CHANGE OF REL SYSTEM (BPI/EA)

BRIEFING FOR DISTI

日付： AUG XX, IN 2016
RENESAS ELECTRONICS CORPERATION

日付入力

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Agenda

1. BPI/EA Project Overview and Schedule
    1-1. What is BPI/EA ?
    1-2. BPI/EA Project Overview
    1-3.Mater Schedule
    1-4.Schedule for Agent

2. Change List of Business and System
    2-1. Change List of Business and System(Release1,2)
    2-2. Accounting period Change
    2-3. Introduction of the successor tool of Salesweb
       (BI-WebFront)
    2-4. Offshore DC summary
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    2-6. Documents changes to Tokuyakuten
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    2-8. Change Booking unit

3. Cooperation favor matter

4. Other contact matter
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5. Question

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1-1. What is BPI/EA ?

REL has plan of New system that is renewal of S/W based on Enterprise Architecture.
And BPI will be implemented at same time.(BPI:Business Process Integration)
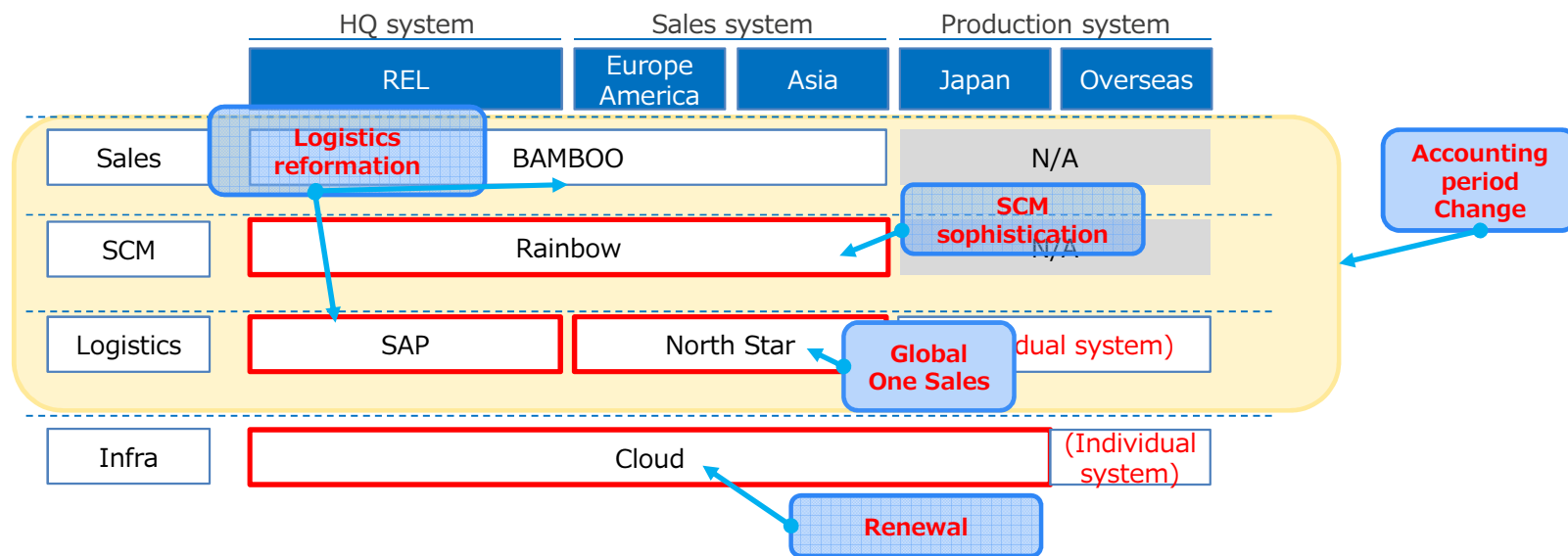Business operation and existing system would be changed.

Business Process Integration + → BPI/EA PJ

Enterprise Architecture

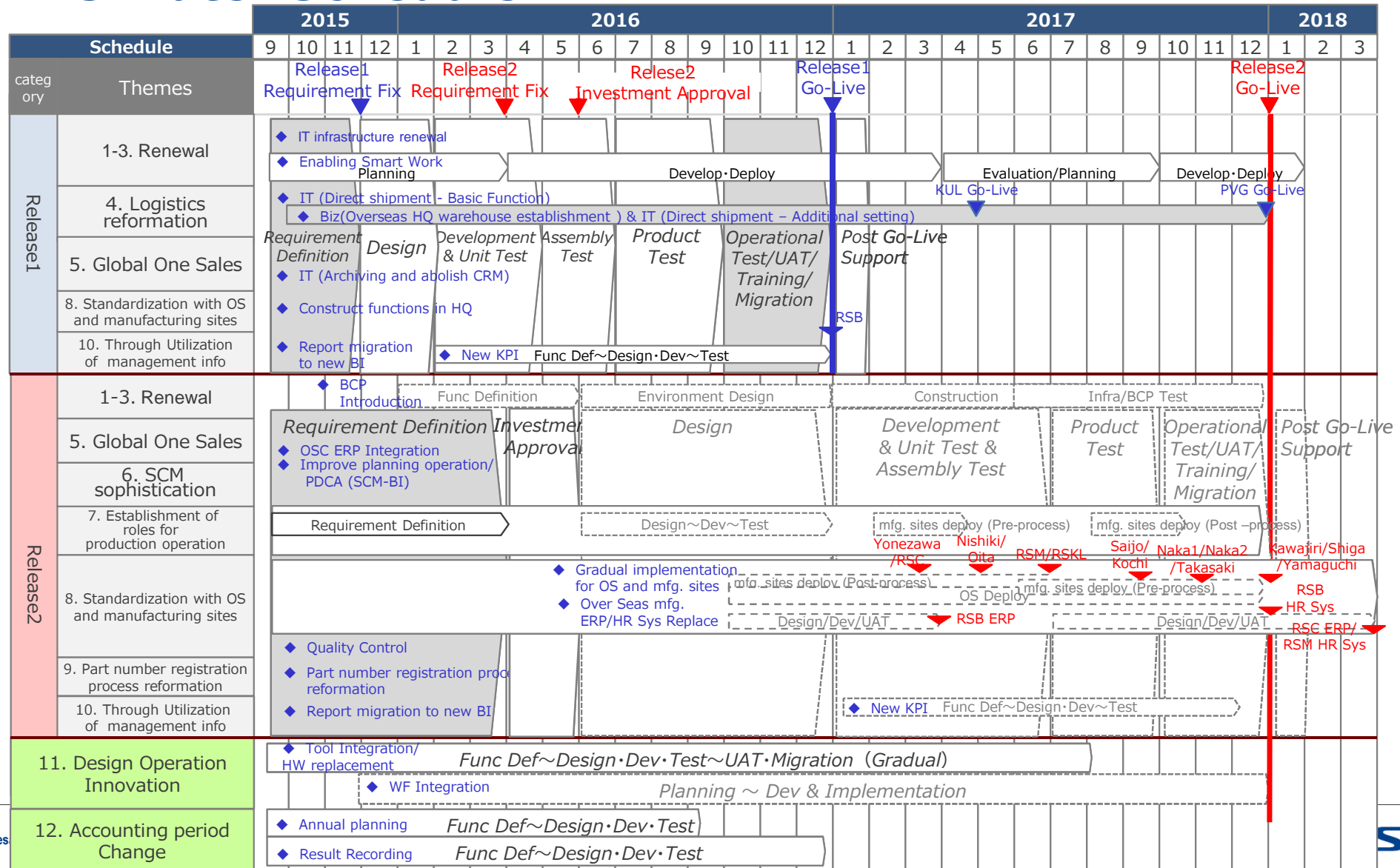RENESAS
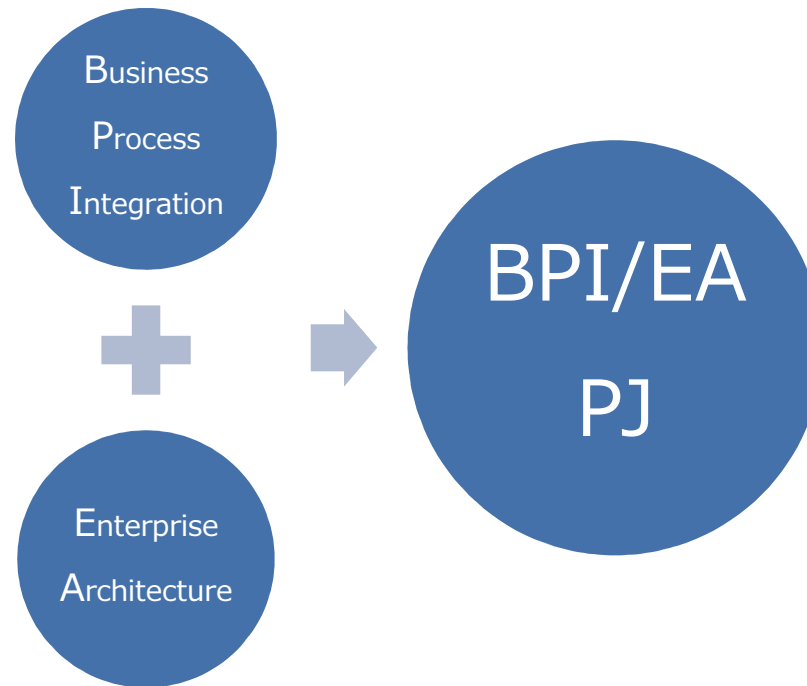
1-2. BPI/EA Project Overview

Scope of this project is the follows.

Renewal of Server H/W that will be out of maintenance at 2017.

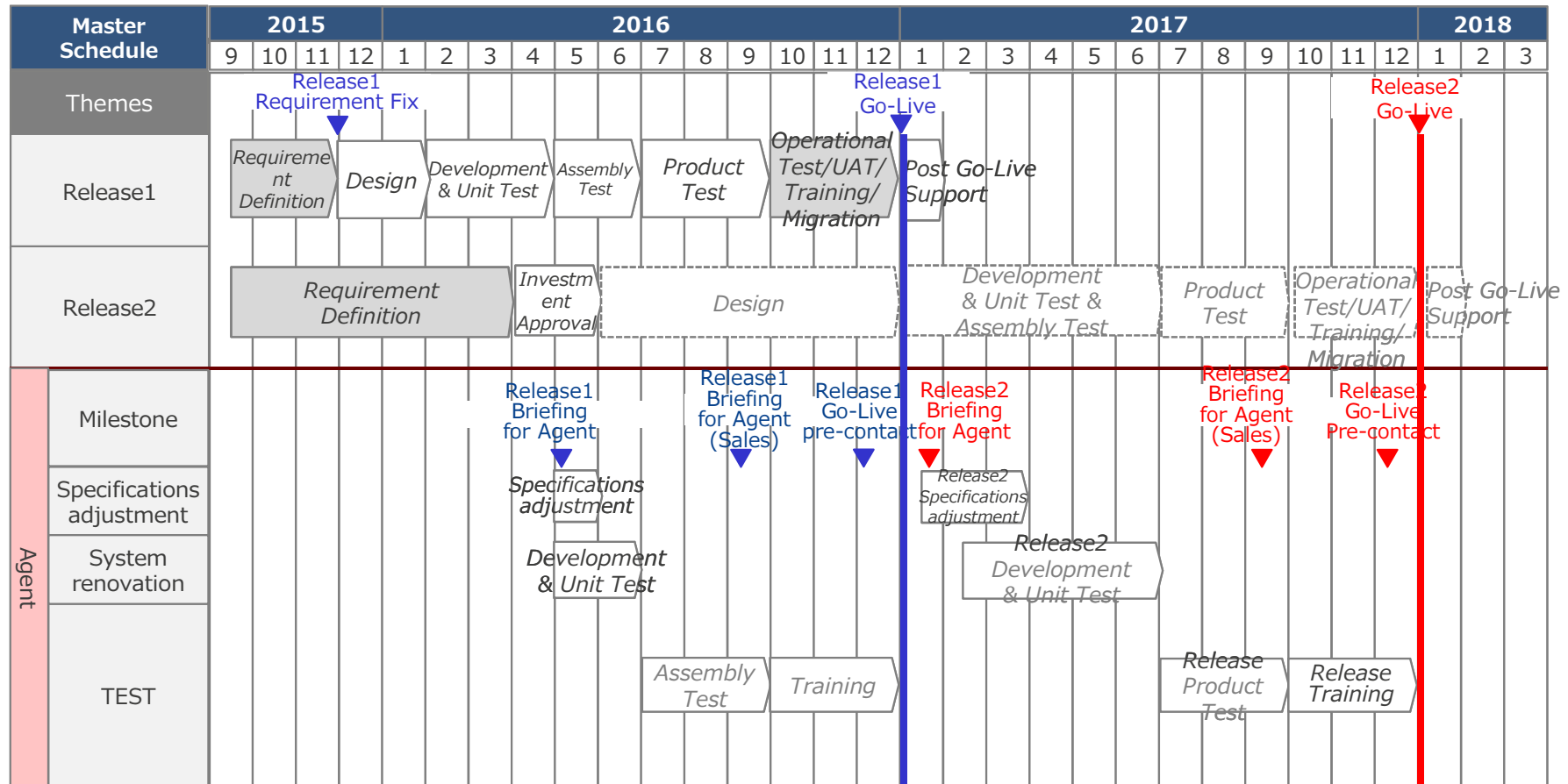Requested of Business structure is changed and new business.

	HQ system		Sales system		Production system	
	REL		Europe America	Asia	Japan	Overseas
Sales	**Logistics reformation**		BAMBOO		N/A	
SCM	Rainbow				**SCM sophistication** N/A	
Logistics	SAP		North Star	**Global One Sales**	(dual system)	
Infra	Cloud					(Individual system)

Accounting period Change

Renewal

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1-3.Mater Schedule

category	Themes	2015				2016												2017												2018		
	Schedule	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3

Release1 milestones: Release1 Requirement Fix; Release2 Requirement Fix; Release2 Investment Approval; Release1 Go-Live; Release2 Go-Live

Release1

1-3. Renewal
- ◆ IT infrastructure renewal
- ◆ Enabling Smart Work — Planning / Develop・Deploy / Evaluation/Planning / Develop・Deploy
  - KUL Go-Live
  - PVG Go-Live

4. Logistics reformation
- ◆ IT (Direct shipment - Basic Function)
- ◆ Biz(Overseas HQ warehouse establishment) & IT (Direct shipment – Additional setting)

Requirement Definition / Design / Development & Unit Test / Assembly Test / Product Test / Operational Test/UAT/ Training/ Migration / Post Go-Live Support

5. Global One Sales
- ◆ IT (Archiving and abolish CRM)

8. Standardization with OS and manufacturing sites
- ◆ Construct functions in HQ
- RSB

10. Through Utilization of management info
- ◆ Report migration to new BI
- ◆ New KPI — Func Def〜Design・Dev〜Test

Release2

1-3. Renewal
- ◆ BCP Introduction — Func Definition / Environment Design / Construction / Infra/BCP Test

Requirement Definition / Investment Approval / Design / Development & Unit Test & Assembly Test / Product Test / Operational Test/UAT/ Training/ Migration / Post Go-Live Support

5. Global One Sales
- ◆ OSC ERP Integration
- ◆ Improve planning operation/ PDCA (SCM-BI)

6. SCM sophistication

7. Establishment of roles for production operation
- Requirement Definition / Design〜Dev〜Test / mfg. sites deploy (Pre-process) / mfg. sites deploy (Post –process)
  - Yonezawa/RSC
  - Nishiki/Oita
  - RSM/RSKL
  - Saijo/Kochi
  - Naka1/Naka2/Takasaki
  - Kawajiri/Shiga/Yamaguchi

8. Standardization with OS and manufacturing sites
- ◆ Gradual implementation for OS and mfg. sites — mfg. sites deploy (Post-process) / OS Deploy / mfg. sites deploy (Pre-process)
- ◆ Over Seas mfg. ERP/HR Sys Replace — Design/Dev/UAT / RSB ERP / Design/Dev/UAT
  - RSB HR Sys
  - RSC ERP/ RSM HR Sys

9. Part number registration process reformation
- ◆ Quality Control
- ◆ Part number registration process reformation

10. Through Utilization of management info
- ◆ Report migration to new BI
- ◆ New KPI — Func Def〜Design・Dev〜Test

11. Design Operation Innovation
- ◆ Tool Integration/ HW replacement — *Func Def〜Design・Dev・Test〜UAT・Migration（Gradual）*
- ◆ WF Integration — *Planning 〜 Dev & Implementation*

12. Accounting period Change
- ◆ Annual planning — *Func Def〜Design・Dev・Test*
- ◆ Result Recording — *Func Def〜Design・Dev・Test*

SAS

1-4.Schedule for Agent

Master Schedule	2015				2016												2017												2018		
	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3

Themes

Release1 Requirement Fix

Release1 Go-Live

Release2 Go-Live

Release1

Requirement Definition — Design — Development & Unit Test — Assembly Test — Product Test — Operational Test/UAT/Training/Migration — Post Go-Live Support

Release2

Requirement Definition — Investment Approval — Design — Development & Unit Test & Assembly Test — Product Test — Operational Test/UAT/Training/Migration — Post Go-Live Support

Agent

Milestone

Release1 Briefing for Agent

Release1 Briefing for Agent (Sales)

Release1 Go-Live pre-contact

Release2 Briefing for Agent

Release2 Briefing for Agent (Sales)

Release2 Go-Live Pre-contact

Specifications adjustment

Specifications adjustment

Release2 Specifications adjustment

System renovation

Development & Unit Test

Release2 Development & Unit Test

TEST

Assembly Test — Training

Release Product Test — Release Training

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2-1-1.Change List of Business and System (Release1(Jan,2017))

REL schedules Business and System change as below.
If these plans are changed, We'll inform it.

◆ Release 1 (Jan,2017)　Change List of Business and System

	System name	System	Business
SCM	Rainbow	Add functions	Change (a little part)
SFM	Bamboo	No change	No change (planed)
	ROM Code Receipt System	No change	No change (planed)
	COMPASS	Close (Jun.2016)	RFQ will be change to Rainbow. ROM will be change to Bamboo.
	e-SPL	No change	No change (planed)
	QUALIS	No change	No change (planed)
	OPSS	No change	No change (planed)
	Delivery Specifications request System	No change	No change (planed)
Logistics	RE:inkS	No change	No change (planed)
	EXPORT'05/EXAM/EXACT	No change	No change (planed)
	EOL-Judge/LTB	No change	No change (planed)
	Kensyu-kanri system	No change	No change (planed)
Data Warehouse/Mining	Sales Web System	Change to Webfront	Change to Webfront
Production	Wip & Stock Inquiry	No change	No change (planed)
Infra	e-Parcel	Access test	No change (planed)

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2-1-2.Change List of Business and System (Release2(Jan,2018))

REL schedules Business and System change as below.
REL inform you of details by an explanatory meeting of Release2.

◆ **Release 2 (Jan,2018) Change List of Business and System**

	System name	System	Business
SCM	Rainbow	No change	No change (planed)
SFM	Bamboo	No change	No change (planed)
	ROM Code Receipt System	No change	No change (planed)
	e-SPL	No change	No change (planed)
	QUALIS	No change	No change (planed)
	OPSS	Renewal	Change (a little part)
	Delivery Specifications request System	No change	No change (planed)
Logistics	RE:inkS	No change	No change (planed)
	EXPORT'05/EXAM/EXACT	No change	No change (planed)
	EOL-Judge/LTB	No change	No change (planed)
	Kensyu-kanri system	Add check pattern	Change (a little part)
	G3 (REL ASIA ERP)	Change to NS	Change (a little part)
Production	Wip & Stock Inquiry	No change	No change (planed)
Infra	GT service	No change	GT ID will be changed. GT password will be DS password.

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2-2. Accounting period Change

1. As the Renesas Group further expands its business activities globally moving forward, the change is intended to simplify comparisons of business performance by synchronizing the fiscal term to match that of other international companies in the same field.

   ① Accounting period of 2016 is defined as a short accounting period for 9 months from 2016/4 to 2016/12, Accounting period of 2017 is defined as a normal accounting period for 12 months from Jan,2017 to Jan,20172.

   ② Annual planning of 2017 is formulated during from Jan,2017 to Jan,20172.

explanatory notes
- Biz Operation(Apr.-Mar.)
- Biz Operation(Jan.-Dec.)

The change in fiscal term, which is subject to approval of a partial amendment to the Articles of Incorporation at the 14th Ordinary General Shareholders' Meeting to be held in late June 2016.

2-3. Introduction of the successor tool of Salesweb (BI-WebFront)

From January in 2017, the service via "BI-WebFront" will be started.
BI-WebFront is the replacement of SalesWeb, which will provide almost the same service as SalesWeb's.
Along this change, SalesWeb will be abolished the end of December 2016.

Before
SalesWeb (will be terminated by the end of Dec.2016)
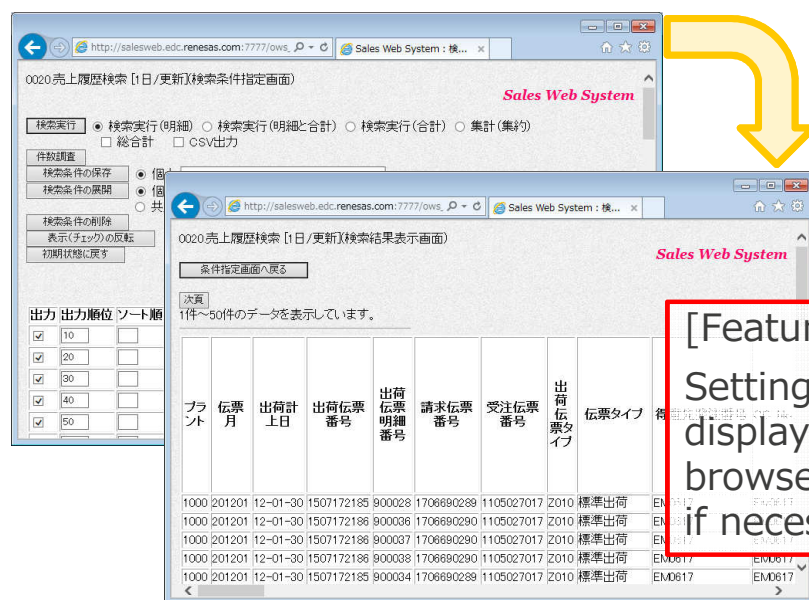
After
BI-WebFront (will be started from beginning of Jan. 2017)
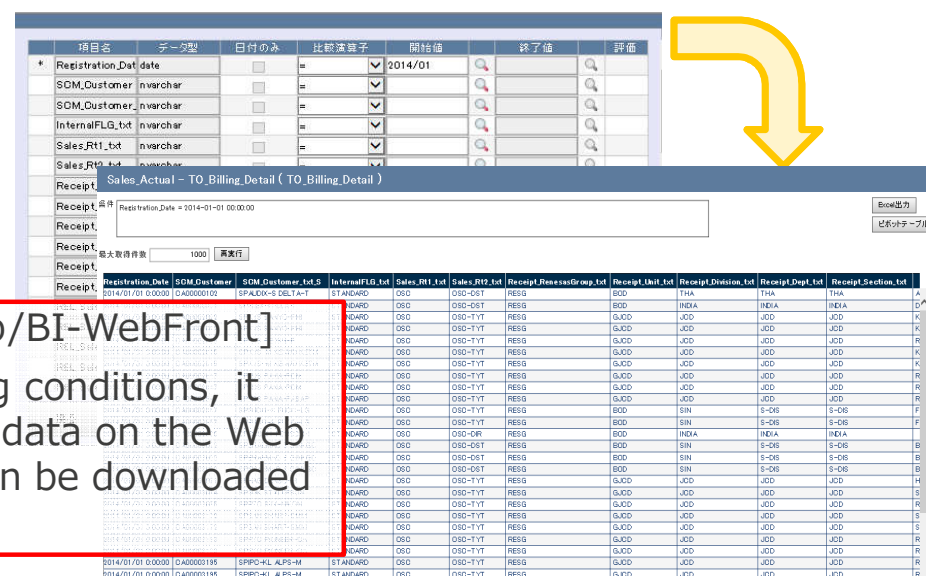
[Feature of SalesWeb/BI-WebFront]

Setting the extracting conditions, it displays the detailed data on the Web browser. The data can be downloaded if necessary.

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2-3. Simple introduction of BI-WebFront

①Screen of searching condition

- It will be prepared each screen of searching condition reports by reports.
- In this screen, users can set the searching condition of data he wants to get.
- The searching conditions can be saved.

[Screen of searching condition]
Set the extracting condition.

Searching condition can be saved.
The searching condition of SalesWeb won't be taken over to WebFront.

②Screen of the result of executing reports

- Data which follows the searching condition users set in the screen of searching condition are displayed.
- The data can be downloaded as Excel file.

The data can be downloaded as Excel file.

[Screen of the result of issuing reports]
Display the data following extracting condition.

Putting the button "Execute", the data is shown.

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2-4. OFFSHORE DC SUMMARY

Build global competitive logistics scheme.
Execute to reduce unnecessary logistics LT and cost by establishing Offshore DC near Oversea factories
on behalf of buy-back route to Onshore DC for Manufacture logistics.
Plan
➢ 2017. May   KUL-DC @Malaysia Kuala Lumpur
➢ 2018. Jan   PVG-DC @China Shanghai

	AS-IS	TO-BE	Basic policy
Measure and objective	All of Products are imported from Japan DC and delivered to customer via OSC DC when sell overseas products to overseas customers. When OMC is near to Customer, unnecessary logistics cost will be occurred	Parallel products of Domestic/Overseas can be shipped directly from factory via Domestic/Offshore DC. Expect reduction of logistics LT and cost.	①**Apply REL HQ system to offshore DC** ● Execute necessary Customize to HQ W/H system and Export system for offshore DC operations. ● Business route is as the existing condition. ②**Operational efficiency as global level** ● Regarding the business of overseas product to overseas sales, we are going to change the business route from buy-back model of Onshore DC to Offshore DC model. Logistics LT will be shorter by logistics network optimization. ● Build global competitive logistics scheme.
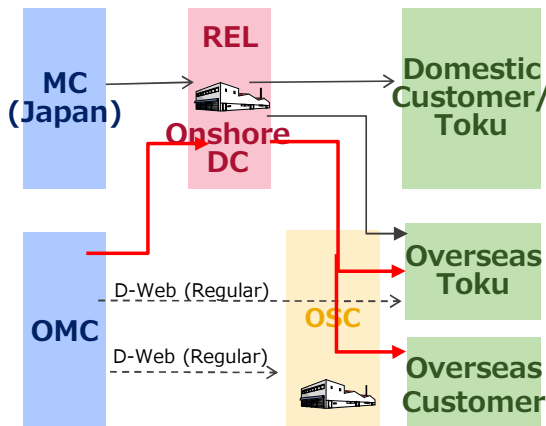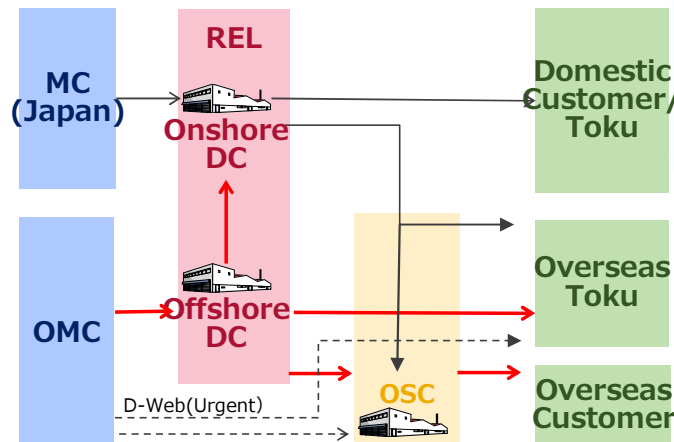
Business flow

AS-IS: MC (Japan), REL Onshore DC, OMC, OSC, D-Web (Regular), Domestic Customer/Toku, Overseas Toku, Overseas Customer

TO-BE: MC (Japan), REL Onshore DC, Offshore DC, OMC, OSC, D-Web(Urgent), Domestic Customer/Toku, Overseas Toku, Overseas Customer

Effect | LT reduction | △ 2 ～ 5 days

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2-4. OFFSHORE DC SUMMARY

➢ 2017. May   KUL-DC @Malaysia Kuala Lumpur
➢ 2018. Jan   PVG-DC @China Shanghai

Abbr	Official Name	Location
Overseas Manufacturing Company @MALASIA		
RSM	Renesas Semiconductor (Malaysia) Sdn. Bhd.	Penang
RSK	Renesas Semiconductor (Kedah) Sdn. Bhd.	Penang
RST	Renesas Semiconductor Technology (M) Sdn. Bhd.	Penang
RSKL	Renesas Semiconductor KL Sdn. Bhd.	Kuala Lumpur
Outsource Manufacturing Company @ASEAN AREA		

Abbr.	Official Name	Location
Overseas Manufacturing Company @CHINA		
RSB	Renesas Semiconductor (Beijing) Co., Ltd.	Beijing
RSC	Renesas Semiconductor (Suzhou) Co., Ltd.	Suzhou
Outsource Manufacturing Company @CHINA AREA		

Overseas Sales Company		
REA	Renesas Electronics America Inc.	SFO
REE	Renesas Electronics Europe GmbH	Unna
RESH	Renesas Electronics (Shanghai) Co., Ltd.	Shanghai
REHK	Renesas Electronics Hong Kong Limited	Hong Kong
RETW	Renesas Electronics Taiwan Co., Ltd.	Taipei
RESG	Renesas Electronics Singapore Pte. Ltd.	Singapore
REKR	Renesas Electronics Korea Co., Ltd.	Seoul
Tokuyakuten／Disti @ W/W		

THAILAND

RSB
北京 Beijin
北京首都国際空港(PEK)
威海 Weihai
OMC
(1,300km)
上海 Shanghai
RSC
上海浦東国際空港(PVG)

be stored

RSM
RST
RSK
Penang

MALAYSIA

400km

Kuala Lumpur

RSKL
KLIA

be stored

KUL-DC (KLIA)
2017.05

INDONESIA

be shipped

be shipped

PVG DC (PVG)
2018.01

WW

WW

To Japan

中国
CHINA

東莞 Dongguan   Hong Kong   香港

To Japan

Be shipped to Japan Tokuyakuten
from Onshore DC.

East Japan DC
Miyauchi DC
Fukuoka DC

* KLIA : Kuala Lumpur International Airport

2-5. Changes of System and Operation (Release1(2017/Jan start)

There will be effects to Tokuyakuten in both Japan and oversea.

◆ **Business arias   Release1 (2017/Jan)**

No.	ITEM	change of the operational rules	change of the system
Release 1-1	Unify outer box label	・Unify outer box label to Export labels	・Change outer box label in Japan
Release 1-2	Expand combined shipment	・Combined one inner box for multiple number of CO.	・Packing information I/F data is changed.

Release 1-3	Change Booking unit (Case : MOQ=1pcs)	・CO creation unit
		  Set CO creation unit as Tube or Tray unit, in case of MOQ=1pcs PN.
		
		・Shipping unit
		  Ship the packing as it is, as much as possible, to be close to "Full Tray, Full Tube" shipment.
		  Unit to be "Tube or Tray".
		
		・Cancellation of remaining small CO
		  Sales have options to select whether auto-cancel remaining CO or need to ship all.
			・CO creation unit
			  CO creation unit is automatically Tube or Tray unit, in case of MOQ=1pcs PN.
			
			・Shipping unit
			・Change REL/DC system (shipping instruction)
			
			・Cancellation of remaining small CO
			  Options to select auto-cancellation or need to ship all for CO B/L less than tray unit when CO issued .(or after issued)

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2-6. Documents changes to Tokuyakuten

Changes

- Outer box label
  ・Unified to Outer box label for Export in W/W.
  ・1sheet/delivery note will be changed to 1sheet/outer box in Japan market.
- Packaging specification label
  ・Packaging specification will be attached always when Offshore DC ship F/G to Tokuyakuten in W/W.

	from DC/factory	to Tokuyakuten	Outer box label		Attached documents	
			AS-IS	TO-BE	AS-IS	TO-BE
DC	Onshore DC	Tokuyakuten in Japan	1sheet/delivery note ※Outer box label for domestic packaging specification is checking output by master.	1sheet/box＋packaging specification ※Outer box label for Export	SAP delivery notice	
	Onshore DC	Tokuyakuten in oversea	1sheet/box＋packaging specification ※Outer box label for Export		INVOICE＋Packing list	
	Offshore DC	Tokuyakuten in Japan	N/A	1sheet/box＋packaging specification ※Outer box label for Export	N/A	Packing list only
	Offshore DC	Tokuyakuten in oversea	N/A	1sheet/box＋packaging specification ※Outer box label for Export	N/A	INVOICE＋Packing list
D-Web	MC In Japan	Tokuyakuten in Japan	1sheet/box＋packaging specification ※Outer box label for domestic	1sheet/box＋packaging specification ※Outer box label for Export	D-Web delivery notice	
	MC In Japan	Tokuyakuten in oversea	1sheet/box＋packaging specification ※Outer box label for Export		INVOICE＋Packing list	
	MC In oversea	Tokuyakuten in Japan	1sheet/box＋packaging specification ※Outer box label for Export		Packing list only	
	MC In oversea	Tokuyakuten in oversea	1sheet/box＋packaging specification ※Outer box label for Export		INVOICE＋packing list	

2-6. Documents changes to Tokuyakuten

Changes summary

- Outer box label   : No change Format, but note
- Packing specification   : Change under planning
- INVOICE, Packing List   : No change

Outer box label

Packaging specification

INVOICE

Packaging List

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2-6-1-1. Renesas Standard outer box label form changes

Changes

- Tokuyakuten in Japan
  ·Unified to Outer box label for Export in W/W.
- Tokuyakuten in oversea
  ·No change

AS-IS

TO-BE

2-6-1-2. The number of Outer box label sheets

Changes

- The number of Outer box label sheet
  AS-IS : The number of Outer box label sheet is as same as the number of Delivery Note.
  TO-BE: The number of Outer box label sheet is as same as the number of Outer box.

Note : The case when multiple number of CO (Inner box) are combined one outer box.

AS-IS

TO-BE

Outer box labels are 3sheets

Outer box labels are 2sheets

Outer box label is 1sheets

Outer box label is 1sheets
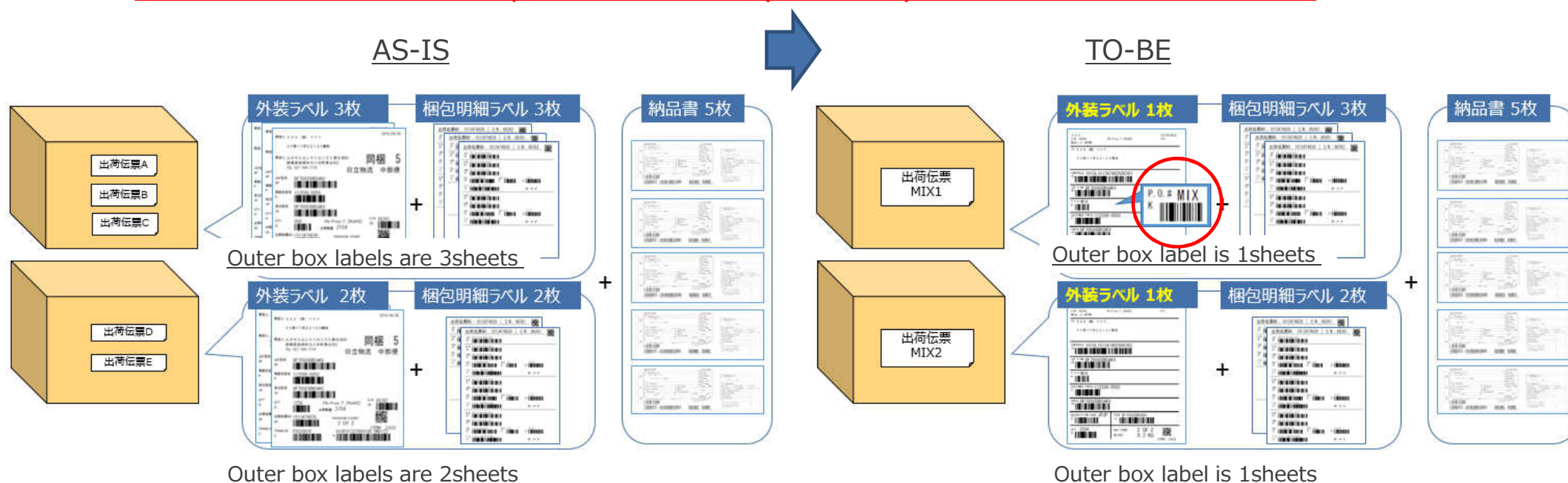
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2-6-2. Renesas Standard packaging specification ●
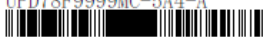
Changes
- Tokuyakuten in Japan
  ・No change. The TEXT「出荷伝票NO」changes to「DELIVERY#」.

Changes under planning
- Tokuyakuten in oversea
  ・Add P.O.# TEXT and Barcode

AS-IS

TO-BE

2-6-3. Renesas Standard delivery note in Japan

Changes

■ Tokuyakuten in Japan
  ・No change

2-6-Reference. INVOICE and Packing list

INVOICE and Packing list are no change.

2-7. Expand combined shipment
(multiple number of CO will be Combined one inner box.)

Changes

■ Be normal packing method under the same customer and same P/N condition, it is combined one inner box for multiple number of CO and one outer box for multiple number of CO if it is the case <u>when the shipment is done on same day</u>.

AS-IS :   Packing inner box separately by CO and Packing one outer box separately by CO.
TO-BE: Packing one inner box for multiple number of CO and Packing one outer box for multiple number of CO.

   Explain the control flow about the combined one inner box as follows page.

AS-IS
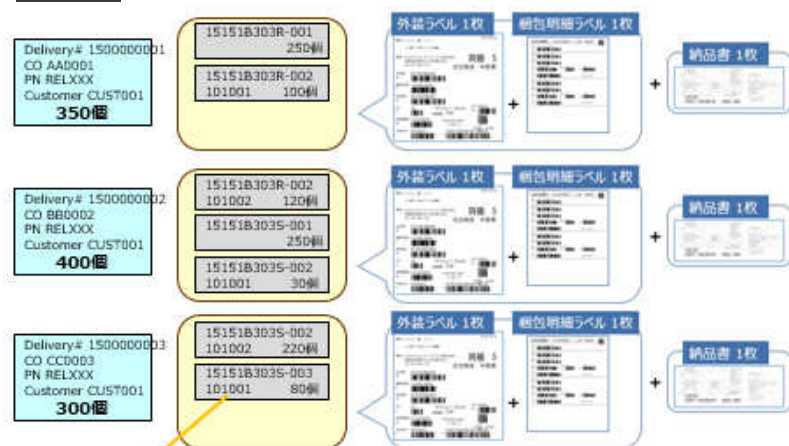
TO-BE

Inner box was subdivided by Delivery note, then one inner box should be related to only one Delivery note.
In this case, 3 Delivery notes has 3 outer boxes and 7 inner boxes.
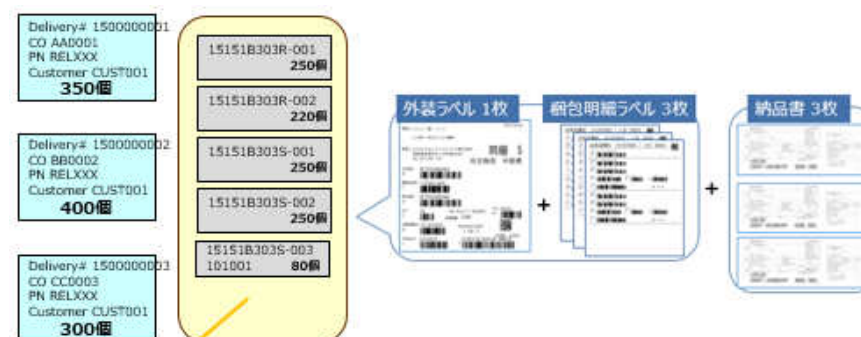
Inner box wasn't subdivided by Delivery note, then one inner box should be related to multiple Delivery note.
In this case, 3 Delivery notes has only 1 outer box and 5 inner boxes.

2-7-1. Expand combined shipment
(multiple number of CO will be Combined one inner box.)

Changes

■From January 2017, in case of inner box combined packing, new pattern packing info data will be send.

Packing Information IF data ※Main data only

AS-IS

1 Outer Box Contains
3 P.O.#
3 Inner Boxes

P02(Outer Box Info.)

Shipment No.	Outer Box ID	Inner Box Count	Quantity (in Outer Box)
12345678	1015K151347407358747	3	3000

P04(Inner Box Info.)

Shipment No.	Outer Box ID	Inner Box ID	Delivery Note (Linked with P.O.#)	Quantity (in Outer Box)
12345678	1015K151347407358747	1544041006-001101001	1513474073	1550
12345678	1015K151347407358747	1544041006-001101002	1513474074	780
12345678	1015K151347407358747	1544041006-001101003	1513474075	670

After the Changes

TO-BE

1 Outer Box Contains
3 P.O.# combined
1 Inner Boxes

P02(Outer Box Info.)

Shipment No.	Outer Box ID	Inner Box Count	Quantity (in Outer Box)
12345678	1015K151347407358747	1	3000

P04(Inner Box Info.)

Shipment No.	Outer Box ID	Inner Box ID	Delivery Note (Linked with P.O.#)	Quantity (in Outer Box)
12345678	1015K151347407358747	1544041006-001	1513474073	1550
12345678	1015K151347407358747	1544041006-001	1513474074	780
12345678	1015K151347407358747	1544041006-001	1513474075	670

※There are no changes in IF data of P01(Header) and P03(Delivery Note).

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2-7-1. Expand combined shipment
(multiple number of CO will be Combined one inner box.)

Example ■Case   90pcs/Tray, 720pcs/Inner box

Inventory in REL

Current Stock
- 720 1544041006-001
- 720 1544041006-002

Shipment
- 720 1544041006-001
- 270 1544041006-002101001

Back to shelf ⬅ 450 1544041006-002101002

CO BL Pattern
- CO1   270
- CO2   270
- CO3   450

TO-BE

After the Changes

1 Outer Box Contains
3 P.O.# combined 1 Inner Boxes
& 1 P.O.# combined 1 Inner Boxes

P02(Outer Box Info.)

Shipment No.	Outer Box ID	Inner Box	Quantity (in Outer Box)
12345678	1015K151347407358747	2	990

	Qty	Delivery Note (P.O.#)
CO1	270	1513474073
CO2	270	1513474074
CO3	450	1513474075

P04(Inner Box Info.)

Shipment No.	Outer Box ID	Inner Box ID	Delivery Note (Linked with P.O.#)	Quantity (in Outer Box)
12345678	1015K151347407358747	1544041006-001	1513474073	270
12345678	1015K151347407358747	1544041006-001	1513474074	270
12345678	1015K151347407358747	1544041006-001	1513474075	180
12345678	1015K151347407358747	1544041006-001102001	1513474075	270

※There are no changes in IF data of P01(Header) and P03(Delivery Note).

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2-7-1. Expand combined shipment
(multiple number of CO will be Combined one inner box.)

Example ■Case 90pcs/Tray, 720pcs/Inner box

"ship all" is not ticked case Note1

Inventory in REL

Picking order
- ② 720   1544041006-001
- ③ 720   1544041006-002
- ① 223   1544041006-003

Current Stock

Shipment

- 720   1544041006-001
- 360   1544041006-002101001
- 223   1544041006-003

Back to shelf ← 360   1544041006-002101002

CO BL Pattern1
CO1	270
CO2	270
CO3	450
CO4	360

Note1:CO1 balance47pcs will be Auto cancelled.

1 Outer Box Contains
1 P.O.# combined 1 Inner Boxes
& 2 P.O.# combined 1 Inner Boxes
& 1 P.O.# combined 1 Inner Boxes

After the Changes

TO-BE

P02(Outer Box Info.)

Shipment No.	Outer Box ID	Inner Box	Quantity (in Outer Box)
12345678	1015K151347407358747	3	1303

	Qty	Delivery Note (P.O.#)
CO1	223	1513474073
CO2	270	1513474074
CO3	450	1513474075
CO4	360	1513474076

P04(Inner Box Info.)

	Shipment No.	Outer Box ID	Inner Box ID	Delivery Note (Linked with P.O.#)	Quantity (in Outer Box)
①	12345678	1015K151347407358747	1544041006-003	1513474073	223
②	12345678	1015K151347407358747	1544041006-001	1513474074	270
②	12345678	1015K151347407358747	1544041006-001	1513474075	450
③	12345678	1015K151347407358747	1544041006-002101001	1513474076	360

※There are no changes in IF data of P01(Header) and P03(Delivery Note).

Note1:CO1 balance47pcs will be cancelled automatically due to "ship all" was not ticked.

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2-7-1. Expand combined shipment
(multiple number of CO will be Combined one inner box.)

Example ■Case 90pcs/Tray, 720pcs/Inner box
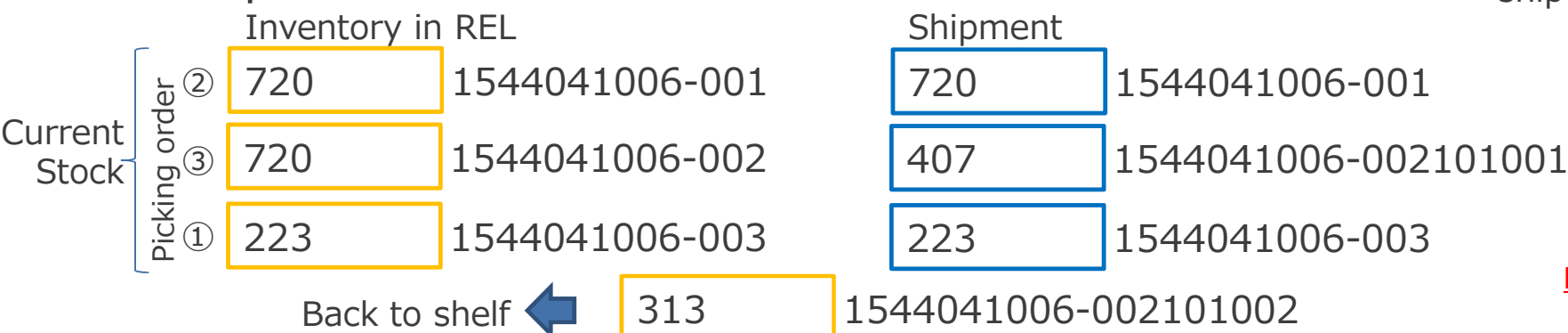
"ship all" is ticked case Note2

Inventory in REL

Current Stock

Picking order

② 720 1544041006-001

③ 720 1544041006-002

① 223 1544041006-003

Shipment

720 1544041006-001

407 1544041006-002101001

223 1544041006-003

Back to shelf ← 313 1544041006-002101002

CO BL Pattern2
CO1 270
CO2 270
CO3 450
CO4 360

Note2:CO1~4 will be shipped completely.

After the Changes

1 Outer Box Contains
1 P.O.# combined 1 Inner Boxes
& 3 P.O.# combined 1 Inner Boxes
& 2 P.O.# combined 1 Inner Boxes

TO-BE

P02(Outer Box Info.)

Shipment No.	Outer Box ID	Inner Box	Quantity (in Outer Box)
12345678	1015K151347407358747	3	1350

	Qty	Delivery Note (P.O.#)
CO1	270	1513474073
CO2	270	1513474074
CO3	450	1513474075
CO4	360	1513474076

CO番号はPromise回答納期順

P04(Inner Box Info.)

	Shipment No.	Outer Box ID	Inner Box ID	Delivery Note (Linked with P.O.#)	Quantity (in Outer Box)
①	12345678	1015K151347407358747	1544041006-003	1513474073	223
②	12345678	1015K151347407358747	1544041006-001	1513474073	47
②	12345678	1015K151347407358747	1544041006-001	1513474074	270
②	12345678	1015K151347407358747	1544041006-001	1513474075	403
③	12345678	1015K151347407358747	1544041006-002101001	1513474075	47
③	12345678	1015K151347407358747	1544041006-002101001	1513474076	360

※There are no changes in IF data of P01(Header) and P03(Delivery Note).

Note2 : CO1~4 will be shipped completely due to "ship all" was ticked.

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2-7-1. Expand combined shipment
(multiple number of CO will be Combined one inner box.)

Example ■Case 90pcs/Tray, 720pcs/Inner box

"ship all" is not ticked case Note1

Inventory in REL

Picking order		
②	720	1544041006-001
③	720	1544041006-002
①	223	1544041006-003

Current Stock

Shipment

720	1544041006-001
450	1544041006-002101001
223	1544041006-003

Back to shelf ← 270 1544041006-002101002
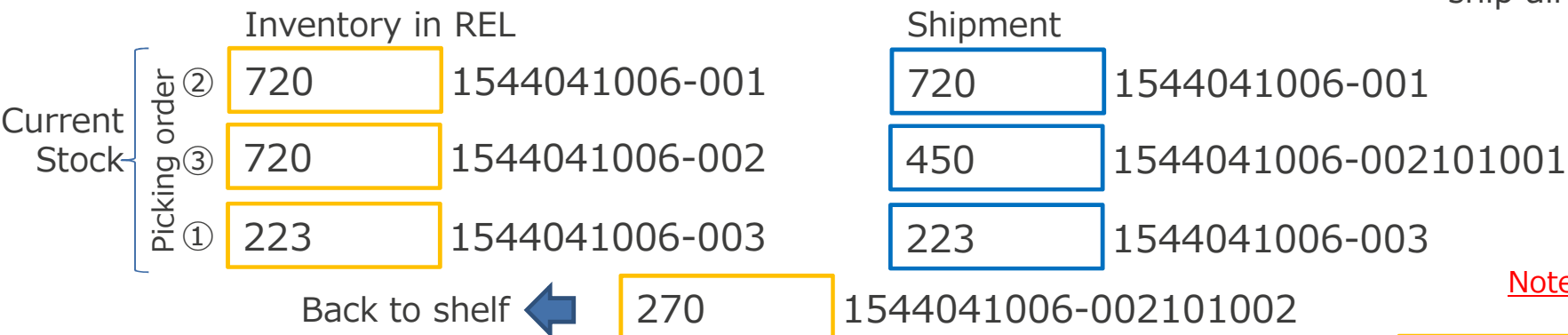
CO BL Pattern3
CO1	360
CO2	270
CO3	450
CO4	360

Note1:CO1 balance47pcs will be Auto cancelled.

After the Changes

1 Outer Box Contains
1 P.O.# combined 1 Inner Boxes
& 3 P.O.# combined 1 Inner Boxes
& 2 P.O.# combined 1 Inner Boxes

TO-BE

P02(Outer Box Info.)

Shipment No.	Outer Box ID	Inner Box	Quantity (in Outer Box)
12345678	1015K151347407358747	3	1393

	Qty	Delivery Note (P.O.#)
CO1	313	1513474073
CO2	270	1513474074
CO3	450	1513474075
CO4	360	1513474076

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P04(Inner Box Info.)

	Shipment No.	Outer Box ID	Inner Box ID	Delivery Note (Linked with P.O.#)	Quantity (in Outer Box)
①	12345678	1015K151347407358747	1544041006-003	1513474073	223
②	12345678	1015K151347407358747	1544041006-001	1513474073	90
②	12345678	1015K151347407358747	1544041006-001	1513474074	270
②	12345678	1015K151347407358747	1544041006-001	1513474075	360
③	12345678	1015K151347407358747	1544041006-002101001	1513474075	90
③	12345678	1015K151347407358747	1544041006-002101001	1513474076	360

※There are no changes in IF data of P01(Header) and P03(Delivery Note).

Note1:CO1 balance47pcs will be cancelled automatically due to "ship all" was not ticked.

2-7-2. How to control packing method

Changes

■Be normal packing method under the same customer and same P/N condition, it is combined one inner box for multiple number of CO and one outer box for multiple number of CO if it is the case when the shipment is done on same day. This packing method will be apply to all customer.

　Ask Sales to report whether Customer accept Combined one outer box and Combined one inner box or not. Can set the condition by SCM customer code or Ship-To.

■We will announce the Declaration Method after designing operational flow.

Control flow

| Check 1 Can Combine to one outer box for multiple number of CO ? | **Yes** → | Check 2   Can Combine to one inner box for multiple number of CO ? | **Yes** → |

No ↓ ... **No** ↓

Combine one outer box : NO
Combine one inner box : NO

Combine one outer box : YES
Combine one inner box : NO

Combine one outer box : YES
Combine one inner box : YES

Delivery Note (×3)　Delivery Note (×3)　Delivery Note
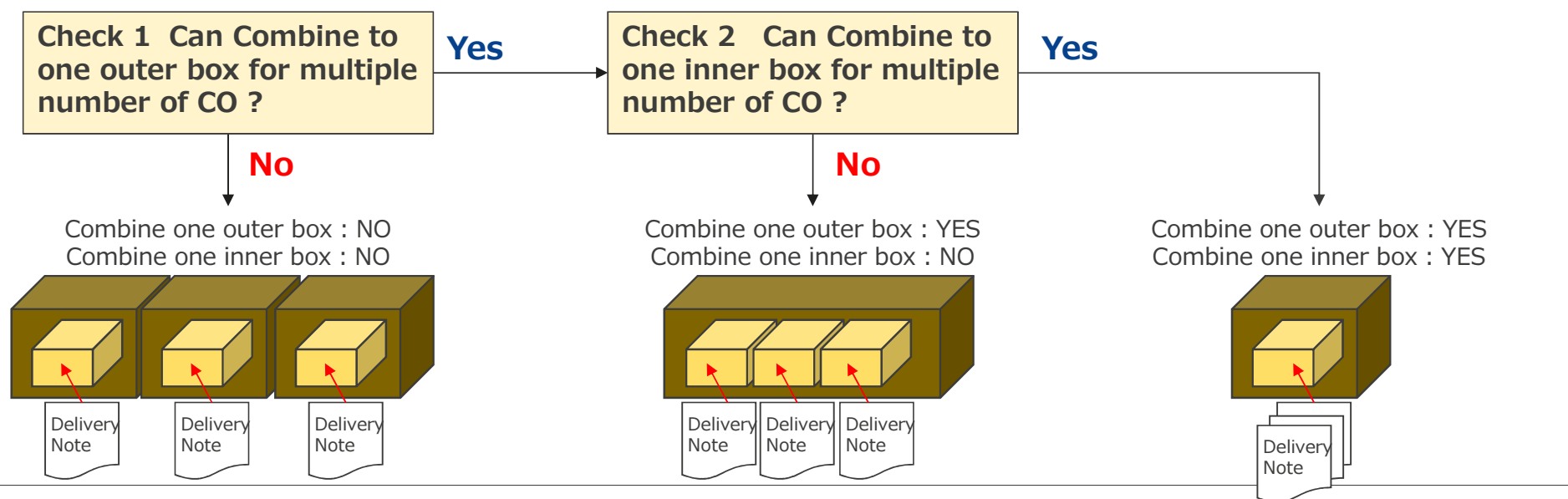
RENESAS

2-8. RELEASE1-3 EXPLANATION ON THE BACKGROUND

Claim from customer and Renesas Issue

[Customer Issue]

Tray or Tube in Inner box has not become full.
①Increase manufacturing costs in times of mass production, production efficiency will go down.
②Dispose unnecessary package material, not Green logistics.
③Increase transportation cost, bad packaging efficiency.
④Have trouble purchasing operation of VMI PULL.

[Customer request]

Full Inner box or Full tray
   ···Some customer in REE requests Full outer box.

[Solution]

Under our customer's request, Our solution should be ···
Packing specification should be Full try/Full tube as of shipping timing at factory.
   →Started the examination, but the project will take a long time to get off the ground

[Renesas Issue]

The qty of Production lot is not a multiple of the try size and Tube size.

 Try product and Tube product are···
● Un-fulled try (tube) is needed somewhere due to production lot size, and be in-stocked.
●Then SPQ=MOQ=1, CO and AATP should be created by 1 pcs unit.

Complaints and inquiries from our customers
for packaging specification of Inner carton box and outer carton box

Indicating lots of unnecessary package material !

Customers concerns:
✓ Is Renesas a "green" company ?
✓ Waste of money !

No more Trash!
Corporate with production efficiency!

Outer carton box   Inner carton box   Trash

Not full Outer carton box

Not full Inner carton box (Red ●)

Many Trash from Outer carton box

Ex) UPD70F3736GC-GAD-AX
● total order 27900 pcs (complained qty: 4050)
● 21 boxes delivered (nominal 450 pcs / innter carton box)
● 81,419,60,5,428,445,343,335,14,141,49,274,124,89,114, 363,163,154,247,87,115

Trash

Many Trash from Inner carton box

Many evils against production efficiency in customer's production line.

REL SCM is now an inexpedient manner for customer's VMI-pull purchasing.

Execute unified a minimum unit for both booking and shipment!

RENESAS

2-8. RELEASE1-3 EXPLANATION ON THE BACKGROUND

Looking Forward solving Customer's issues

The best solution is that our Packing specification should be Full try/Full tube as of shipping timing at factory.
But the project will take a long time to get off the ground.

And we should solve Tokuyakuten's issues immediately too.
Then we need to execute a **prompt solution** until Renesas Packing specification will be Full try/Full tube as of shipping timing at factory.
We will start a new Packing form and a shipping method for Customers, Tokuyakutens and Renesas.

Supposing the qty of Production lot is not a multiple of the try size and Tube size, we will add a new solution as follows.

[Target]Contribute to Customer's production efficiency by a new Packing form and a shipping method.
[Measure] Don't change PACKAGING FORM AND PACKAGING METHOD as of shipping timing at factory as much as possible for approaching the Full try/Full tube shipment.
[Effect] Customer   : Production efficiency improvement, reduce unnecessary wastes
Tokuyakuten : Transportation and storage efficiency improvement, reduce unnecessary wastes
Renesas   : Logistics quality, subdivision operation, Transportation and storage efficiency
improvement, reduce unnecessary packaging material

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2-8. RELEASE1-3 EXPLANATION ON THE BACKGROUND

New measure (1)

In case of SPQ＝MOQ＝1, the particle size of Rainbow reply is too small⋯
- **The particle size of Rainbow reply move to multiple number of Full inner box or less than Full inner box base**

	CustomerxPN MOQ unit 「Tube or Tray」	Rainbow Reply	Present Reply qty	New measure Reply qty	
Full inner box	CO1=4050	CO1-1	2,234	2,160	: qty for 3 inner boxes
720pcs/box		CO1-2	1,059	1,440	: qty for 2 inner boxes
Full tray		CO1-3	757	450	: Remaining qty less than 1 inner box
90pcs/tray	CO2=4050	CO2-1	2,234	2,160	: qty for 3 inner boxes
		CO2-2	1,059	1,440	: qty for 2 inner boxes
		CO2-3	757	450	: Remaining qty less than 1 inner box

- **Be normal packing method under the same customer and same P/N condition, it is combined one inner for multiple number of CO and one outer box for multiple number of CO if it is the case when the shipment is done on same day.**

AS-IS : Packing inner box separately by CO and Packing one outer box separately by CO.

TO-BE: Packing one inner box for multiple number of CO and Packing one outer box for multiple number of CO.

We can reduce the number of un-fulled tray and tube shipment from DC more than current.

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2-8. RELEASE1-3 EXPLANATION ON THE BACKGROUND

We have an insoluble problem･･･

We have Un-fulled try (tube) which is needed somewhere due to production lot size, and be in-stocked. Then even if Rainbow reply qty moves to inner box base, we need to make <u>another subdivided tray</u> if we aim to ship all of CO balance qty less than 1 tray qty.

Execute to ship all CO balance under un-Fulled try (tube) is needed somewhere due to production lot size and is in-stocked, Renesas increase un-Fulled tray shipment as a result.

In-stock
Shipping instruction as same as CO reply

CO

CO≠SO
Stock

VMI
SO   SO

<※Example : Subdivided tray by 1pcs>
76% of TRAY/TUBU shipment are subdivided by 1pcs in DC.
As a result, ship un-fulled tray to customer.

Factory → DC W/H → Tokuyakuten W/H / REL OSC W/H

Divided by 1pcs for SO
(But actually Customer PULL)

VMI → Channel's customer
VMI → Direct customer

Real Pull-point

Tray and Tube product
Un-fulled Instock

Need to subdivided

Mismatch between packaging style and reply qty.

Increase unnecessary
・un-fulled tray
・packing material
・Transport and W/H cost
・Too excess quality control

There are many case that Re-divided at REL W/H and Tokuyakuten W/H for SO

Customer claim
①Low production efficiency.
②No Green logistics.
③High transportation cost, bad packaging efficiency.
④Have trouble purchasing operation of VMI PULL.

Our effort goes unrewarded

REL Issue : Human, money, investment

(Result : 2015/Oct actual)	Total	Need subdivided		No subdivided		作業内容
		Number	%	Number	%	
The number of shipping ticket	100K	59K	59%	41K	41%	
SPQ1 (TRAY,TUBU product)	53K	41K	76%	13K	24%	Done subdivided by 1pcs for CO
Not SPQ1 (T&R, bag etc)	47K	19K	40%	28K	60%	Done subdivided by T&R or bag for CO

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2-8. RELEASE1-3 EXPLANATION ON THE BACKGROUND
New measure (2)

To make another subdivided tray is undesirable, so Renesas prepare a new function which CO balance less than 1 tray qty can be canceled automatically by Rainbow. We called "Auto cancel". After "Auto cancel" by Rainbow, Rainbow will make CO candidate which the balance CO qty less than 1 tray qty is rounded up to 1 tray qty.
Tokuyakuten can select whether new co candidate can be confirmed or not.
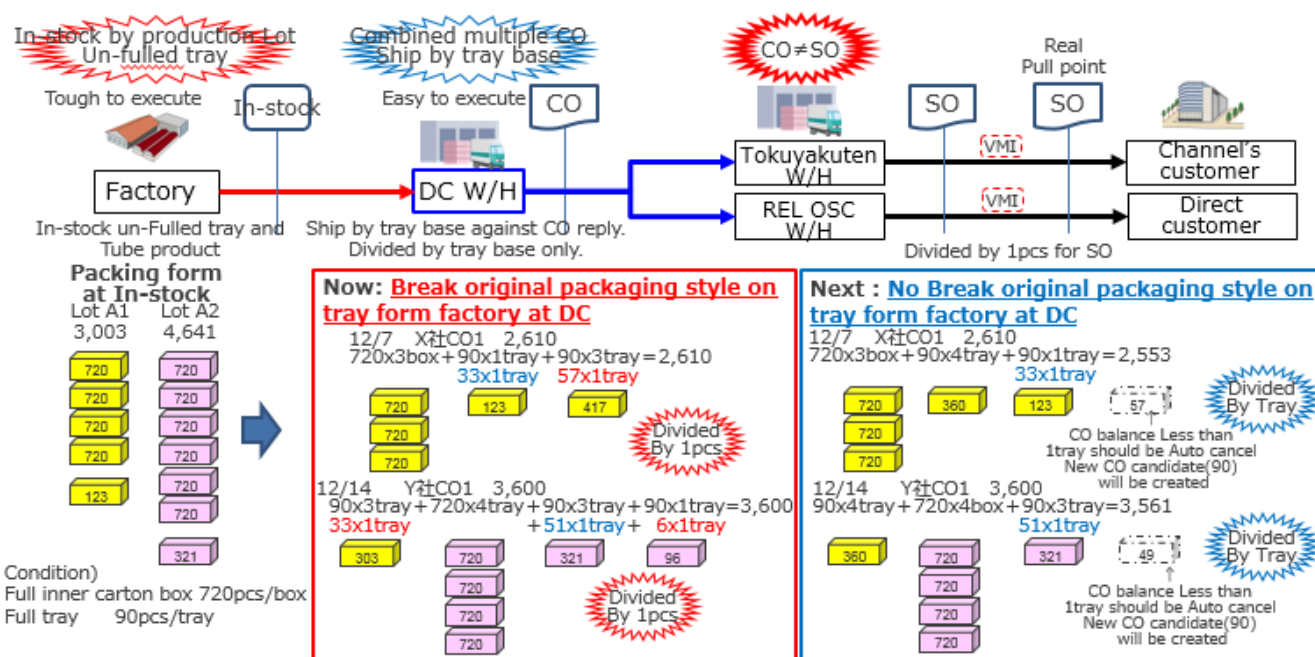
RELEASE1-3
ORDER UNIT & CANCEL REMAIN CO

New scheme ●

Changes

■ For P/N of MOQ＝1 , CO creation unit will be "Tube or Tray" unit in principle.

No	item	current	new
1	New CO candidate	1pcs unit (same quantity as Netted Out)	**Unit of Tube or Tray quantity** (round up from Netted Out)
2	When CO issued	Confirm new CO	**Judge "ship all" setting** when confirm CO.
3	REL ship operation	Re-pack quantity on tray based on CO backlog quantity and ship.	Try to **keep packing of factory output and ship** as much as possible.
4	Cancellation Management	When cancel balance CO quantity, follow the cancellation flow, and PPD cancels after the approval.	**Auto-cancel function for CO B/L** for less than tray qty. (new) ・ When "ship all" is not set for CO, remaining qty less than tray will be auto-cancelled. ・ When "ship all" is set for CO, same as current operation. (Remaining qty will be cancelled.)

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CO ORDER QTY （CONFIRM UNIT QTY)

Changes

- Case of P/N MOQ＝1 , default of CO creation unit will be "Tube(Magazine) or Tray" unit, new CO is created by this unit.   One CO creation unit is the quantity of "one Tube or one Tray".
  →Netted Out calculated by 1pcs unit. New CO may created more than Netted Out quantity.

CO creation unit setting selection menu
- **N/A** will be **deleted** from the menu.
- When **Option** selected, it need to be **unit of "Tube or Tray" quantity**.

■current
When MOQ＝1 is set, MOQ is selected from "N/A", "Tube or Tray", "Inner Box", "Outer Box", "Option".

■new
Order unit is minimum "Tube or Tray" unit.
Default is "Tube or Tray" quantity.
・**Delete "N/A" from the menu.**
・**Option is set "Tube or Tray" unit.**

■CO creation unit setting menu （reference）

Tube or Tray : Qty of Tube or Tray(Default)
Inner Box   : Quantity of Inner Box Unit
Outer Box   : Quantity of Outer Box unit
Option   : Optional quantity unit

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SHIP ALL SETTING FOR CO ISSUE

New scheme

Changes

■When Order Entry, please set auto-cancellation or not, for remaining CO backlog less than one CO creation unit.
（The setting can be changed by "C/O, U/O Backlog" screen after CO issued.）

"ship all" column added

Setting for auto-cancel of CO B/L less than tray qty.
 (how to use "ship all")

１．When not ticked（default for Mass production）

(1) As CO shipped as factory's output quantity, balance CO may remains by less than tray qty.
(2) When CO backlog less than tray qty created, it'll be automatically cancelled.
(3) For CO B/L less than tray qty by auto-cancelled, if necessary, new CO will be created by tray-qty-unit according to new Netted Out qty.

２．　When ticked　（default for EOL product）

(1) All quantity for the CO is shipped. This is same as current operation. When CO B/L qty is not same as factory output qty, re-pack (by 1pcs unit) and ship.

REL SHIP OPERATION

Changes

■ Try to ship by keeping packing of factory output
When "ship all" is not set, **quantity of Tube or Tray will not be re-packed.**
**CO order will be "Tube/Tray" unit, that not-full-tray backlog may remains
by not-full-tray shipment. And how to handle this remaining backlog is the new point**.

Assumptions
1. Average yield after Assembly input lot = 3,000pcs
2. Inner box = 8trays = 8 x 90 = 720pcs

eg.) assuming Output from factory this time = 3,180pcs

Inner box = 720	Inner box = 720	Inner box = 720	Inner box = 720	inner box = 300
tray = 90	tray = 90	tray = 90	tray = 90	tray = 90
tray = 90	tray = 90	tray = 90	tray = 90	tray = 90
tray = 90	tray = 90	tray = 90	tray = 90	tray = 90
tray = 90	tray = 90	tray = 90	tray = 90	**tray = 30**
tray = 90	tray = 90	tray = 90	tray = 90	
tray = 90	tray = 90	tray = 90	tray = 90	
tray = 90	tray = 90	tray = 90	tray = 90	
tray = 90	tray = 90	tray = 90	tray = 90	
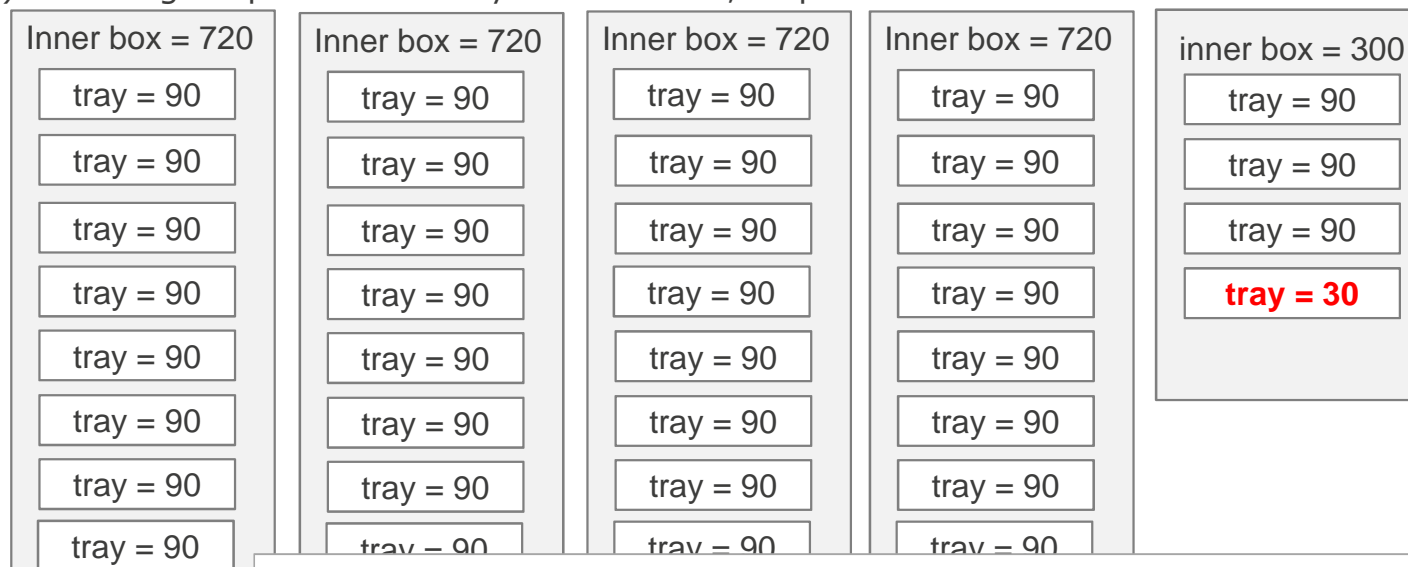
⇐ Not-full-tray
1 / 36 = 2,8 %
=> Not-full-tray
could be appear
by **about 3 %**.

CO creation is requested by 90pcs unit which is tray quantity. **Balance CO B/L handling
after not-full-tray (above case 30pcs) shipped is important**.

CASE1 : SHIP ALL, NO SETTING (AUTO-CANCEL)

New scheme

When "ship all" **not ticked** case, and small qty shipped.
·Case: MOQ＝1pcs, 1Tray＝100pcs (no delay SO, no Sales inventory, no Inv. setting)

Order	RT	Confirm	ship all	Reconfirm
0 CO				

JSF 10pcs

demand = 10pcs

JSF	Netted Out	Exsit CO	New CO
	10		100
10			

90pcs of excess order

JSF	Netted Out	Exsit CO	New CO
	10	100	
10			

30pcs shipped, and demand filled.

JSF	Netted Out	Exsit CO	New CO
		70	
10			

ShipSO+ASF	10
Inventory	30
Liability	0

70pcs cancelled, and no shortage.

JSF	Netted Out	Exsit CO	New CO
10			

New CO created for **1tray(100pcs)** against JSF.

→

100pcs of new CO issued "ship all" not ticked.

→

30pcs(1tray) shipped from factory output.

→

70pcs of CO auto-cancelled. Netted Out becomes zero as inventory satisfies JSF.

70pcs of CO auto-cancelled. 100pcs of new CO created by not-full-tray shipment.

JSF 100pcs

demand = 100pcs

JSF	Netted Out	Exsit CO	New CO
	100		100
100			

No excess order

JSF	Netted Out	Exsit CO	New CO
	100	100	
100			

70pcs necessary after 30pcs shipped.

JSF	Netted Out	Exsit CO	New CO
	70	70	
100			

ShipSO+ASF	100
Inventory	30
Liability	0

70pcs cancel create 30pcs of excess new CO.

JSF	Netted Out	Exsit CO	New CO
	70		**100**
100			

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CASE2 : SHIP ALL, SETTING (NO AUTO-CANCEL)

When "ship all" **ticked** case, and small qty shipped.

·Case: MOQ＝１pcs, 1Tray＝100pcs（no delay SO, no Sales inventory, no Inv. setting)

Order	RT	Confirm	ship all	Reconfirm
0 CO			✓	

JSF10pcs

demand = 10pcs

JSF	Netted Out	Exsit CO	New CO
	10		100
10			

90pcs of excess order

JSF	Netted Out	Exsit CO	New CO
	10	100	
10			

30pcs shipped, and demand filled.

JSF	Netted Out	Exsit CO	New CO
		70	
10			

ShipSO+ASF	10
Inventory	30
Liability	0

B/L 70pcs remain after demand filled.

JSF	Netted Out	Exsit CO	New CO
		70	
10			

New CO created for **1tray(100pcs)** against JSF.	→	100pcs of new CO issued **"ship all" ticked.**	→	**30pcs(1tray)** shipped from factory output.	→	Netted Out becomes zero as inventory satisfies JSF. But since CO backlog remains, it may cause unnecessary shipment.

B/L remain for balance 70pcs.

JSF100pcs

demand = 100pcs

JSF	Netted Out	Exsit CO	New CO
	100		100
100			

No excess order

JSF	Netted Out	Exsit CO	New CO
	100	100	
100			

70pcs necessary after 30pcs shipped.

JSF	Netted Out	Exsit CO	New CO
	70	70	
100			

ShipSO+ASF	100
Inventory	30
Liability	0

B/L remain for balance 70pcs.

JSF	Netted Out	Exsit CO	New CO
	70	70	
100			

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CASE STUDIES OF "SHIP ALL" FUNCTIONS

The followings are cases of automatic CO cancel and new CO candidate after broken qty shipment. ●
(condition : MOQ=1, 1 tray=100pcs)

case : "ship all" is NOT ticked

	JSF	Netted Out	CO creation	CO ship	Netted Out after shipped	Auto-cancelled CO	Remaining backlog	New CO candidate
Case 1	30pcs	30pcs	100pcs	40pcs	0pcs	60pcs	0pcs	-
Case 2	90pcs	90pcs	100pcs	40pcs	50pcs	60pcs	0pcs	100pcs
Case 3	120pcs	120pcs	200pcs	40pcs	80pcs	0pcs	160pcs	-
Case 4	180pcs	180pcs	200pcs	40pcs	140pcs	0pcs	160pcs	-

If NettedOut is left after automatic cancel, new CO candidate will be 100 (1 tray).
→case 2

Even if broken qty was shipped, CO is not canceled when backlog is greater than 100 (1 tray).
→case 3, 4

case : "ship all" is ticked

	JSF	Netted Out	CO creation	CO ship	Netted Out after shipped	Auto-cancelled CO	Remaining backlog	New CO candidate
Case 5	30pcs	30pcs	100pcs	40pcs	0pcs	-	60pcs	-
Case 6	90pcs	90pcs	100pcs	40pcs	50pcs	-	60pcs	-
Case 7	120pcs	120pcs	200pcs	40pcs	80pcs	-	160pcs	-
Case 8	180pcs	180pcs	200pcs	40pcs	140pcs	-	160pcs	-

Even if NettedOut is 0 after shipment, CO is never be canceled.
→ case 5

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MASTER DATA PREPARATION PLAN OF TRAY/TUBE

Explain our current Status of Development of Tube or Tray Quantity Master.

The preparations for Tube or Tray Quantity Master for MCU product & SOC product are almost complete.
We are registering a Tube or Tray Quantity to Grouping master in order.
Targeted Plan to finish this work by end of Oct 2016.

The other hand, Tube or Tray Quantity Master for A&P product are not fully-prepared yet.
We will announce the progress and the new register schedule by end of Oct 2016.

	2016 Aug	Sep	Oct	Nov	Dec	2017 Jan	Feb
MUC & SOC	Final confirm & register →			Preparation for Go-live		Go-live →	
A&P	Preparation of registration →			Final confirm & register →		Estimate Go-live	

We will judge the Go-live schedule and the cope for A&P product by end of Nov 2016.

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HOW TO GET MASTER DATA OF TRAY/TUBE

(1) select [Download Menu]from [Main Menu] of IM
(2) select [Grouping Master Download] from [Download Menu]
(3) after [Master Download List] screen is shown, press [Search] button
     to show a download list
(4) click "PA00000000" or "PB00000000" to get PartNo related information
(5) tick "TUBE_OR_TRAY_QUANTITY" and other necessary items
(6) press [Csvdownload] button
* if necessary, please refer to manuals in SCM portal

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RENESAS

ISSUES AND COUNTERMEASURES FOR TOKU & DISTI

**issue 1
potential of future scrap
incurred from qty gap**

SO by 1 piece   **CO by tube/tray**   production plan by 1 piece

customer → tokuyakuten disti → Renesas (warehouse) → factory

ship by 1 piece   ship based on storing
=> no ship for broken backlog
=> automatic cancel   storing by 1 piece

SO by 1 piece   **CO by tube/tray**   production plan by 1 piece

customer → tokuyakuten disti → Renesas (warehouse) → factory

ship by 1 piece   **ship based on storing
=> no ship for broken backlog
=> automatic cancel**   storing by 1 piece

**issue 2
if toku/disti's internal rule does NOT
allow automatic cancel, ...**

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ISSUES AND COUNTERMEASURES FOR TOKU & DISTI

SPQ = 1
MOQ = 1

for issue 1

CO by 1 piece → ship by 1 piece
ship all

**in case that risk of scrap is high,
CO can be issued by 1 piece.
=> details in the next page**

CO by tube/tray → based on storing
ship all

for issue 2

**change default to "ship all"
for toku/disti whose internal
rule does not allow automatic
CO cancel.**

based on storing
auto cancel

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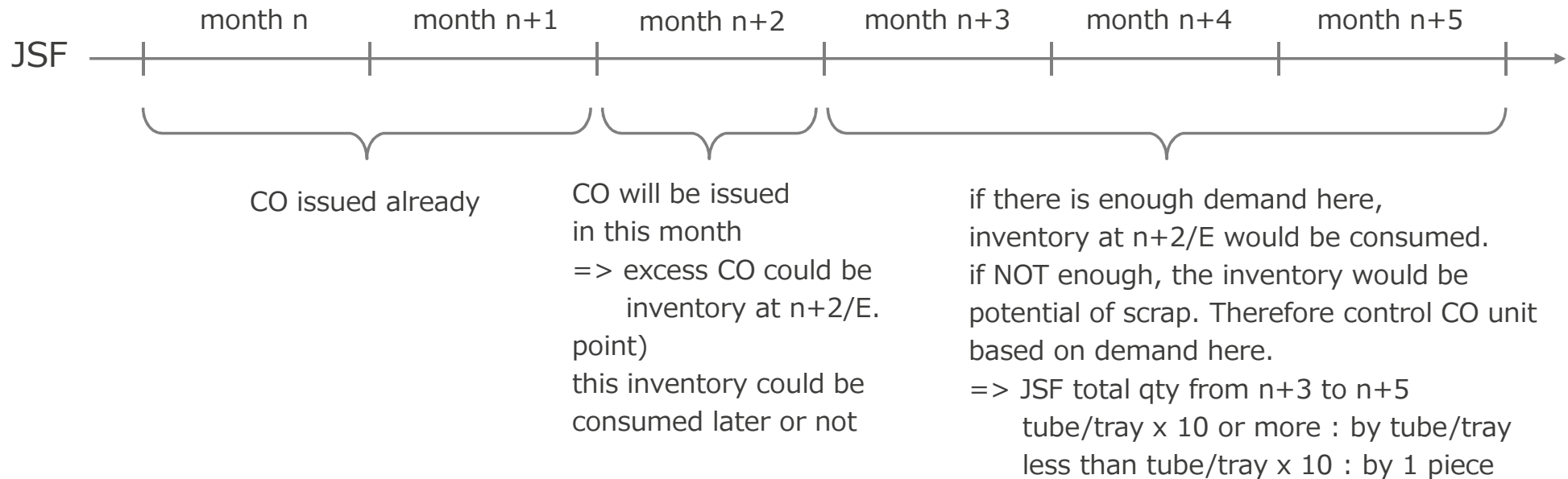
ISSUES AND COUNTERMEASURES FOR TOKU & DISTI

It depends on UO generation period and inventory setting but general situation is as follows.

| | month n | month n+1 | month n+2 | month n+3 | month n+4 | month n+5 |

JSF

CO issued already

CO will be issued
in this month
=> excess CO could be
    inventory at n+2/E.
point)
this inventory could be
consumed later or not

if there is enough demand here,
inventory at n+2/E would be consumed.
if NOT enough, the inventory would be
potential of scrap. Therefore control CO unit
based on demand here.
=> JSF total qty from n+3 to n+5
    tube/tray x 10 or more : by tube/tray
    less than tube/tray x 10 : by 1 piece

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ISSUES AND COUNTERMEASURES FOR TOKU & DISTI

CO creation unit	enough demand *JSF total from n+3 to n+5 is tube/tary x 10 or more*	NOT enough demand *JSF total from n+3 to n+5 is less than tube/tary x 10*	point
	by tube/tray ➡	**by 1 piece**	in case of expensive products, unit is controlled **automatically** based on future demand. It can **reduce scrap risk**.

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Agenda

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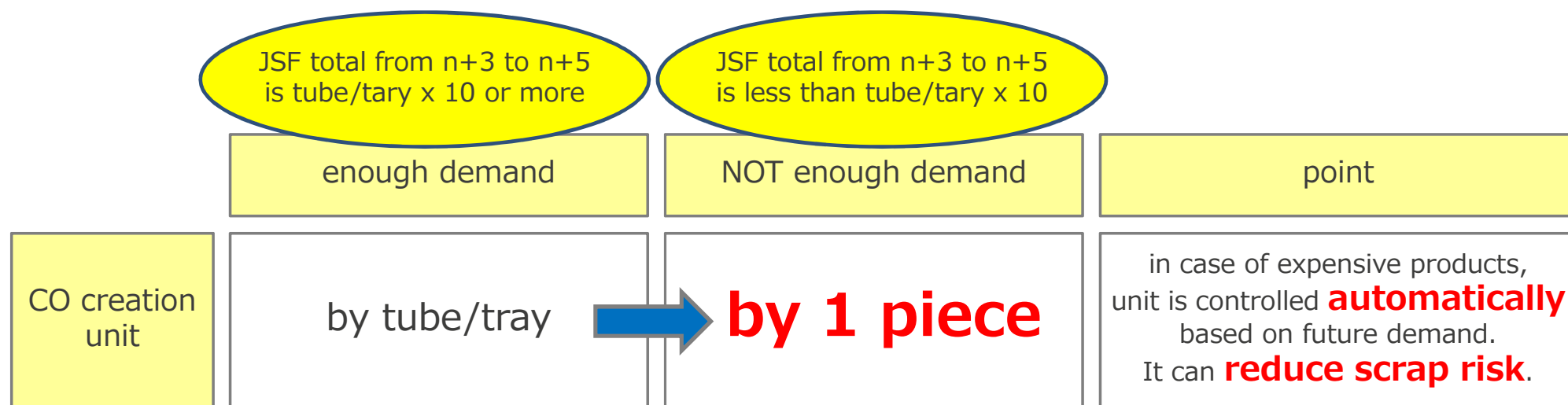
3. Cooperation favor matter(Release1)

A cooperation request list to agents.

Theme	Request matter	Schedule
1. IF test	• Please participate in a IF test which becomes change with Expand combined shipment.	in Oct from Sep, 2016

Theme		Content of treatment	Schedule
2.Shft	Shipment adjustment	• A shipment stop period with shift processing occurs. For due date correspondence in a shipment stop period, cooperation of a shipment adjustment, please. (We announce a in-depth stop period in September, 2016.)	The end of Dec, 2016

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4.Other contact matter

1. Contact details for inquiries

   Please inquire of an overseas sales company as a desk.

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5. Question

Please proceed with questions.

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