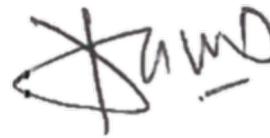
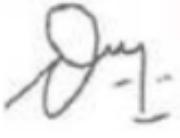




Supplier Jiritsuka for TS Online (TS Online Digitalization)

Approved	Checked	Prepared
		
Daniel D.	Dwianta	Lutful H.

26th August
2023

PT. Toyota Motor Manufacturing Indonesia



QCC - QCP TMMIN

TEAM MEMBERS (TSO Group)

Facilitator:

1. Mr. Bambang S.



F.X. Dwianta H
(ADVISOR)



Bobby
(PUD)



Michael
(EMD)



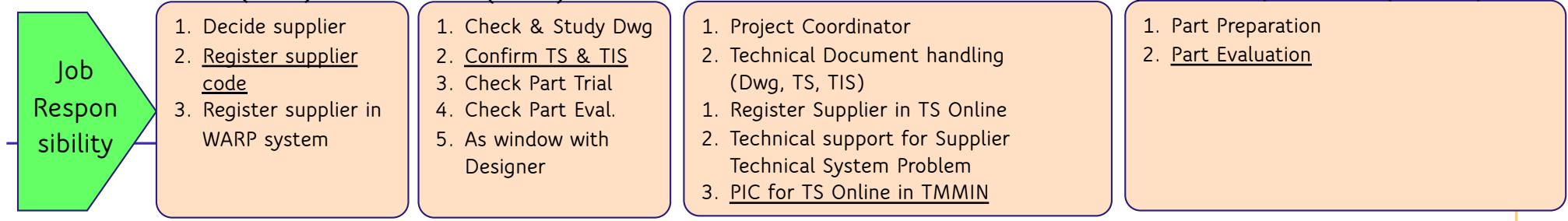
Lutful H.
(EMD)
"Project Leader"



Kusmanto
(PT. TGIDN)



Sadiyatul Muzayannah
(PT. TRI)

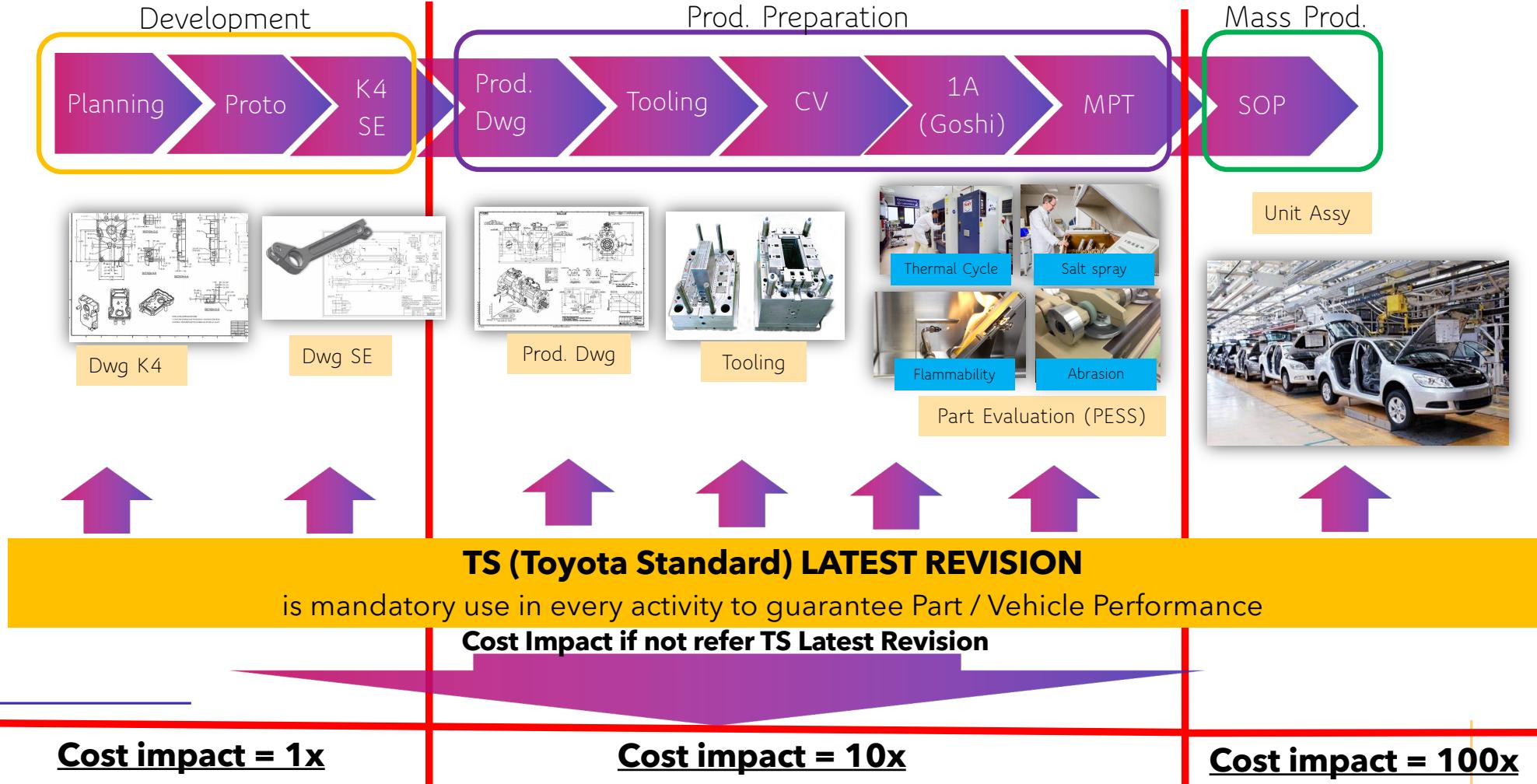




Overview

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Toyota Project Milestone



Background

TMMIN 560B **PESS** Progress Delay compare to TKM due to **Evaluation Item** in PESS not refer to **TS (Toyota Standard)** latest revision

The diagram illustrates the PESS process flow:

- Parts Product:** Shows various engine components like a cylinder head, intake manifold, and connecting rods.
- PESS Doc. Check by Designer (before Part Evaluation):** A 3D character holding a clipboard.
- Part Evaluation & Goshi:** Photos of a person in a lab coat and robotic arms.
- Mass Prod. Vehicle (SOP):** A white SUV on a assembly line.

PESS Progress Sheet:

PESS Progress	72%
TKM	31%
TMMIN	31% (highlighted with a red box)

PARTS EVALUATION STATUS SHEET (PESS):

- Model Code: 560B
- Protected: PROTECTED
- Do Not Reproduce

TOYOTA ENGINEERING STANDARD:

Table 2 Requirements for General Mechanical Properties (when measurement method complying with ISO Standard is used)

Test item	Class 1A	Class 1B	Class 2A	Class 2B	Class 2C
Density	1.37 to 1.44				
Tensile test	57 min.	9 min.	60 min.	20 min.	61 min.
Charpy impact test	4.1 min.	2.7 min.	5.5 min.	3.6 min.	
Deflection temperature under load	1.8 MPa (°C)	75 min.	80 min.	88 min.	
Rockwell hardness	0.45 MPa (°C)	132 min.	142 min.		
	M Scale	66 min.	73 min.		

Table 3 Requirements for General Mechanical Properties (when measurement method complying with former JIS is used)

Test item	Class 1A	Class 1B	Class 2A	Class 2B	Class 2C
Specific gravity	1.37 to 1.44				
Tensile test	55 min.	20 min.	40 min.	20 min.	59 min.
Flexural test	73 min.		85 min.		
Izod impact test	1800 min.		2000 min.		
Heat distortion temperature	44 min.	29 min.	59 min.	39 min.	
Rockwell hardness	1820 kPa (°C)	140 min.	95 min.	150 min.	
	M Scale	70 min.		75 min.	

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What will happen if Part Evaluation delay/not finish/ Fail

1. New Model SOP DELAYED

2. Bad Image of Toyota Brand

3. Car Selling & Profit Decrease

4. Customer Complain & Repair Cost Increase

Vehicle Export to other country

The diagram shows the following consequences of part evaluation delay or failure:

- 1. New Model SOP DELAYED:** A car icon.
- 2. Bad Image of Toyota Brand:** A Toyota dealership building.
- 3. Car Selling & Profit Decrease:** A graph showing a downward trend in sales and profit.
- 4. Customer Complain & Repair Cost Increase:** Photos of angry customers and a mechanic working on a car.

Need concrete action to avoid potential delay of PESS submission

① Clarify the Problem

Division Hoshin

- Transform business model through **Digital Transformation (DX)** to increase efficiency (office & shop floor).

Department Hoshin

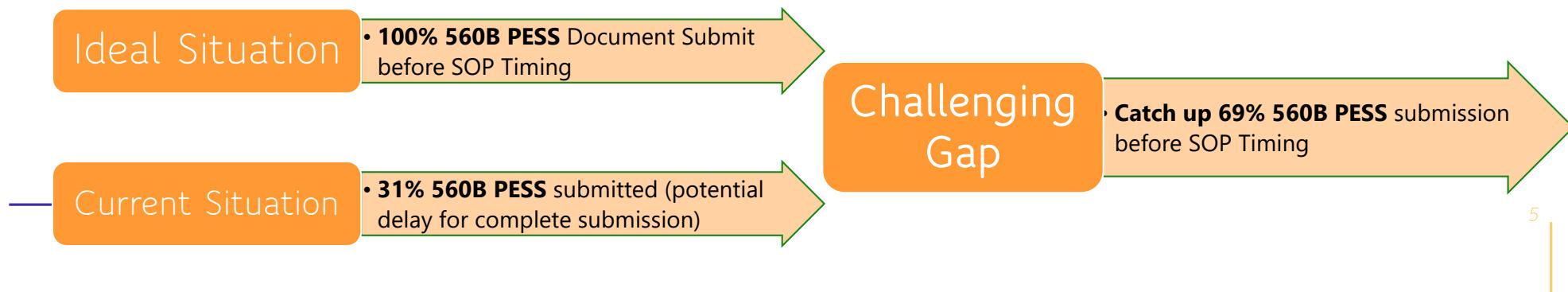
- Step by step: **Digitalization** to Digital Transformation

My Role

- Enhance **digital** collaboration by IT to improved job process (quality & lead time)

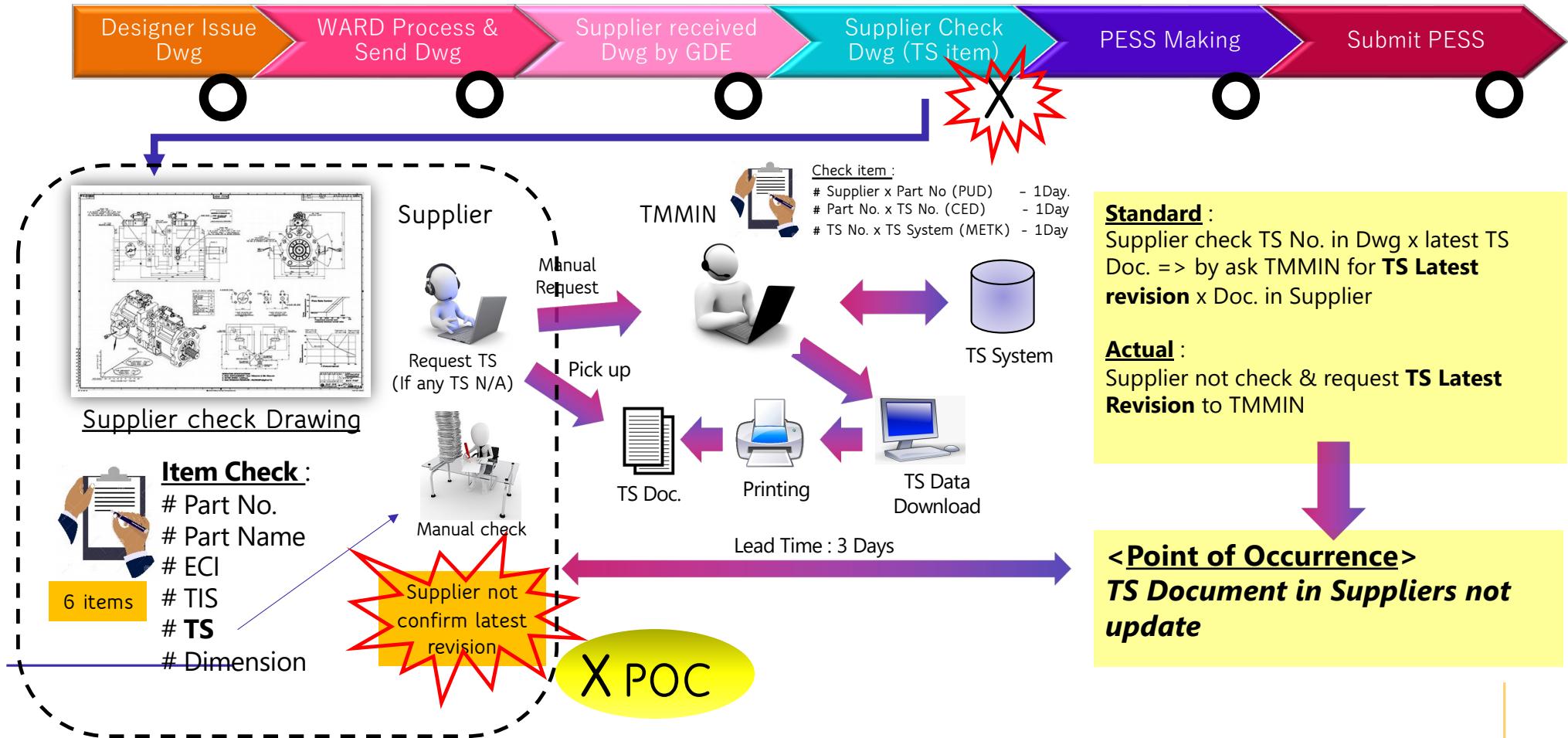
Ultimate Goal:

All Suppliers get TS Latest Revision for PESS document submission



② Breakdown the Problem

Technical Document Flow for Supplier



③ Target Setting

<Point of Occurrence>

TS Document in Suppliers not update

<TARGET-1>

TS Document latest revision receive by Supplier in real time (jiritsuka)

<TARGET-2>

PESS 560B 100% Submit before SOP Timing



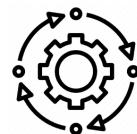
Current condition

④ Root Cause Analysis

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TS Document in Supplier not update

— <4M Analysis>



Method



Material



Man



Machine

WHY?

TS request
by manual form

TS Document still
Old Revision

PIC not pro-actively
ask to TMMIN

No Problem

WHY?

No direct access
To TS System

No review TS
Doc. revision

PIC low awareness
to review TS Doc.

WHY?

Not register in TS
System

Root
XCause

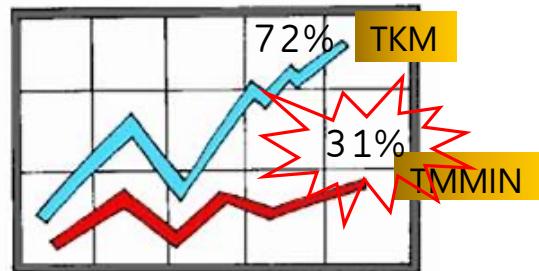
PIC don't know TS
has several Revision

Not as Root
Cause

⑤ Develop Countermeasure

Project Report and Brainstorming TMMIN x TMC-ZH

PESS Report status by TMC-ZH



TMMIN PESS achievement below from TKM

Speed up revise PESS refer to TS Doc. Latest Revision

Is there any system for supplier to check update TS Latest Revision directly?



TMMIN

There is system for supplier to check TS Latest Revision directly:
TS Online
(TKM & TMT Supplier already registered)



Countermeasure by Yokoten idea (Digitalization):

- To **register** supplier in **TS Online** to get **TS Latest Revision** Document as real time (Jiritsuka)

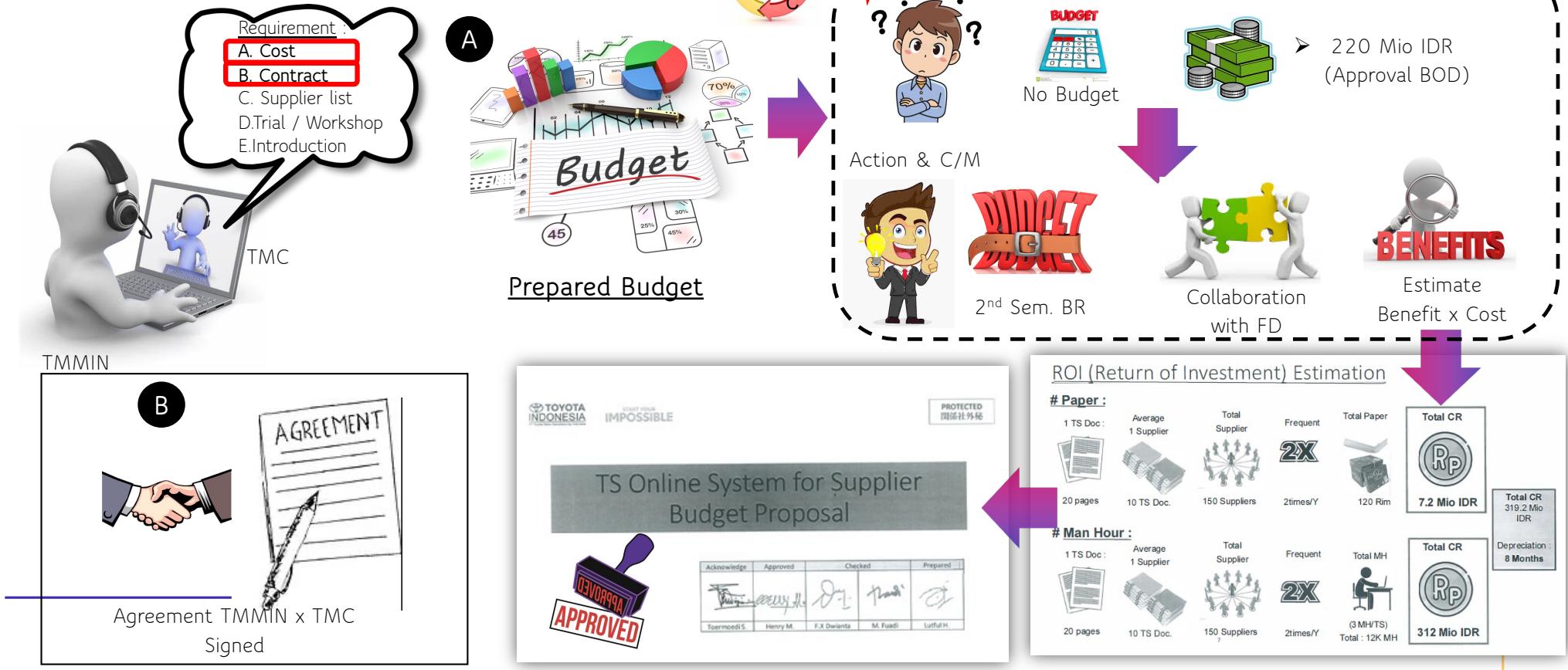
⑤ Develop Countermeasure

<Countermeasure Action Plan>

Root Cause	Countermeasure	Activity	PIC	2022				2023
				Q1	Q2	Q3	Q4	
Not register in TS System	Register supplier in TS Online system to get latest revision in real time (Jiritsuka)	560B Project Milestone						560B \$OP
		Communicate with TMC # Cost & Contract	EMD					
		Supplier list related with 560B Project (supplier list & Code)	PuD					
		Supplier list process and send to TMC	EMD					
		TS Online System Trial	EMD & Supplier					
		TS Online Workshop	EMD & Supplier					
		TS Online Introduction and Go Live	TMC					Go Live
		Manage TS Online utilization	EMD					
		Progress Report	EMD	 	 	 		

⑥ Development Activity

Communicate with TMC-DQI



⑥ Development Activity

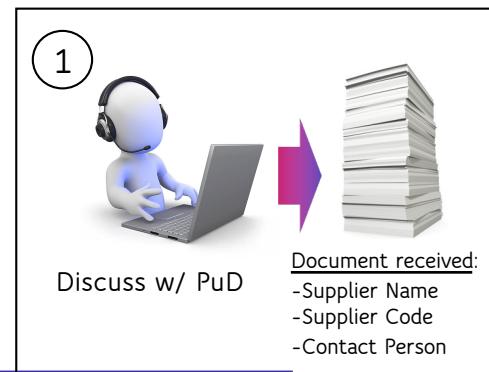
TS Online Preparation

Requirement :

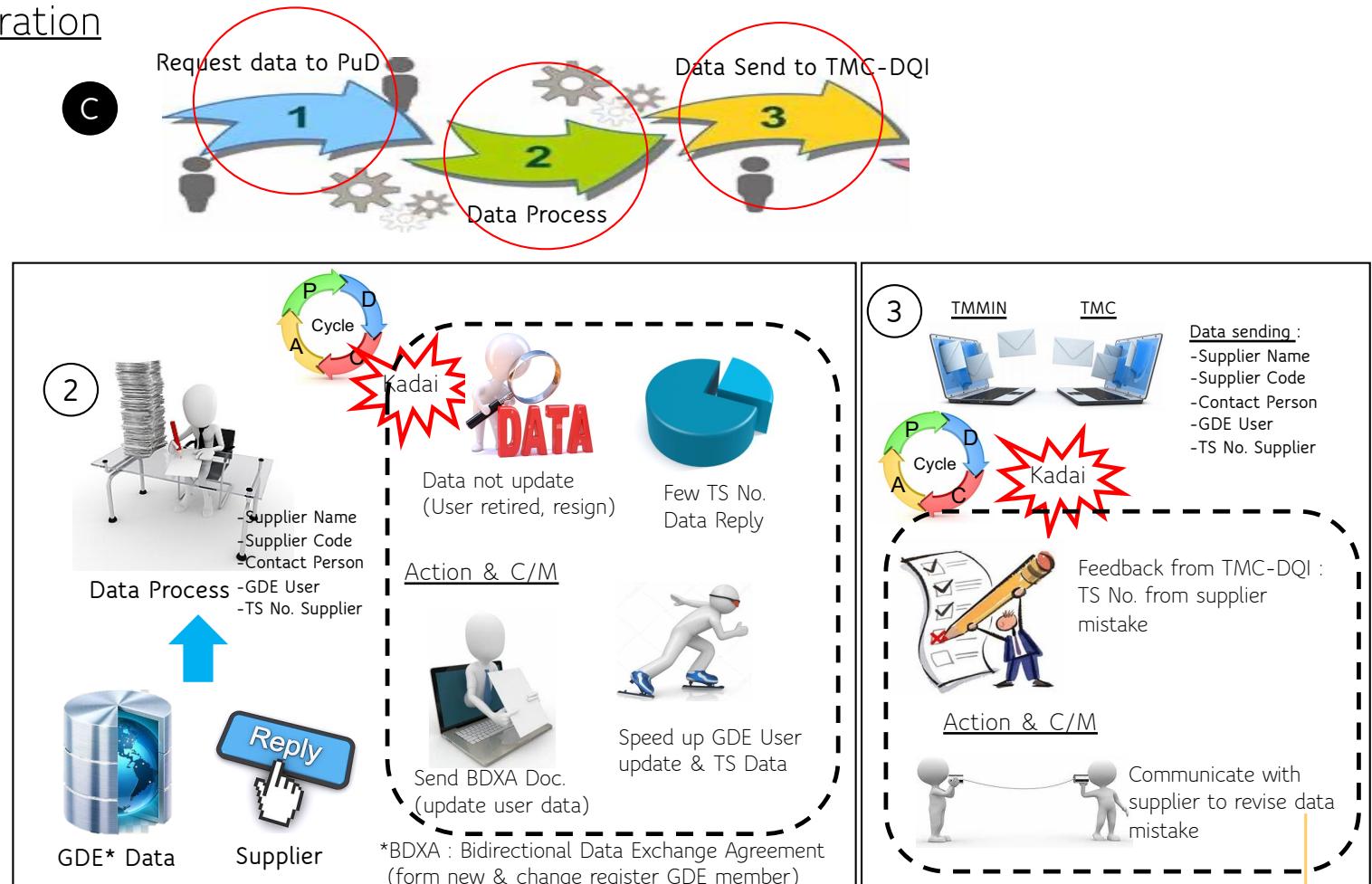
- A. Cost
- B. Contract
- C. Supplier list**
- D. Trial / Workshop
- E. Introduction

TMC Data Req :

- Supplier Name
- Supplier Code
- Contact Person



*GDE : Global Data Exchange
(Data transfer system)



⑥ Development Activity

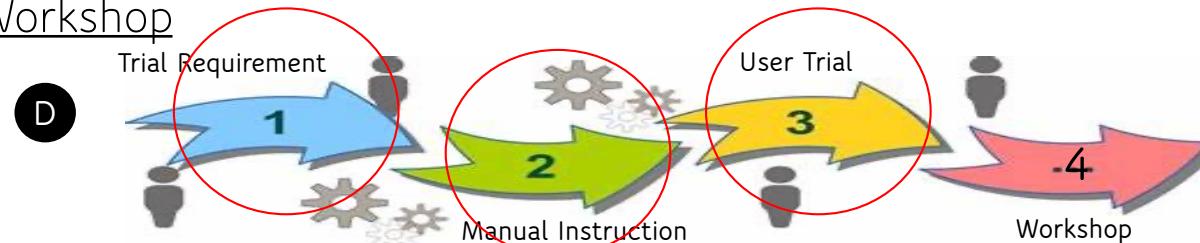
TS Online Trial & Workshop

Requirement :

- A. Cost
- B. Contract
- C. Supplier list

D. Trial / Workshop

- E. Introduction



1 Mtg w/ TMC-DQI

ACTION REQUIRED

-Requirement Trial :
#Select 2 suppliers
#Supplier GDE User

- Reply req. 2 suppliers
#TGIDN (Toyoda Gosei)
#TRI (Tokai Rika)
-and Inform Supplier GDE user

2 Received Doc. Trial User

3 TMMIN & Supplier Study

2

3

TS Online User Trial 2 Suppliers :
-TGIDN (Toyoda Gosei)
-TRI (Tokai Rika)

TS Online Trial User

FINISH

Kadai

P D Cycle

Test Screen Expected Result Actual Result Comments Date

1	TEST	TOYOTA ENGINEERING STANDARD	No problem	If you have any comment or problem, please enter:
2	TEST	TOYOTA ENGINEERING STANDARD	No problem	
3	TEST	TOYOTA ENGINEERING STANDARD	No problem	
4	TEST	TOYOTA ENGINEERING STANDARD	No problem	
5	TEST	TOYOTA ENGINEERING STANDARD	No problem	
6	TEST	TOYOTA ENGINEERING STANDARD	No problem	
7	TEST	TOYOTA ENGINEERING STANDARD	No problem	
8	TEST	TOYOTA ENGINEERING STANDARD	No problem	
9	TEST	TOYOTA ENGINEERING STANDARD	No problem	
10	TEST	TOYOTA ENGINEERING STANDARD	No problem	
11	TEST	TOYOTA ENGINEERING STANDARD	No problem	
12	TEST	TOYOTA ENGINEERING STANDARD	No problem	
13	TEST	TOYOTA ENGINEERING STANDARD	No problem	
14	TEST	TOYOTA ENGINEERING STANDARD	There is a problem	There is a problem
15	TEST	TOYOTA ENGINEERING STANDARD	No problem	

Data trial error => Can't continue next process

Action & C/M

Communicate w/ TMC-DQI

TMC-DQI 2022/5/27

Tomoko Imanaka, imanaka_tomoko@mail.toyota.co.jp

RE: [ATSG-Auto Birth] -Revised- User test of TS-online in TMMIN (Unr: 8. Jul. 2022)

We received extra links from this message.

Dear Tomoko-san and Samuels-san

Thank you for doing test and sending the result.

I confirmed it.

About items which "Result" is "There is a problem", I'm sorry, there were errors in the system pre-registration.

Please fix it.

Connected system registration.

About items which is colored in orange, would you confirm again?

Planned if attached data will be sent separately.

⑥ Development Activity

TS Online Workshop & Go Live System

Requirement :

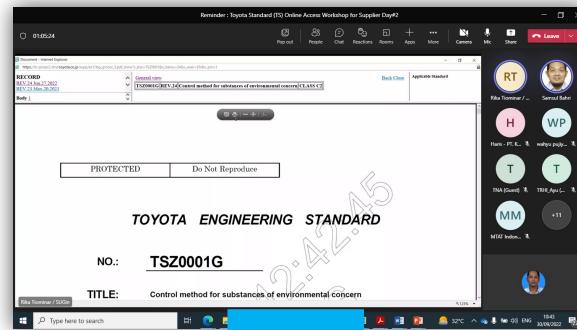
- A. Cost
- B. Contract
- C. Supplier list
- D. Trial & Workshop**
- E. Go Live

Suppliers set User (Workshop) :

- # User as W/P
(Window Person)
- # User receive TS Revise Info
- # User can print TS



④ Workshop for all suppliers



E TS Online System Introduction by TMC (1st Aug.'22)

go live

To TS Administrator of TMINN
1st Aug. 2022
TMC-DQI

Notification for introduction of TS-online system for supplier

We would like to inform that the introduction of TS-online system for supplier is completed.

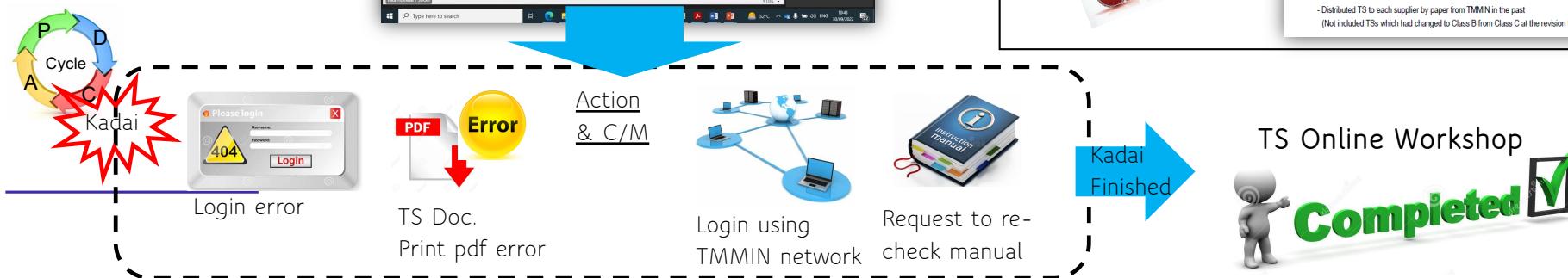
Information>

1. The system URL.
Please access from following URL.

[TS ONLINE SYSTEM Control Page (For TMINN)]
https://ts-global.snd.toyota.co.jp/files/tats_mng
*Luful Hakim-san and Samsul Bahri-san who are registered as TS Administrator set the authority and can access to TS ONLINE SYSTEM Control Page.

*The registration data at the time of release which informed beforehand (Supplier Information, User information, and Distribution log) have been registered.
From now on, if new registration is necessary, please register according to the operation manual.

[TS-online system (Supplier)]
<https://ts-global2.snd.toyota.co.jp/vog/WDSTS7000>
*User can access following TS
- All TS of class C2
- Distributed TS to each supplier by paper from TMINN in the past
(Not included TSs which had changed to Class B from Class C at the revision timing.)



⑦ Implementation

TS Online System



TS Online System for Supplier

<https://ts-global2.stnd.toyota.co.jp/riyog/WDSTSG7000>

TOYOTA TECHNICAL STANDARDS ONLINE SYSTEM

USER ID: PASSWORD:

SUBMIT RESET

TOYOTA

Welcome to TOYOTA TECHNICAL STANDARDS ONLINE SYSTEM
Hello, "Sadiyatul Muzayyahah"!!

[CAUTION] Copying TS (Including scanning and capturing a screenshot) and save TS data is prohibited.
*When paper print-out is necessary for use in your company, ask the person who have printing authority in your company to print.

LINK Information Environment Guidelines System Improvement Site

Information last update: 03-Aug-2023

03 Aug 2023
In following time period, TMC members will be absent.

TIME PERIOD:
Aug 11 (Fri) 4:00 pm - Aug 21 (Mon) 7:00 am (WIB)
(Aug 11 (Fri) 4:00 pm - Aug 21 (Mon) 9:00 am (PST))
[The system stops. It is not possible to use it.]

REASON:
Summer holidays.

19 Jul 2023
In following time period, you will not be able to connect to TS-Online system.

TIME PERIOD:
Aug 6 (Sun) 5:00 pm - Aug 6 (Sun) 7:00 pm (WIB)
(Aug 6 (Sun) 5:00 pm - Aug 6 (Sun) 9:00 pm (JST))
[The system stops. It is not possible to use it.]

REASON:
Server maintenance.

Option Latest Version Only

TS Online System for TMMIN

https://ts-home2.stnd.toyota.co.jp/es1/tsg_mainte.main

TS ONLINE SYSTEM Control Page

- Supplier List
- Supplier User List
- Access Permission Control

WDST6500 Supplier List - Work - Microsoft Edge
<https://ts-home2.stnd.toyota.co.jp/riyog/WDSTSG65001AREA+ID>

Area	Authentication	Supplier name	Supplier code
Indonesia	WHD [starts with keyword.]	WHD [contains with keyword.]	WHD [starts with keyword.]

Supplier List

Supplier name Supplier code

Search Reset

ALL NO RT R Area Authentication Supplier name Supplier code WARP Supplier code Type

Copyright 2007 (C) TOYOTA MOTOR CORPORATION. All Rights Reserved.

TMMIN can register Suppliers User

- # User as W/P
(Window Person)
- # User receive TS Revise Info
- # User can print TS

TMMIN can register & delete TS No. for Suppliers
(TS Class-C)

⑧ Manage Implementation

TS Online Utilization

- A. ID Login
- B. TS No. Data
- C. TS Doc. Print

A

TOYOTA TECHNICAL STANDARDS ONLINE SYSTEM

USER ID: _____
PASSWORD: _____
SUBMIT RESET

TOYOTA

Suppliers able to login TS Online System.

B

Welcome to TOYOTA TECHNICAL STANDARDS ONLINE SYSTEM

From May 2023, Internet Explorer and Microsoft Edge are available.

[CAUTION!] Copying TS technicals and capturing a screenshot and save TS is prohibited.
*The paper print-out is necessary for use in your company, ask the person who have printing authority in your company to print.

Information
Monthly Issued List
Sort by Date of Issue
Sort by Standard Number

Search by
Standard Number
Begins With (Example TS-A12)
TS-A0905

Keyword in Title
Begins With (Example TS-C)
TS-C

Code (Material, Tolerance, etc)
Begins with (Example TS-C)
TS-C

Results 1-(of 1) STANDARD # REV. EN JP TITLE ISSUED

1 TS-A0905G 2 Measurement and analysis equipment for vehicle vibration and noise [Apr 13 2021]

Complete: 21sec

Supplier can't access TS Doc. (mis inform TS No.)

Missing Data

Action & C/M

x-check Supplier name X P/No. (dwg) X TS (CED)

C

Suppliers able to print TS Doc. Latest Version.

TOYOTA ENGINEERING STANDARD
NO. TS-A0905G
TITLE: Measurement and analysis equipment for vehicle vibration and noise
CLASS: C1
Established date: Rev 1 - 1 Sep 2011

Print 4 sheets of paper
Destination: FX DocCentre-V C226 P...
Copies: 1
Pages: All
Color mode: Color
More settings
Print using the system dialog...

Kadai Error

TS Doc. Print pdf error

Supplier request user change for TS print

Action & C/M

Request to re-check manual

UPDATE

Instruction manual

Update user in TS Online System

Kadai Finished

Completed ✓

Suppliers can utilize TS Online system smoothly to catch up PESS Submission.

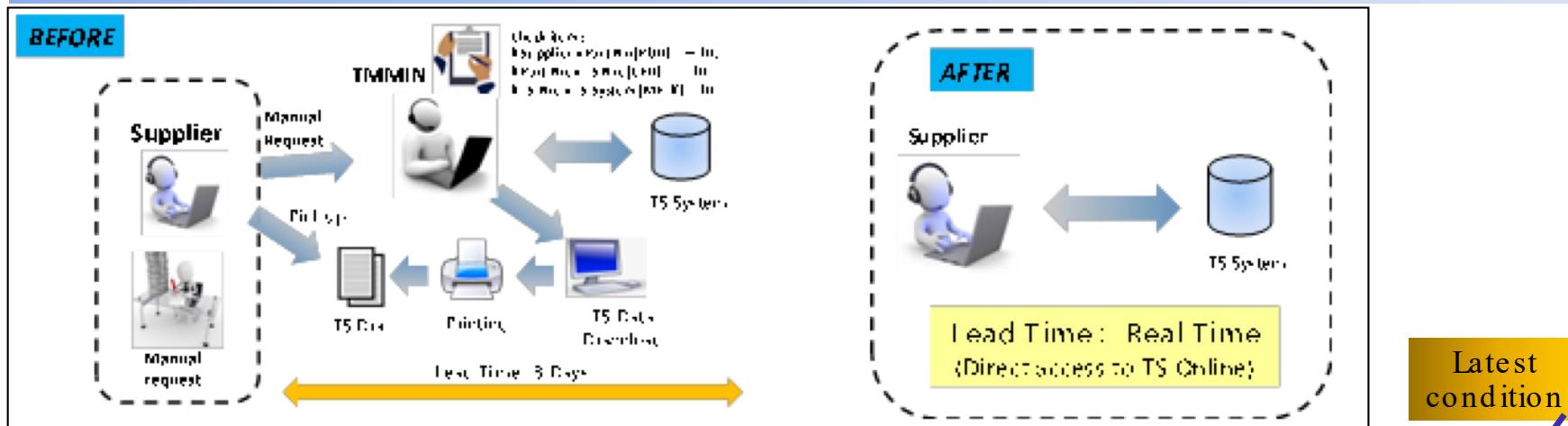
⑨ Result

<TARGET-1>

TS Document latest revision receive by Supplier in real time (jiritsuka)

Result :

TMMIN Suppliers can access TS Document directly to get latest revision through TS Online System (Jiritsuka) as real time



<TARGET-2>

PESS 560B 100% Submit before SOP Timing

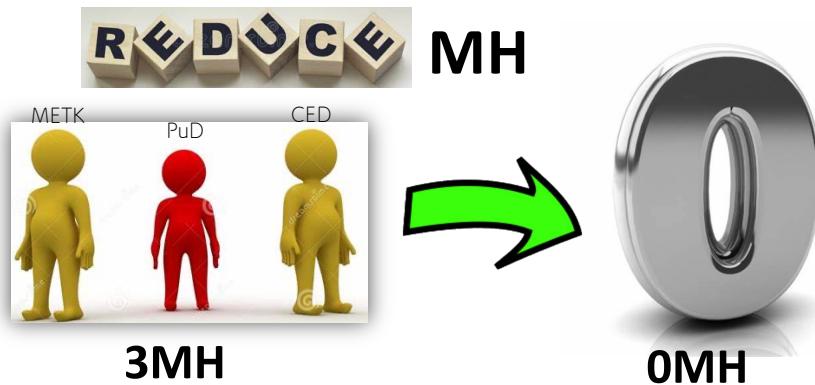
Result :

PESS 560B 100% Submitted to Designer

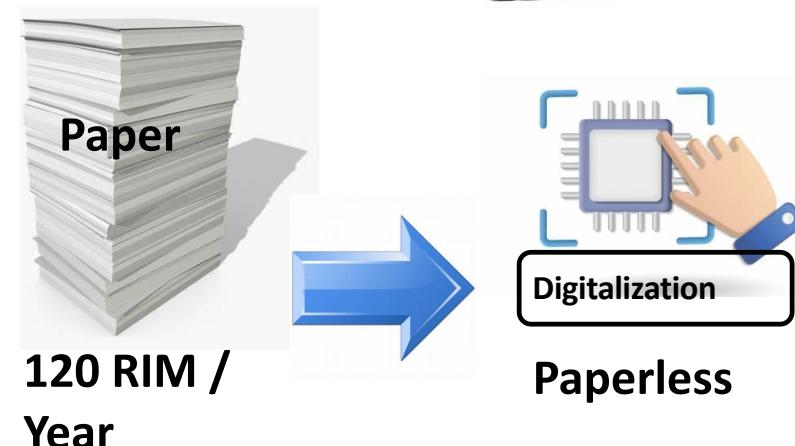


⑩ Benefit

1.



2.



3.



4.



*Source : www.akuinginhijau.org

⑪ Standardization

Every new supplier must be registered in TS Online System

TS Online Registration Flow (New Supplier)

New Supplier decided (PuD)

Receive Supplier Name & Code
=> Register into TS Online System
(EMD)

TS Online Workshop & start
access TS Online System
(Supplier)

THANK YOU!
