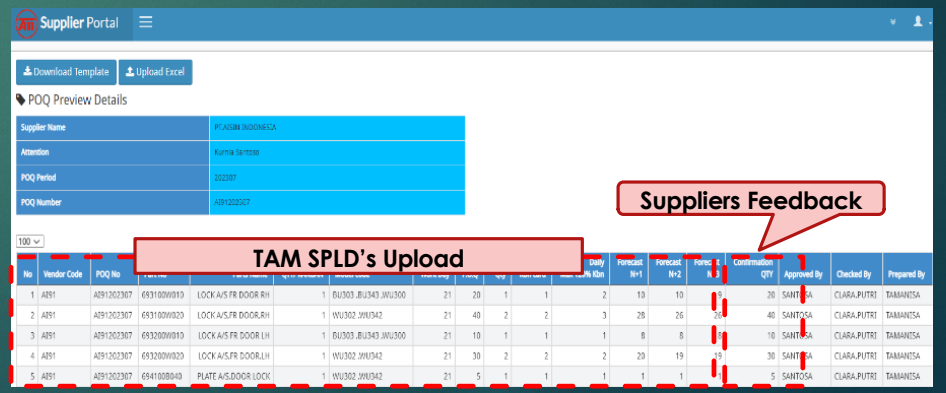


Supplier's Feedback

After : done by system (Via Supplier Portal)

TAM SPLD → Local Supplier

Calculate Forecast to Supplier → Upload Forecast at Supplier Portal System → Feedback at Supplier Portal System



08. COUNTERMEASURE ACTIVITY

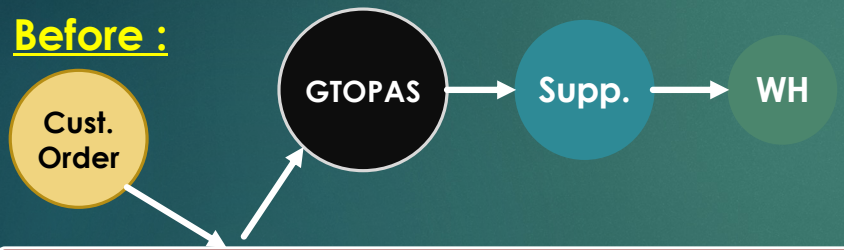
QCP

Strategy Activity :

1. Easy Communicate with Supplier (Forecast vs Capacity Confirmation)
2. Levelling Purchase Order by RPA
3. CrossDock Operation

Summary Improvement Point in 2nd Strategy

Before :



Manual Leveling PO Creation

Data Collecting:	Data Create:
-New PO -Outstanding PO	-PO to Supplier -By Supplier portal, + email

High complexity - High Potential Data Error
Man Hours required : Big Data Volume & Long LT process

After : Robotic Process Automation (RPA)

Leveling PO Creation **by RPA**

Data Collecting:	[new] Data Calc. :	Data Create:
-New PO -Outstanding PO	-Leveling PO -Supplier Cap.	-PO to Supplier - By supplier portal

No Potential Data Error
No require Man Hours to conduct the process (100% RPA)

08. COUNTERMEASURE ACTIVITY

QCP

Strategy Activity :

1. Easy Communicate with Supplier (Forecast vs Capacity Confirmation)
2. Levelling Purchase Order by RPA
3. CrossDock Operation

Unloading → Check Receiving → Binning ✕ → Storage ✕ → Picking ✕ → Check Issuing → Loading

X-Dock bypass

LAYOUT BEFORE

LAYOUT AFTER

Install transfer roller from receiving to issuing process

09. IMPLEMENTATION ACTIVITY

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Implemented to :

PHASE #1

Focus : **Stock Reduction**

a. AISIN (Clutch)
b. KAYABA (Absorber)
c. SUGITY (Bumper)
d. ICHIKOH (Lamp)
e. DENSO (Filter)

Example :

Cover Clutch
31x31x5.5 cm | 6.22 Kg

Part No	Avg Stock before	Avg Stock after	Pcs reduction	Pcs/Pallet	Pallet saving
312100D180	222	89	133	72	2
312100K040	592	275	317	75	5
312100K101	1178	664	514	48	11
312100K131	248	191	57	18	4
312100K190	365	105	260	45	6
			Total		28

Total Part
(up to June 2023)
38
Clutch, Absorber, Bumper, Lamps, Filters

Total Pallet reduction
168
(reduction of usage in reserve location)

a. Stock Month Reduction
[target : 0.3]

b. WH Space reduction

10. FINAL RESULT / BENEFIT

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Customer Delight

Supply LT reduced **128** days → **62** days

Supplier Supply-ability

Supply LT reduced **17** days → **3** days

HEIJUNKA PO Released

easily manage the production plan in daily basis due to **order match with daily capacity**

CPD Capacity

Stock Amount Reduced* IDR **11.55** bio

*) Cross dock item only

Location usage reduced

Storage type	Used	Target	Eval	Life Time
1. Primary location	77%	≤ 80%	O	2030
2. Reserve location**	**85%**	≤ 80%	Δ	**2026** (min)

27.3 m2 (IDR 36 mio/year)

**) lifetime increase 2022 → 2026

Man Hour Reduction

1,795 hours /year

IDR 133 mio /year

***Expansion** continued →*

11. EXPANSION ACTIVITY

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CrossDock Expansion Plan

PHASE #2

Focus : **Space Reduction**

1. KOITO (lamp)
2. NOI (chemical)
3. HITACHI ASTEMO (absorber)

CPD Capacity

Stock Amount Reduced* — IDR **1.1** bio

*) Cross dock item only

Location usage reduced

Storage type	Used	Target	Eval	Life Time
1. Primary location	77%	≤ 80%	O	2030
2. Reserve location**	**81%**	≤ 80%	Δ	**2026** (min)

55.5 m2 (IDR 74 mio/year)

Man Hour Reduction

1,188 hours /year

IDR 88 mio /year

11. FUTURE EXPANSION ACTIVITY

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CrossDock Expansion Plan

PHASE #3

Focus : **Future Space Reduction**

All previous item but add destination to Sub Depot

<need GTOPAS modification – under discussion with TMC>

CPD Capacity

Stock Amount Reduced* IDR **39** bio

*) Cross dock item only

Location usage reduced

Storage type	Used	Target	Eval	Life Time
1. Primary location	77%	≤ 80%	O	2030
2. Reserve location**	**67%**	≤ 80%	o	2030 (min)

241.2 m2 (IDR 318 mio/year)

Man Hour Reduction

13800 hours /year

IDR 1,022 mio /year

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THANK YOU