Explanation : 70 mins
Q&A : 45 mins

Honda VMC
Supplier Collaboration project – Phase 2

Please wait a little while until the event starts.

Please turn-off camera and microphone.

※Please enter: "Company name + First name" in chat.

2024.10.28

Asian Honda Co., Ltd. (ASH)
Honda R&D Asia Pacific Co., Ltd. (HRAP)

Agenda

Explanation : 70 mins
Q&A : 45 mins

No.	Item	Time (Minutes)	Presenter
1	Opening speech ▪ Today's purpose	5	HRAP Funakoshi SMG
2	Outline of Honda initiatives ▪ Evolution of Honda's development-process and key measures Business Partner Collaboration Initiatives ▪ Vision for Joint Creation with Business Partners ▪ Collaboration environment evolution	20	HRAP CIS Attawit
3	Environment cost and system configuration Administrative Procedures for Starting Use of the environment	20	ASH IT Aikawa
4	Methods for Applying CATIA V6 Practices Deployment plan	20	HRAP Funakoshi SMG
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6	Q&A	45	ASH/HRAP/HM ALL
7	Closing speech	5	HRAP Funakoshi SMG

Main purpose of this day

Thank you for taking time out of your busy schedule to attend the information session today.

As part of our manufacturing DX, we have worked with our business partners to develop a strong manufacturing structure.
We are making improvements to issues such as mistakes in information that have been returned, requirements and requirements that have been mismatched prior to the drawing.

In particular, for direct data sharing in CATIA V6 cloud environments, and for digital-based schedule matching and problem matching
Prompting the process construction is important in achieving operational efficiency improvements.

Today, we will explain how to collaborate with our design using the Digital Collaboration Environment, and the necessary administrative procedures for use.

We plan to begin using CATIA V6 and Digital Collaboration Environment in HRAP around September 2025. For each supplier, please accept CATIA V6 drawings and prepare for delivery.

Agenda

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Evolution of IT Tools: Introduction of CATIA V6

1980 1990 2000 2010 2020

'80 - JUN CADAM (2D)

'81- JAN CATIA (3-D)

V2 → V3 → V4 **→V5** **→ V6**

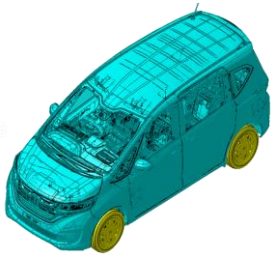
Applicable from models in 25M

Conventional drawing

3D Shape + 2D Drawing

3D + Digital drawing data

Change the form of the drawings



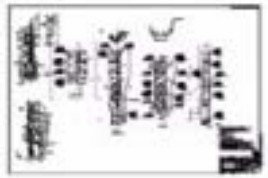
3D for a single unit

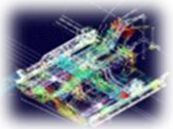
3D representation of shapes

Shape assurance of things

Digitization of drawings

UP of plotting effi ciency





2D diagram

Wire frame

Solid

Surface

Solid

Data protomodel

DPM

Digital product model

Drawing form and CAD software are greatly evolving, and it is in the stage of full digital utilization.

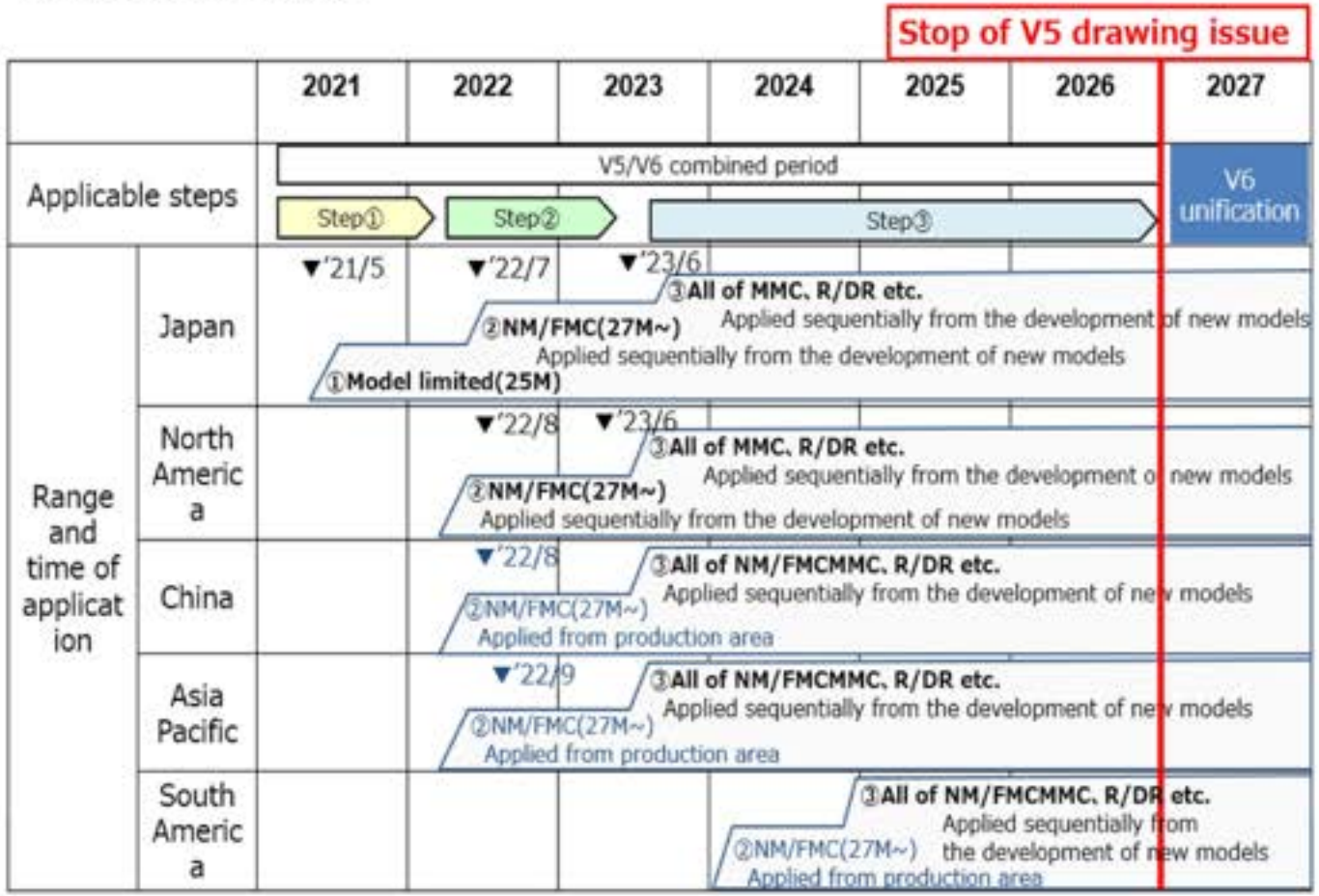
CAD News Issue

CAD NEWS which was issued on April 29, 2022.

＜CATIA V6 Applicable Steps＞

Applicable Steps	Step 1	Step 2	Step 3
	Introduction Phase	Expansion Phase	All applicable Phase
Start timing	Since May, 2021	Since July, 2022	Since June, 2023
Range of Application	Applied to 25M domestic development models only	Applied sequentially from NM/FMC development models from 27M onward	Applied sequentially from newly developed models such as MMC-developed and R/DR-developed models
Honda drawing	Limited application to shed parts	All application	All application
Maker drawing	Limited application to 9 companies	Sequential application	All application

＜CATIA V6 Application Roadmap＞



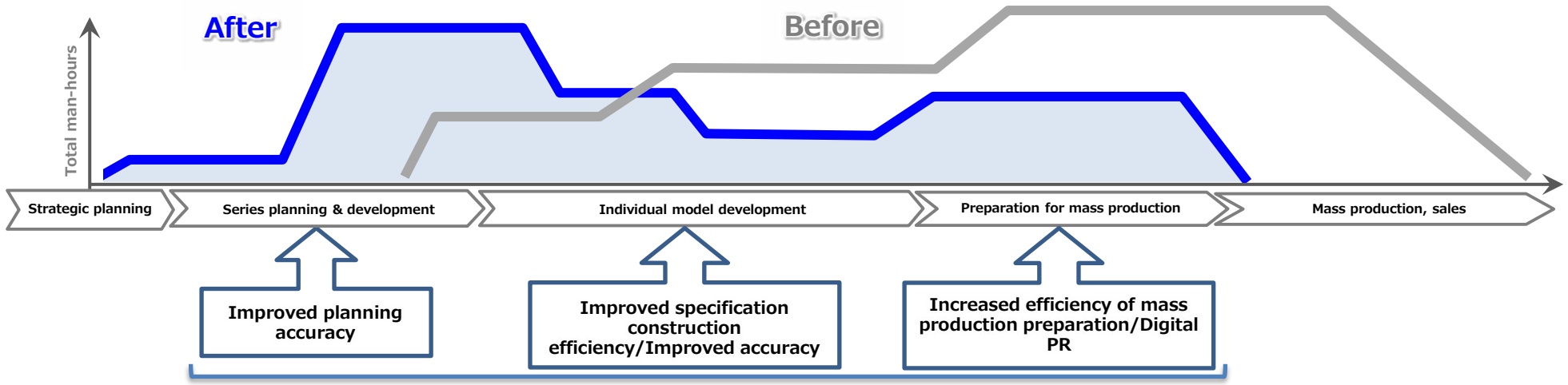
Apply CATIA V6 from 28.5M FMC starting in September 2024.

HONDA's Direction

Honda has set new environmental & safety goals for 2025.
- Carbon neutral thru all Honda product and company activities
- Zero death caused by Honda motorcycle/automobile accident

To achieve these, Honda will focus on environment and safety.
Honda will continue to "solidify the existing business", which is the foundation for meeting our goals.

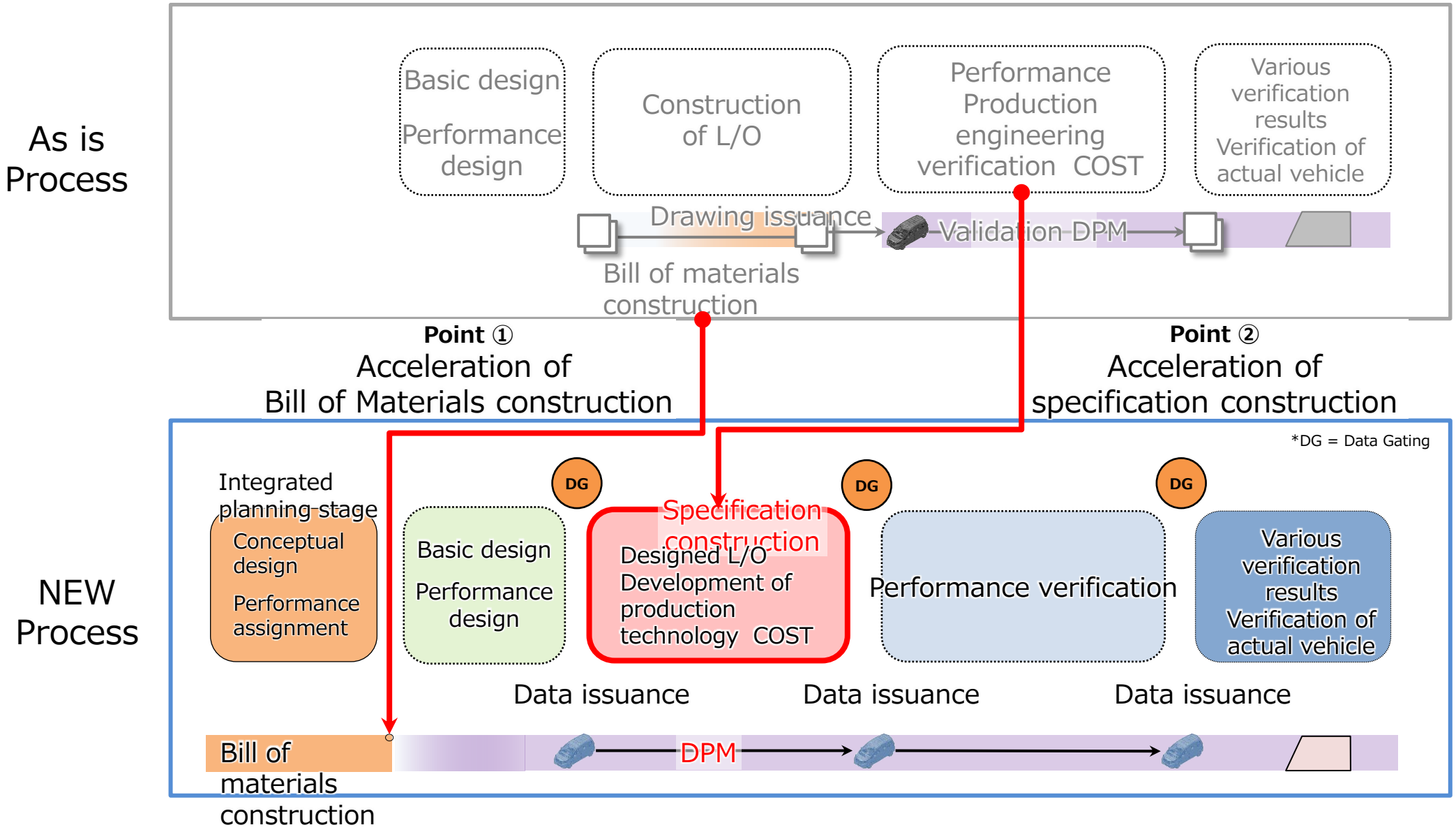
For automobile development, we have introduced a new series development flow which will allow Honda to increase parts commonality/usage for longer period. Through the execution of digital parts maturation and continuous manufacturability verification & collaboration, errors which cause rework for design can be eliminated and efficiency improved. Mass production quality can be guaranteed prior to drawing issue.



Digital verification using DPM in each phase

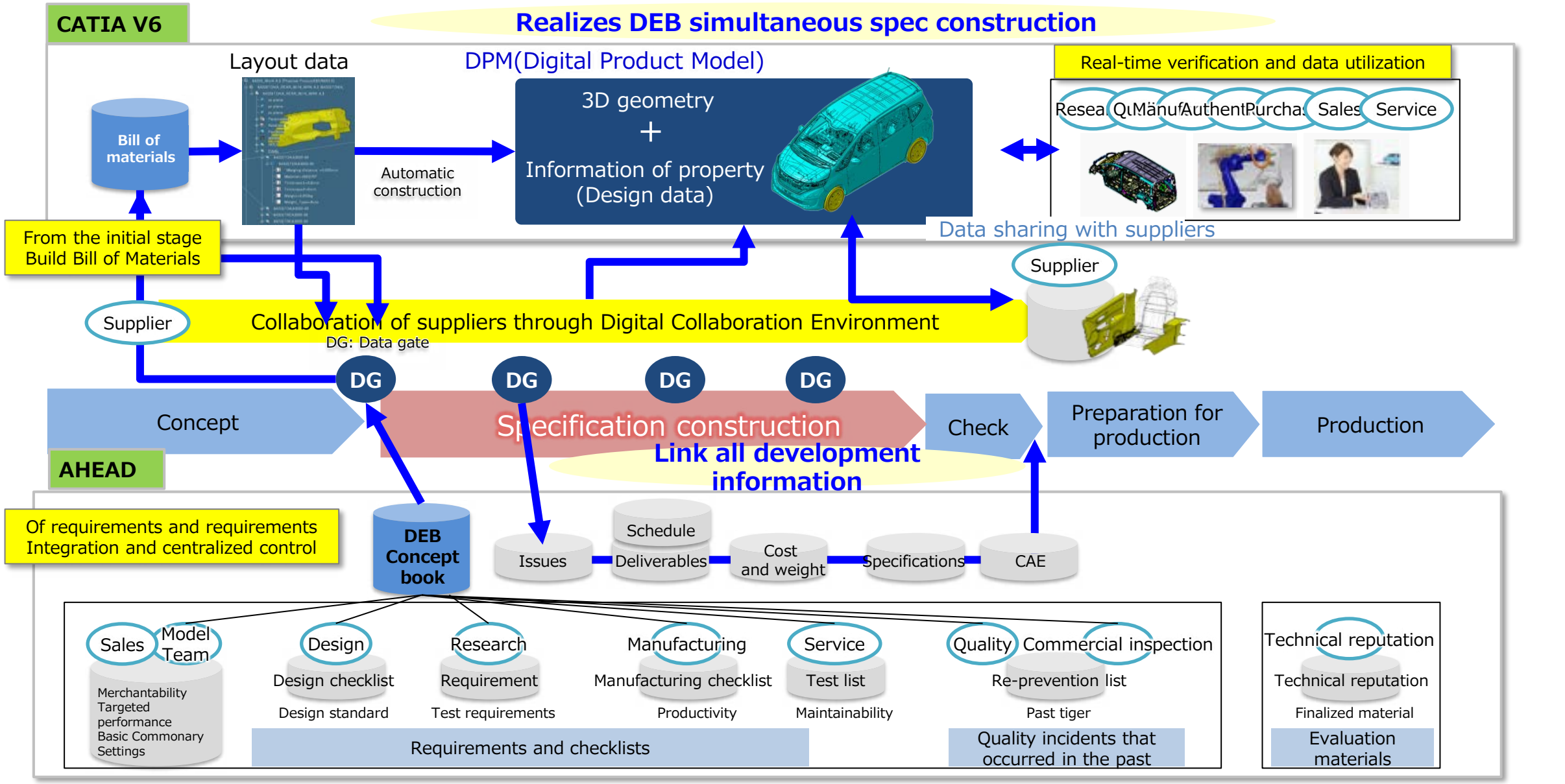
Achieve strong "Monozukuri" thru supplier digital collaboration in DPM-centric environment.

Evolution of Honda's development-process



Our goal is to evolve from a verification system after drawing to an early specification-building process centered on DPM.

Key Measures to Realize DPM-Centric Development Style



We will improve the concern by having our suppliers participate in an environment that strengthens information coordination within HONDA.

Key Measures to Realize DPM-Centric Development Style

Measure ①: DPM automatic construction

→Quickly create data to be presented to suppliers without omission

Measure ②: Evolution of DWG

→Improvement of accuracy and efficiency when utilizing information

Measure ③: Distributed data and evolution of data flow

→Reduction of data conversion man-hours and support for various systems/format

Measure ④: Collaboration environment evolution

→Efficient data sharing with suppliers and visualization of exchange history

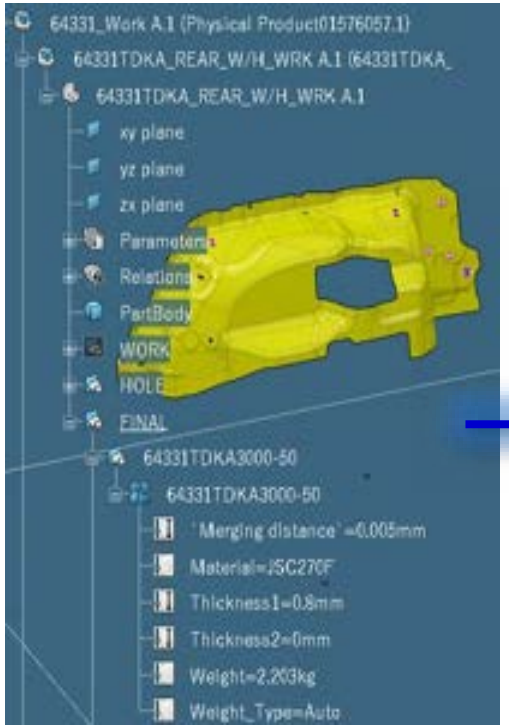
Measure ①: DPM Automatic Construction

Current concern

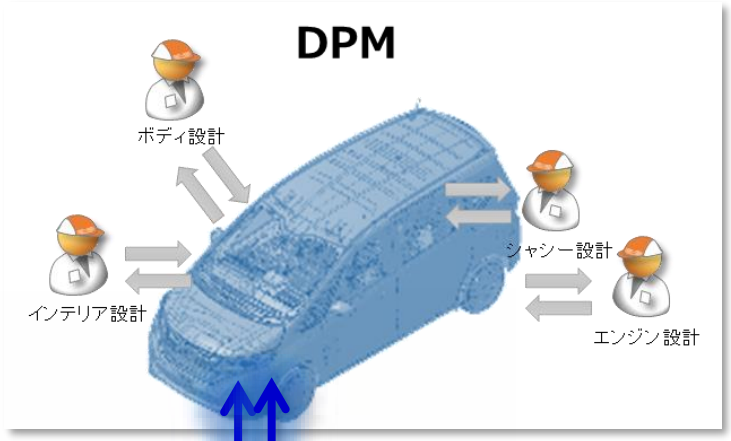
- DPM is not delivered until after drawing is issued.
- Cannot check Layout data in timely manner.
- Due to DPM verification delays, data has to be reworked.

Solution

Area where DPM will be "automatically built" and referenced.

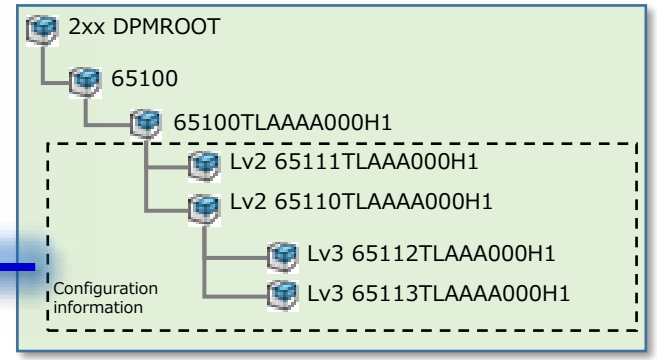


Layout data (3D)



SAVE

Automatic



BOM (Bill of Materials)

DPM will be automatically constructed from layout data and BOM and data presented to suppliers can be gathered quickly without exception.

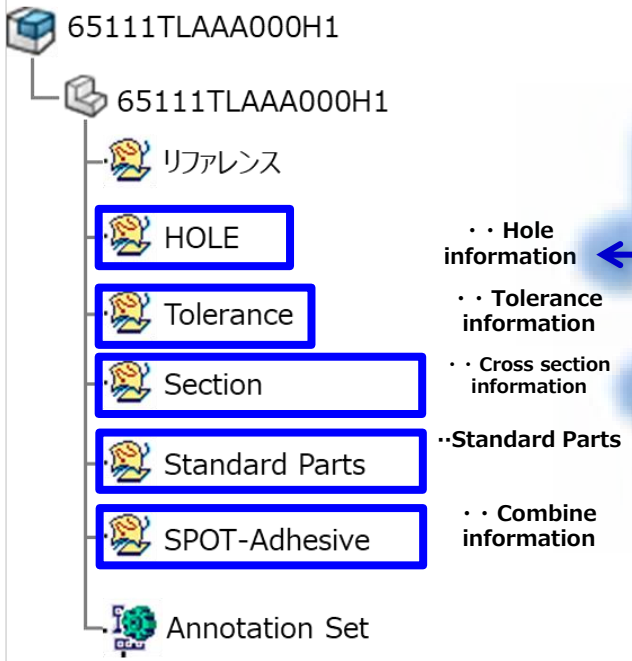
Measure ②: Evolution of DWG

Current concern

- Modeling and drawing rules are different depending on the regions, functional group and PIC.
- It takes time to understand the intention of the previous PIC when reusing.
- It takes time to inspect the drawing.

Solution

Standardize and set the rule for the storage destination of DWG information.



・・Hole information

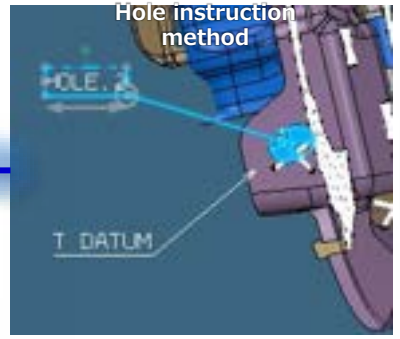
・・Tolerance information

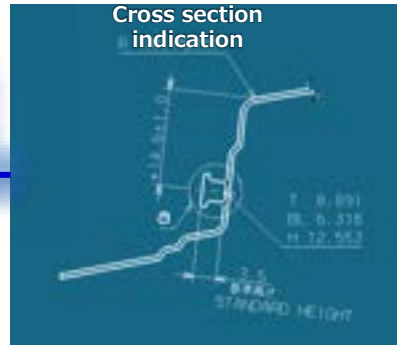
・・Cross section information

・・Standard Parts

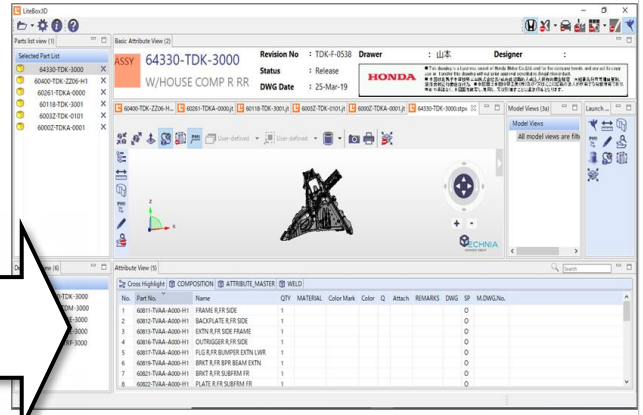
・・Combine information

Unified DWG instruction method

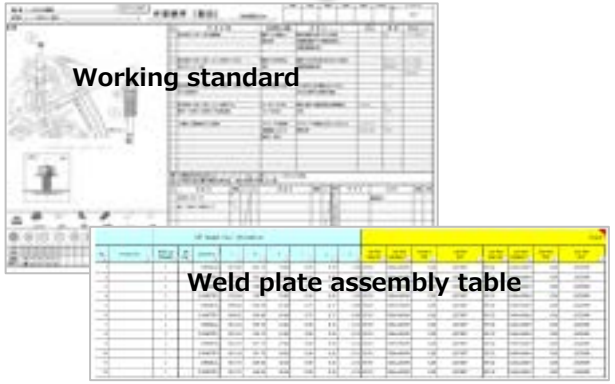




"New DWG"



Directly use attribute information



Digitization of attribute information improves accuracy and efficiency when checking DWG and utilizing information.

Measure ③: Distribution Data and Evolution of Data Flow

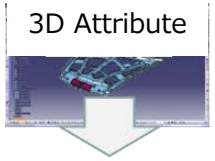
Current concern

- Data is only available in CATIA.
- CATIA data needs to be converted each time it is delivered.
- Data volume is too heavy, so it is difficult to handle. Data delivery is also inefficient.

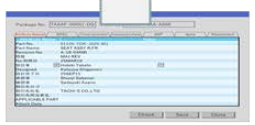
Solution

Deliver in standard format

Honda/Supplier (DPM creation/issue)



3D Attribute



Management Info

DPM Issue

PDF	**Storage Information** **Delivery data package**	**File Name: PN+Part Name+Rev. #.extenion** 12345XXXXA010M1_BRKT_TTTAF0001.hpdf
JT	**3D shape** **-3D Shape** -Section/View -3D attribute (Parameter/elements)	12345XXXXA010M1_BRKT_TTTAF0001.jt
XML	**Attribute info** -3D structure -STEP242 Std Attr (Materials/positioning)	12345XXXXA010M1_BRKT_TTTAF0001.stpx
XML	**Attribute info** -Attribute out of STEP242 Standard (Honda exclusive info)	12345XXXXA010M1_BRKT_TTTAF0001.xml
TIFF	**Other Image info** -Notes column -Illustration -Surface treatment	12345XXXXA010M1_BRKT_TTTAF0001.tiff
PDF	**Change point info**	12345XXXXA010M1_BRKT_TTTAF0001.pdf
	3DExperience data	12345XXXXA010M1_BRKT_TTTAF0001.3Dxml

JT data

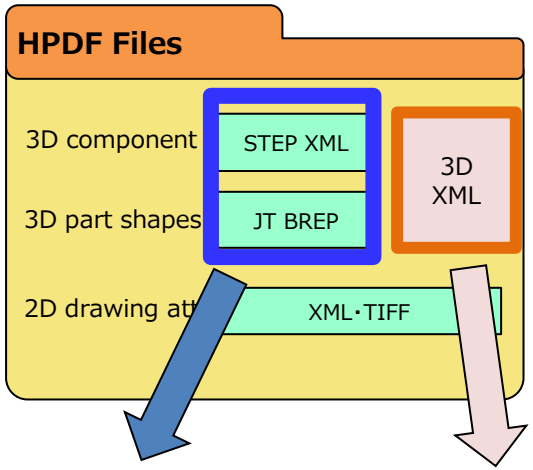
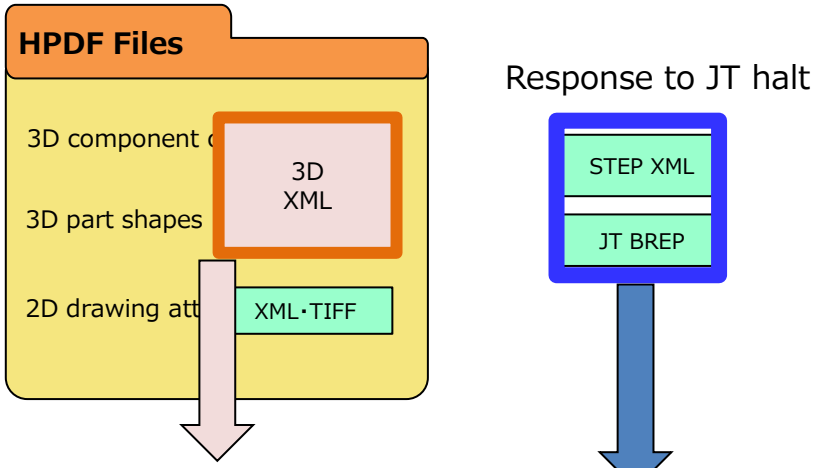
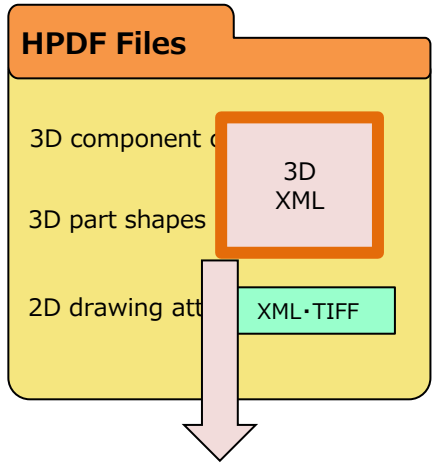
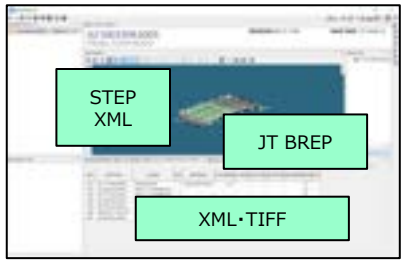
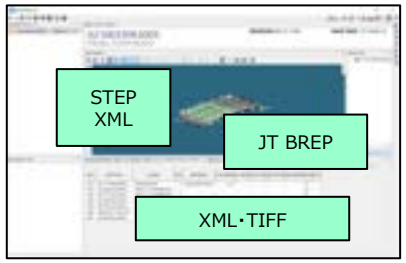
Native 3DX data

Released July

DWG issue

The standard format conforming to international standards reduces data conversion man-hours and can be used directly with various tools of suppliers.

Changes in Drawing Format

	3DXML formalization (2/19 ~) Positive: 3dxml+XML+TIFF Positive: JT BREP+XML+TIFF	3DXML unification JT halted (from Oct. 7) Positive: 3dxml+XML+TIFF	JT full stop ('25/1~) Positive: 3dxml+XML+TIFF
Distribution Format			
Viewer	Shape confirmation data DARWIN Viewer  Design data CATIA Viewer 	Design data CATIA Viewer Shape confirmation data DARWIN Viewer 	Design data CATIA Viewer
	Add 3DXML/CATIA Viewer JT/DARWIN continues	Formally, 3DXML, JT responds to requests Sending data separately	Officially 3DXML/CATIA Viewer Unification

※Please check the previously issued drawings in JT/DARWIN.

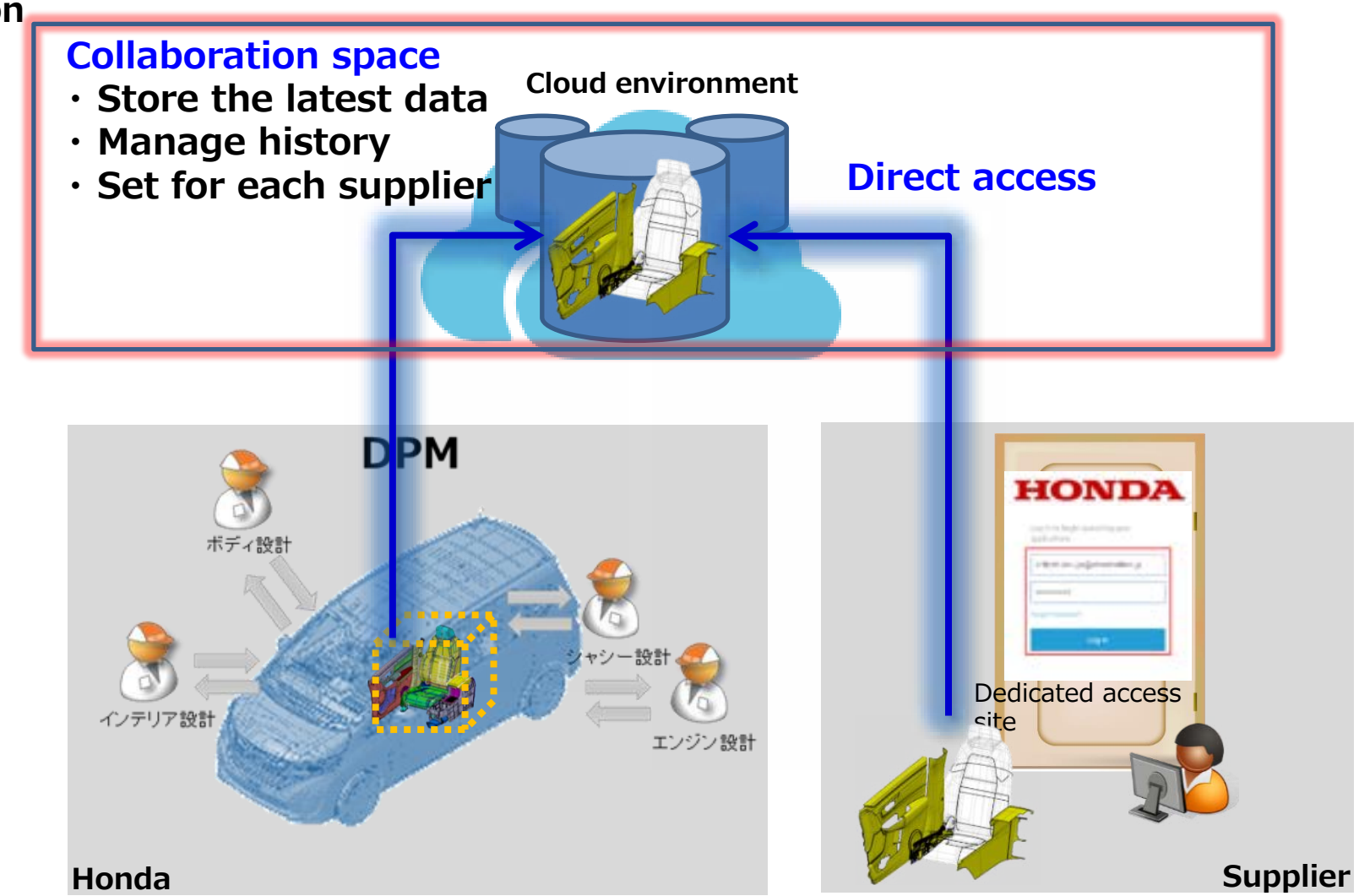
Transition to 3DXML/CATIA Viewer from 7th October 2024

Measure ④: Collaboration Environment Evolution

Current concern

- Late sharing of L / O and surrounding parts to suppliers
- It is unclear whether the presented data is up to date.
- Rework occurs by referring to old data.
- Man-hours for data sharing and transmission / reception are large.
- No history of exchanges remains.

Solution



Direct access makes sharing the latest product data much faster, and history management reduces rework.

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Q&A : 45 mins

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Vision for Joint Creation with Business Partners

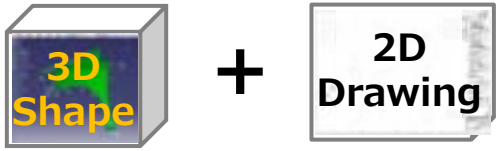
At present, the main issues in collaboration with business partners are
- ・Delay in reflection of supplier skills
- ・Rework due to inadequate sharing of information, such as reference to old surrounding data
- ・Waste man-hours such as information copying and repeated input

We believe that improvement is indispensable.

To solve this problem, we have developed a new DPM that digitizes the drawing data, and have developed and verified the product with our suppliers.We will do this efficiently.

Current status

Conventional drawing

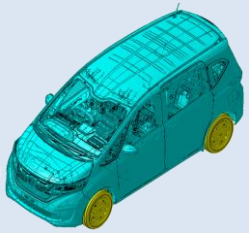


Old DPM

In future

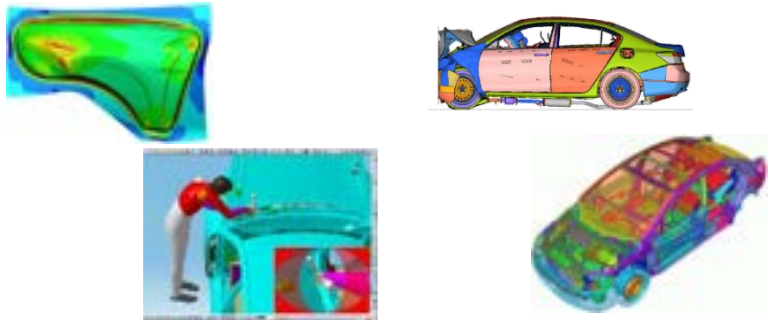
New DPM

Digital product model



3D + Properties

部番	溶接	設変経歴	色	トルク
部品名称	穴	材料	シボ	接着
派生/構成	板厚/肉厚	複層材料	表面処理	溶着
位置/個数	防水・防錆	重量	可動範囲	カシメ



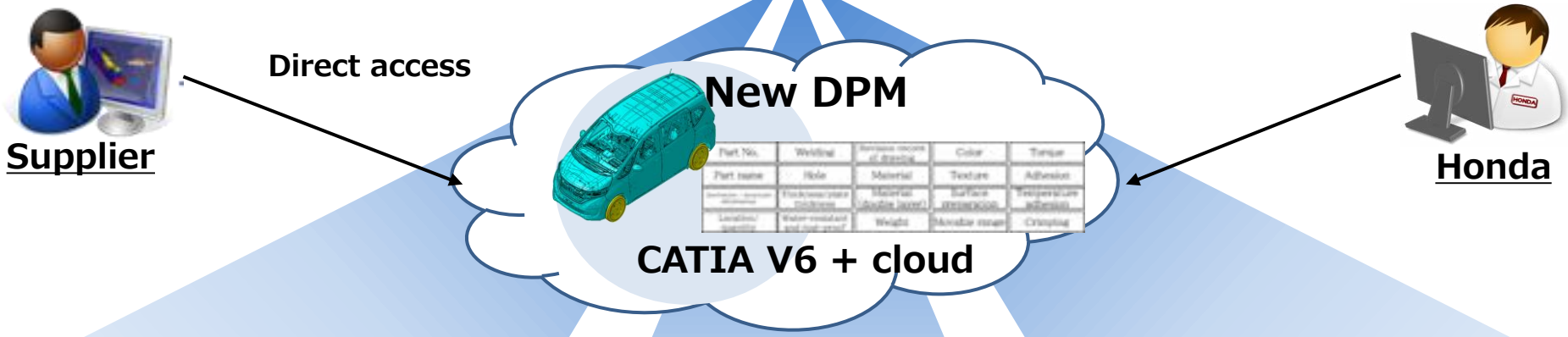
Production engineering verification
Performance verification

DPM were repeatedly verified from the previous drawing, Achieve specification maturity

We will solve conventional problems by building a new DPM that digitizes the drawing data.

Supplier Digital Collaboration Environment - Benefit

Strong manufacturing taishitsu without rework



① Information sharing accuracy + speed improvement

■ For early specification maturation, from the L / O stage efficiently build DPM and share quickly.

■ Development information (schedule / concern)
Can be shared accurately and quickly.

②Improvement of work efficiency for design PIC

■ Eliminates the double work of DPM construction and drawing.

■ Workload before DWG issue can be distributed.

■ With new DPM / standard format, improve convenience of data utilization at downstream data post-process.

③ Supports remote work style

■ Compatible with Honda development
Using the same method and rules regardless of region or country.

■ No work location restrictions.

■ Creating time by reducing travel.

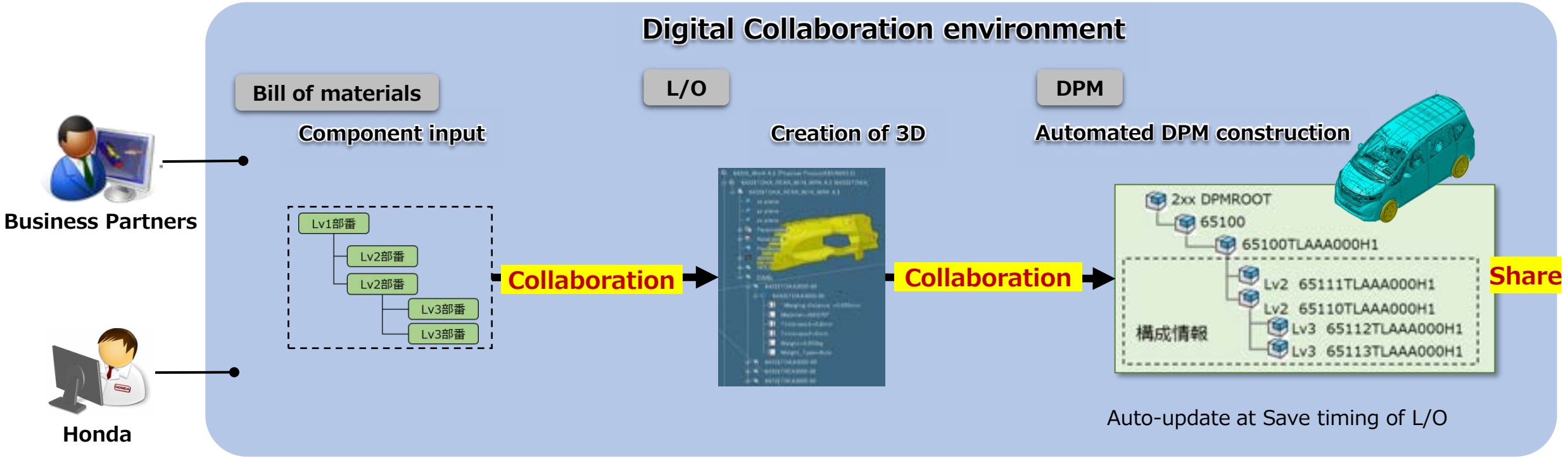
■ Reduction in business trip expenses (stay expenses, transportation expenses, miscellaneous expenses).

We aim to maximize the benefits by having our suppliers use this digital collaboration environment widely.

① Accuracy and speed of information sharing

[High-speed sharing of 3D by DPM auto-build function]

Component information entered in the Digital Collaboration Environment is linked to L/O data, and shared data can be created at high speed by DPM auto-build function that creates DPM data from L/O data.



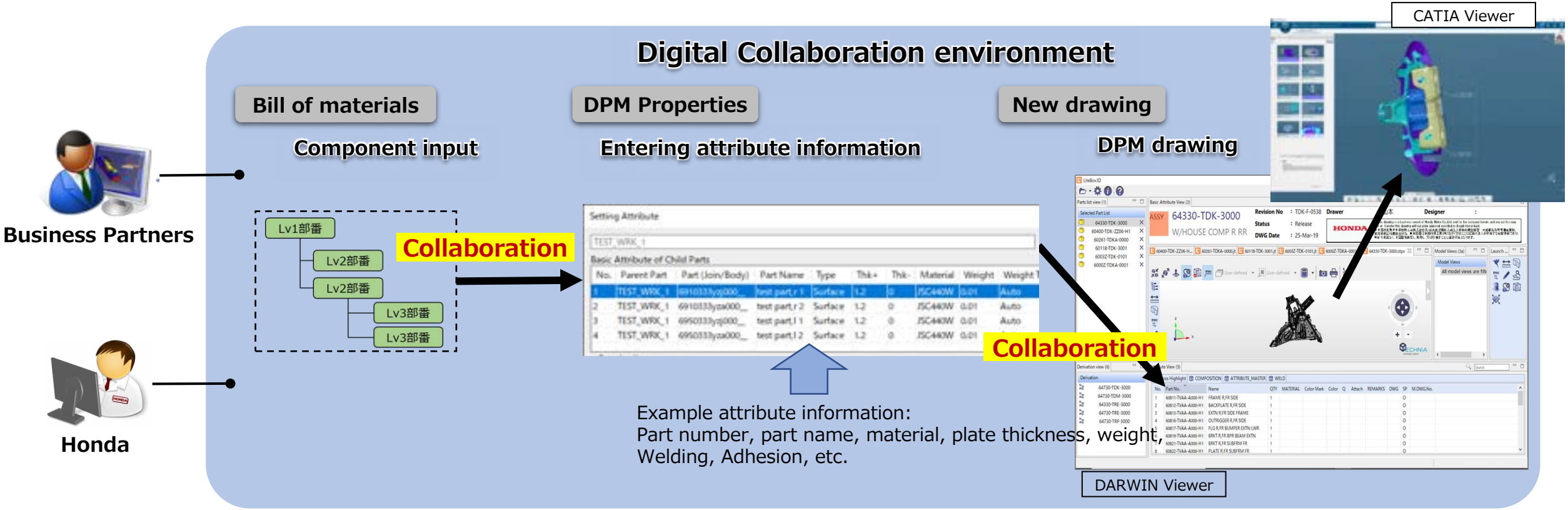
Achieve quick sharing of 3D data using a Digital Collaboration Environment

② Improvement of work efficiency for designers

[Produce efficient DPM and drawings by digitizing attribution data]

・The "box" for attribute input is automatically created from the component information entered in the digital Collaboration environment.
Input the attributes sequentially according to the specification decision.

・You can use this information to generate a drawing.



Use Digital Collaboration to enter properties to build and plot DPM efficiently

③ Supporting Remote Work Styles

Current

Supplier

3D and DWG double work
Clerical errors and changes

V5

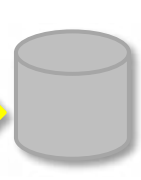
Environment: GSN

Sending/receiving time is too long

Send and receive

FR seat all variations ≒4 hours

Send and receive



Honda (R&D)

V5
CAD data

Data loss
Repeatedly resending data

Information sharing does not go well, inefficiency and wasteful work occur, and changes occur due to omissions of necessary requirements.

Future

Development that eliminates waste and prevents rework

Cloud collaboration environment

No double work

V5

Import

Export

Honda - Supplier
TLAA
SEA
Reference
Send
CADDATA
Docs
Receive

V5

V6

Sync

Instant data sharing (0 seconds)

CAD data

Honda - Supplier
TLAA
SEA
Reference
Send
CADDATA
Docs
Receive
CADDATA
Docs

V6

Data and history remain and can be retrieved

Confirmation/OK level for verification items at the event

DPM is always the latest 3D
⇒Verification and feedback implementation

Eliminate waste

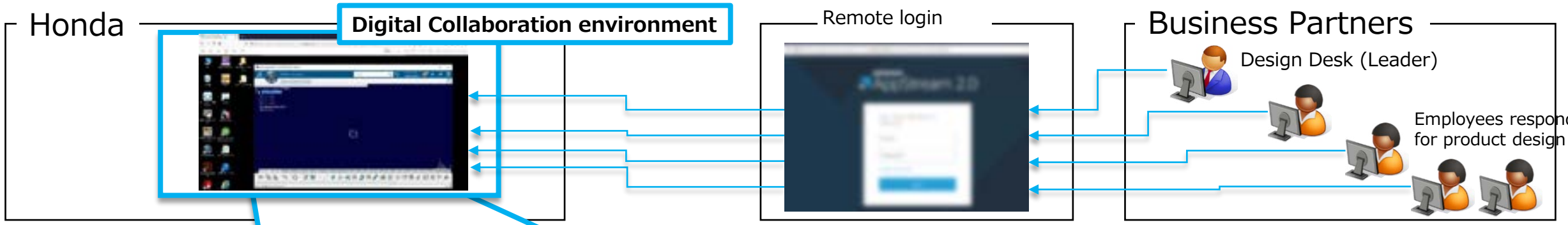
+

Prevent rework

You can access the collaboration environment on the cloud in-house, share CAD data, Development information and perform data construction work.

Viewpoint of digital collaboration environment and effect confirmation

Digital Collaboration environment:
Environment in which business partner designers co-create with Honda on the cloud while still in their own offices

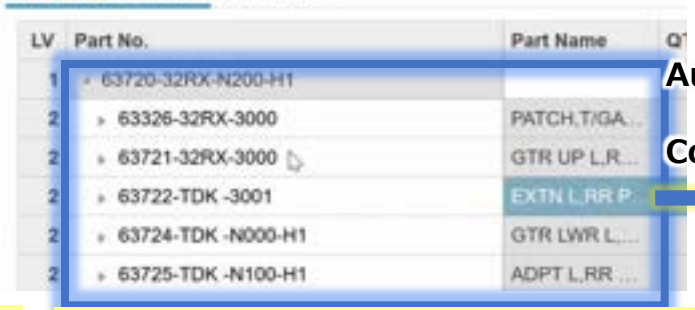


Example of In-house Tools for Efficient Development

Data Sharing on the Cloud

No more data can be sent or received
Instant data sharing

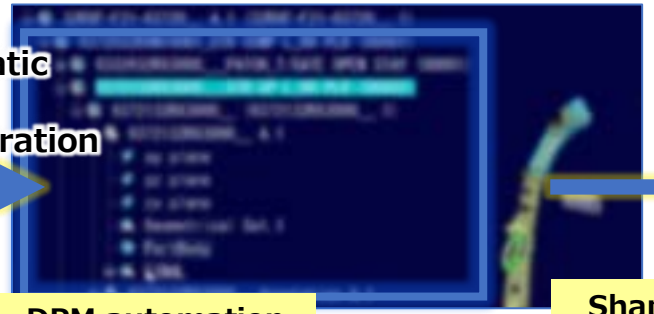
Component creation function



Efficient UP of construction by importing + incremental correction

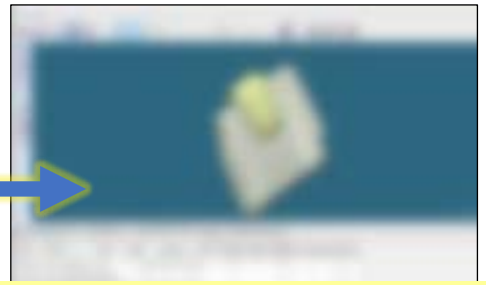
Automatic Collaboration

DPM construction function



DPM automation

DPM data-viewing/extraction function



Shape check, attribute extraction

※Can be referenced only in-house and HM authorization.

Experiment with business partners using in-house Honda tools to improve development efficiency.
Then, lead to study of collaboration process.

Outline of drawing delivery formats and new Viewer

Drawing data	Tools	Conversion function (utilization)

HPDF Files

- 3D component c → STEP XML
- 3D part shapes → JT BREP
- 2D drawing attri → XML・TIFF
- STEP XML + JT BREP → 3D XML

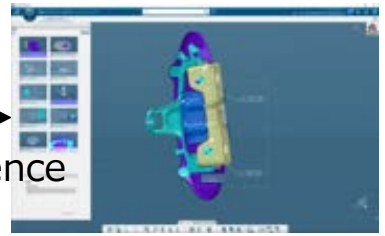
With DARWIN's Export command
Remove the file

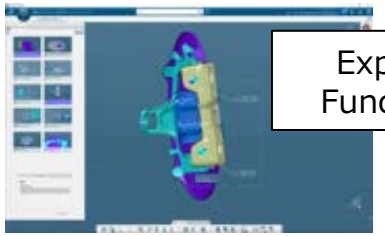
STEP+JT / Reference → DARWIN

3D / Attribute → 3DxSUITE Honda Bundle package

With each company Converter

Free: unlimited

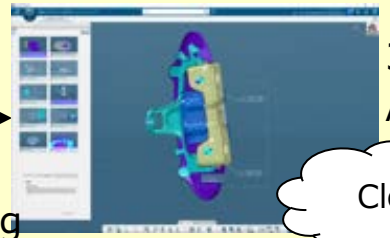
3dxml / Reference →  CATIA Viewer

3D → 

Export Function → V5 / IGES / STEP

Applications: Internal drawings, CAE, etc.

Free: 2 people only

3dxml / Plotting /Refer → 

3D / Attribute

Cloud

Digital Collaboration Environment

Today explanation

Free: 1Model 1Parson / Max 2 Parson/company

Provide DARWIN and CATIA Viewer for each company according to application

Agenda

Explanation :	70 mins
Q&A :	45 mins

No.	Item	Time (Minutes)	Presenter
1	Opening speech ▪ Today's purpose	5	HRAP Funakoshi SMG
2	Outline of Honda initiatives ▪ Evolution of Honda's development-process and key measures Business Partner Collaboration Initiatives ▪ Vision for Joint Creation with Business Partners ▪ Collaboration environment evolution	20	HRAP CIS Attawit
3	Environment cost and system configuration Administrative Procedures for Starting Use of the environment	20	ASH IT Aikawa
4	Methods for Applying CATIA V6 Practices Deployment plan	20	HRAP Funakoshi SMG
5	Summary	5	ASH IT Aikawa
6	Q&A	45	ASH/HRAP/HM ALL
7	Closing speech	5	HRAP Funakoshi SMG

Environment cost (free/charged) rules

■Cost rules:

1 person per M/L for 1 model --> free of charge,
Max 2 person per company --> free of charge
If needed more, supplier will be responsible for cost

Project	Free of charge (Honda's responsibility)	Charge to supplier (Supplier's responsibility)		
	1 Person	2 People	3 People	More
A				～
B	1 Person			～
C	–	1 Person		～

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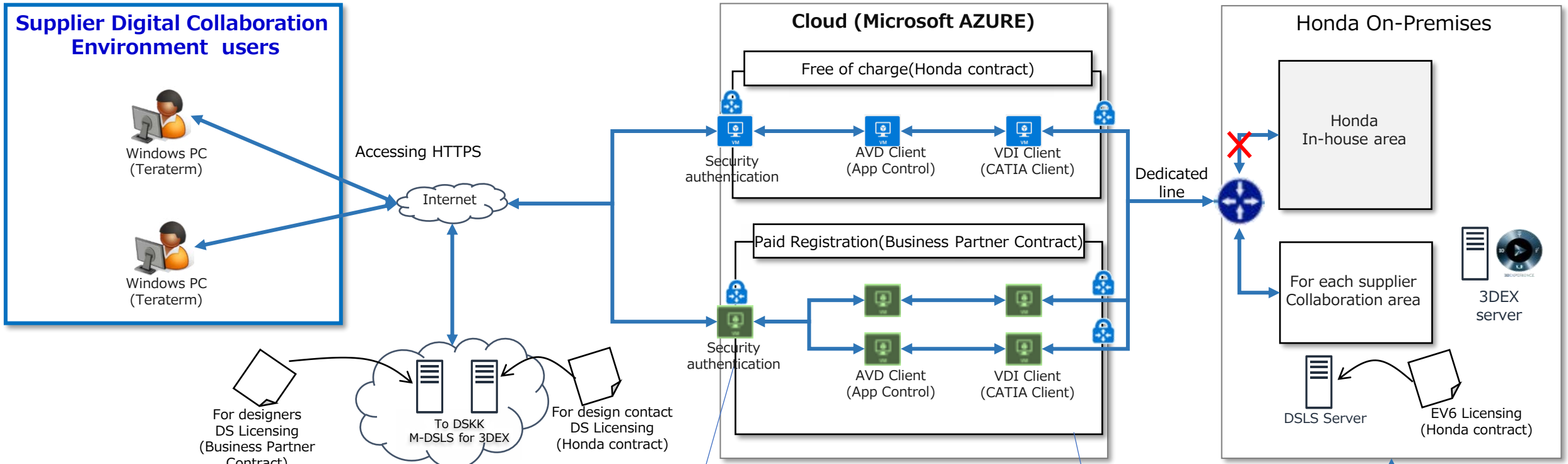
Digital Collaboration Environment configuration



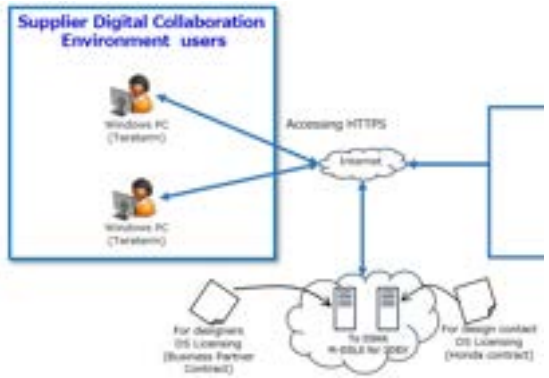
- Same security measures as in Honda
  - Applying Security Software and Policies
  - Behavior detection (EDP) monitoring
  - Control and Logging of Prohibited Operations Using Tools
- Setting and management of use zones for each company
  - Access and Data Management by Business Partner
  - Separation of partitions for proper management of usage volumes

File-transfer

Supplier will use the cloud environment to access the Honda environment.

Requirements for Supplier side Environment

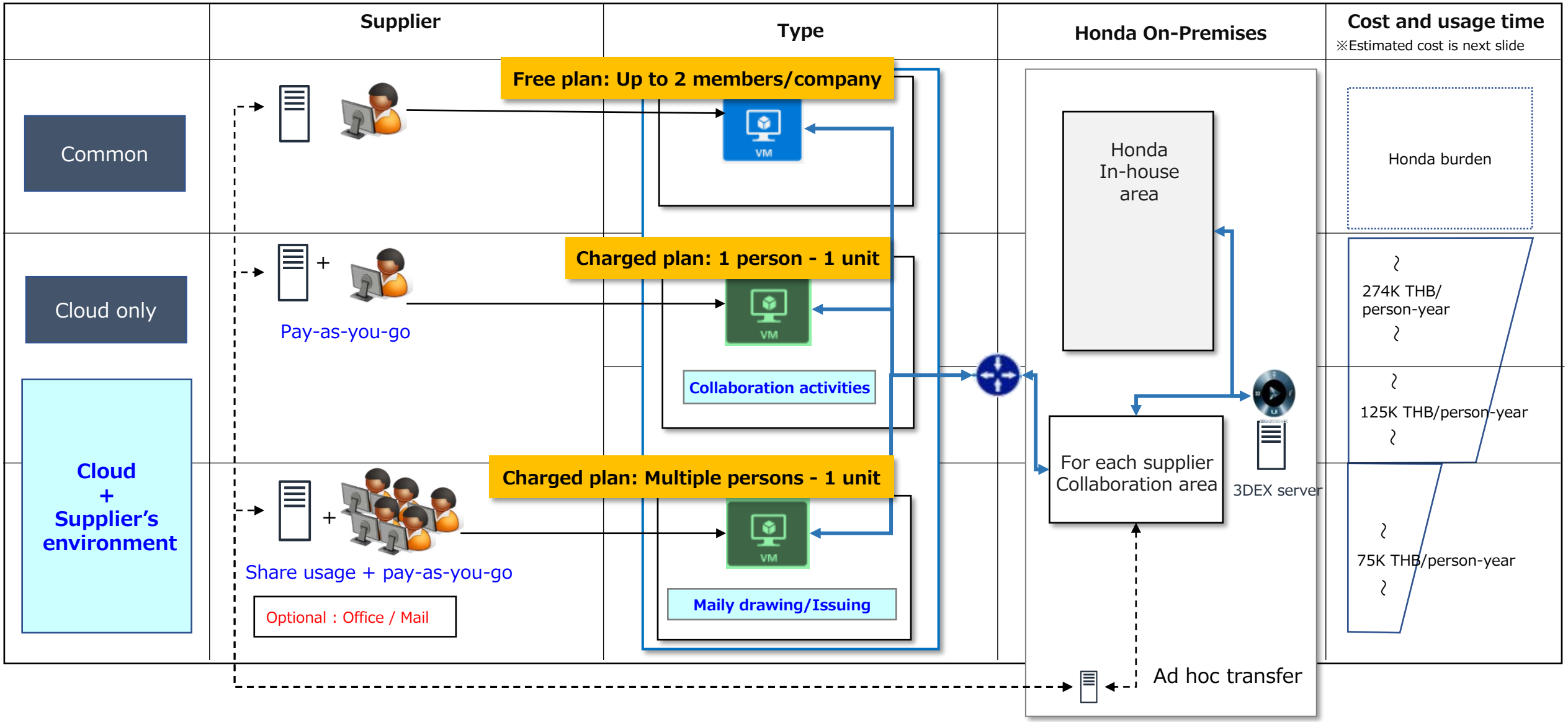
Make sure that the business partner's internal environment and the network for accessing satisfy the conditions below, including DARWIN 3D.



Classification	Category	Item	Remarks
Hardware	Device	Notebook PC or workstation	
	CPU	Intel Core-i5 equivalent	
	Memory	8GB or higher	
	DISK	HDD/SSD	Prepare the capacity according to the amount of data to be transferred.
	Graphic	OpenGL version-2 or later graphics adapter Graphics memory 512MB or higher	Onboard graphics enabled
Software	OS	Windows 10 64	Windows 32bit Not Supported ARM processor not supported (e.g. Surface Pro X)
	Other	Microsoft Visual C++ Redistributable for Visual Studio 2015	・For Bulk Deployment with Lite3D Installer https://www.technia.com/support/software-downloads/#technia ・For individual downloads https://www.microsoft.com/en-us/download/details.aspx?id=48145
Network	Line Type	Internet line	
	Bandwidth	Minimum Bandwidth 15Mbps/User for CAD Usage as a Azure Cloud	This is the bandwidth required from a business partner to the Internet exit. ・Classification by usage (CAD usage is classified into POWER) https://docs.microsoft.com/ja-jp/windows-server/remote/remote-desktop-services/remote-desktop-workloads ・Bandwidth (for applications classified as POWER, the lowest 15Mbps is recommended) https://docs.microsoft.com/ja-jp/windows-server/remote/remote-desktop-services/network-guidance?context=/azure/virtual-desktop/context/context#applications
	Delay	Less than 50ms	As it varies depending on the environment, please check with the network check tool (next page)
	Firewall	Details will be provided at a later date	Cloud URL, Ports

Please prepare the environment that meets the above requirements

Plan Type



Please select a plan according to the actual usage of the supplier.

Cost for charged plan and Collaboration environment spec

Item	Supplier Collaboration environment user	
	Window person of design (Max. 2)	Other than the left side
Cloud environment	Honda burden	Supplier Burden
Enovia V6	Honda burden	Honda burden
CATIA V6	Honda burden	Supplier Burden
Development information (task management)	Honda burden	Supplier Burden
Development information (schedule management)	Honda burden	Supplier Burden

Item		Payee	Expenses	Detailed Description	
All	Basic charge (Monthly)	Honda	¥9,000/set ¥2,000/person (fixed)	Environment disbursement, registration, and management	Application processing, application management, new payout, suspension of use, configuration management/monitoring, maintenance
				QA/ failure response	QA failure response via help desk
				Management tool	Incident management, information distribution
Could environment	Microsoft SW licensing costs	Sales agent	Please ask Sales agent (fixed)	Windows 10/11 Enterprise E5... 1 unit/person	
				Enterprise Mobility + Security E3 (for client) ... 1 unit/person	
				Microsoft 365 Apps for enterprise... 1 unit/person *For Shared plan, this license is Optional	
				Exchange Online Plan2... 1 unit/person *For Shared plan, this license is Optional	
	Cloud Instances Usage fee	Sales agent	Please ask Sales agent (Pay-per-use)	<Usage environment> ■Instance ・Certification machine: “Standard B2S Linux(2vCPU(s),4GB RAM),Standard Managed Disk E4(32GB RAM)×1“・・・1 unit/ company ・AVDClient: “Standard D4v4 Windows10(4vCPU(s)、16GB RAM),Standard Managed Disk E10（128GB RAM）×1・・・1 unit/user ・VDIClilent: “Standard_NC4as_T4_v3 4vCPU(s)、28GB RAM、Standard Managed Disk E10（128GB RAM）×3”・・・1 unit/user ■Additional Storage ・“Azure Files(100GB)、Azure Backup(difference)(500GB) ・・・1 unit/user ■Others ・Microsoft Defender for Cloud ・・・ 1/device + Cloud internal communication fee(30GB) ・・・1 unit/user	
CATIA V6	DS CATIA V6 License costs	Sales agent	Please ask Sales agent	If you already have DS Licenses：Register the licenses to managed DSLS tenant for supplier If you do not have DS Licenses yet.：New purchase or Migration from V5 license MES and TAD are mandatory, PCS (IFW and CSV) are not required	

MES	Necessary for L/O, 3D modeling, kinematics creation, DPM construction
TAD	Necessary for creating FTAs (dimensions / annotations) in 3D

Please prepare for the introduction of Collaboration environment.

Cost image for charged plan

Rate: 1USD=36.9THB
1JPY=0.23THB

Use case	Exclusive plan		Shared plan
Usage plan	Pay-as-you-go + 1 workstation/person		Pay-as-you-go + 1 workstation with 5 users
Basic charge (GUID,AHEAD)	**30,360 THB** ¥11,000 *12		**10,488 THB / person** (¥9,000+¥2,000*5)*12/5
MS SW Licensing	**20,079 THB**		**10,426 THB / person** (Option Ms office and Mail box:+9,653 THB)
CATIA Licensing	Prepared by supplier		Prepared by supplier
Cloud Instances Transactional Pricing	Pay-as-you-go (annual): **223,767 THB** Example: 14 hours × 240 days = 3360 hours	Pay-as-you-go (annual): **74,736 THB** Example: 3 hours x 240 days = 720 hours	Pay-as-you-go (annual): **54,511 THB** Example: 1.5 hours × 240 days = 360 hours
Annual Cost	**274,206 THB**	**125,175 THB**	**75,425 THB**

※This cost is for just reference.
Because the cost depend on contract between supplier and vendor

Setting usage plans according to usage conditions in response to pay-as-you-go/cloud handset shares

Preparation for Cloud and V6 licenses

・To use Honda Supplier Collaboration environment at the expense of a business partner, the following licenses must be prepared by the business partner.

Cloud environment	
AZURE Subscription ID MS licence	**1. Contact Japan Business Systems Asia Pacific Pte. Ltd.** Please consult “Issue Azure Subscription ID and Purchase MS Software License” for Honda digital Collaboration. (*) (*) About terms of use and costs, contact Sales agent. **Contact: vmc-ap@jbs.com, Email Subject: [Honda Business Partner Collaboration Environments]** **2. Once "Azure Subscription ID, and MS Licensing" are delivered (*) from JBS to Honda Tenants, please inform the supplier help desk about Azure subscription ID and MS licensing information.** (*) By registering AZURE subscription ID and license purchased by the supplier with Honda tenant, it will be used to link to the user at the time of application.

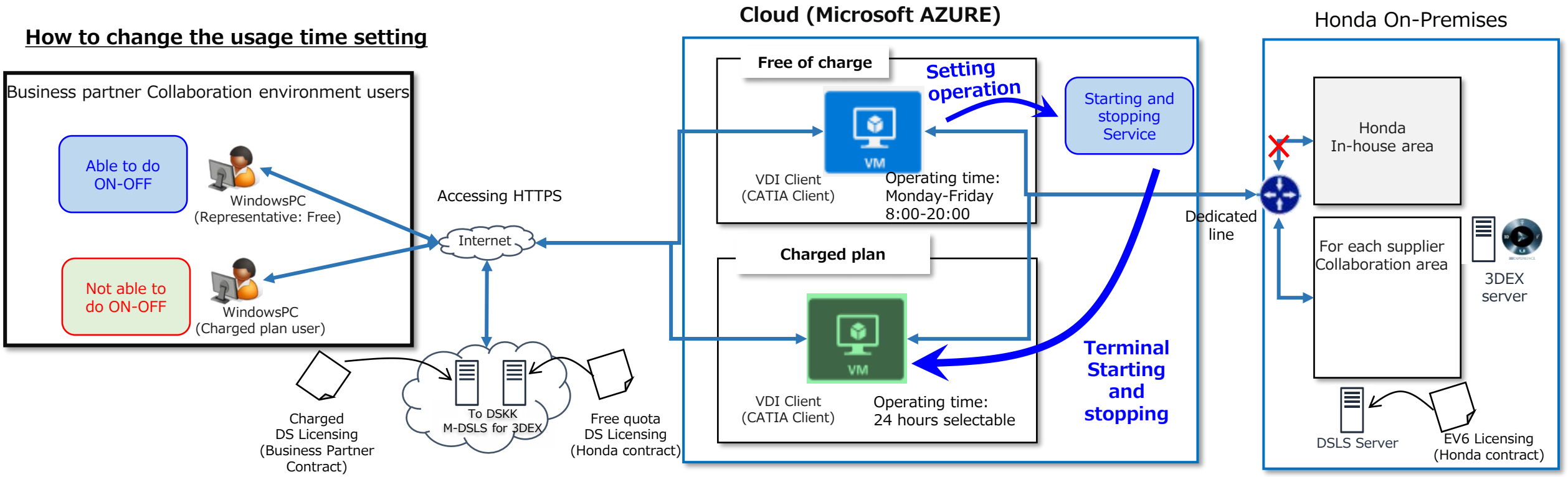
DS Licensing	
If you have CV6 licensing	**1. Contact the distributor who purchased DS license for "Transfer License Registration to Managed-DSLS Tenants for Business Partners".** **2. After the license transfer to Managed-DSLS is complete, contact Honda Supplier Help Desk.**
For CV6 unlicensed	**1. Contact your DS licensing distributor with "DS licensing for Honda digital Collaboration".** If you do not have a V6 license: Purchasing or migration from V5 license Mandatory licensing is MES, TAD. PCS(IFW, CSV) is not required in Honda supplier collaboration environments. REFERENCE DS LICENSING CONFIGURATION URL: https://www.3ds.com/terms/product-portfolio/licensed-programs/ **2. Once you have purchased your DS license and registered your managed DSLS for your business partner with your DS license, contact Honda Supplier Help.**

If you need “Charged plan user”, please contact with Agency

How to ON-OFF cloud workstation

Methods	Definitions
pay-as-you-go	It can be used at any time in 24h by setting the operating hours of the terminals. ※Change the startup/shutdown time setting to the supplier representative (free frame) and use of the startup/shutdown tool

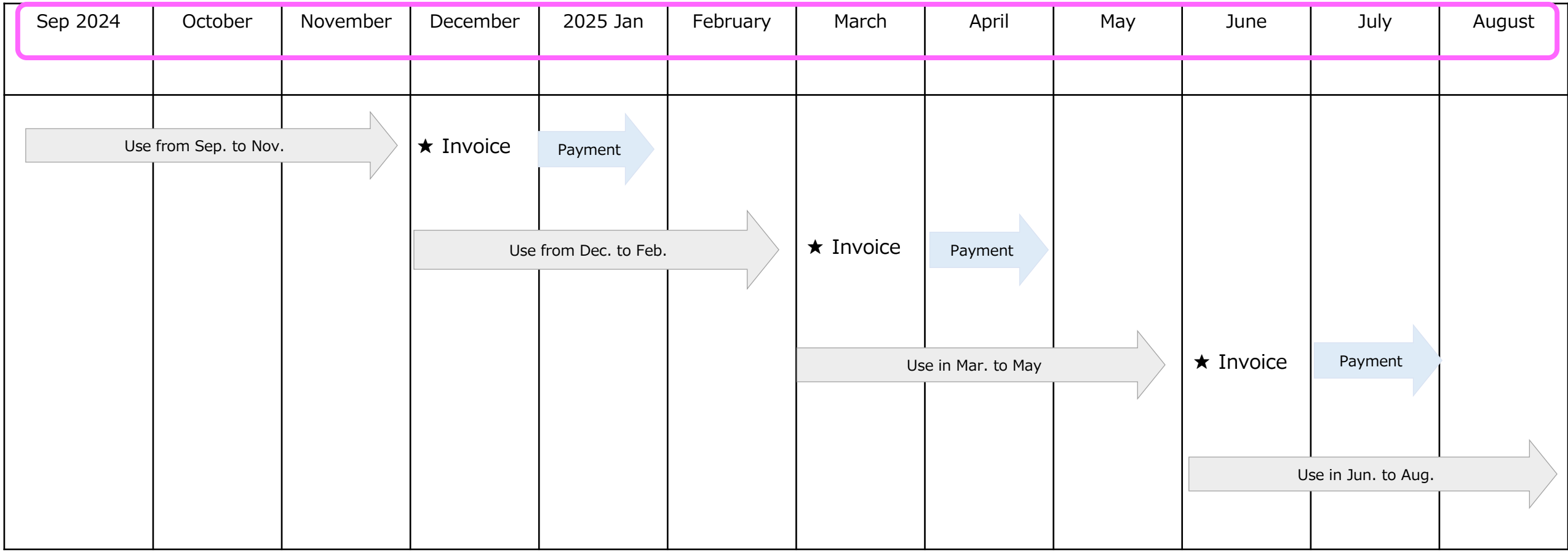
How to change the usage time setting



Allow charges only for usage hours and pre-configuration of usage hours

How to charge for “basic charge”

Timing: Charges are made four times a year (June, September, December, March)
Invoice Methods: Honda confirms the payment amount prior to the first month of the invoice, and Honda issues the invoice to the account at the end of the month of the invoice.
Payment: The counterparty makes payment within one month of receipt of the invoice.
Late Payment: If the late payment exceeds one (1) month, a late payment fee will be charged (the late payment fee will be charged at the next billing month).



For the basic charge, Honda will issue an invoice every three months and payment in the next month.

Agenda

Explanation :	70 mins
Q&A :	45 mins

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7	Closing speech	5	HRAP Funakoshi SMG

List of application-related documents

Classification			Deliverables	New contract		New Add user		Change											Means of submission		Submission Form			
								Delete User		Change Permissions		Shared plan												
												Change Office/Mail Option		Change number of user										
				Free	Charged	Free	Charged	Free	Charged	Free to Charged	Charged to Free	From Yes to None	From None to Yes	Add Non-Office/ Mail Option user	Add Office/ Mail Option user	Delete Non-Office/ Mail Option user	Delete Office/ Mail Option user	Change Assigned workstation	E-Mail	Send by Post	PDF	EXCEL	Original paper	Other
Per Company	Contract	1	Honda Cloud Development Environment License Agreement	●	●	-	-	-	-	-	-	-	-	-	-	-	-	-		○			○	
	Confidentiality	2	Confidentiality check sheet	●	●	-	-	-	-	-	-	-	-	-	-	-	-	-	○			○		
		3	Confirmation sheet of teleworking rules	●	●	-	-	-	-	-	-	-	-	-	-	-	-	-	○			○		
Per User	Development guest registration	4	Confidentiality Pledges for Developer GE	●	●	●	●	-	-	-	-	-	-	-	-	-	-	-	○	○	○		○	
	Cloud subscription	5	Public key (*.pub)	●	●	●	●	-	-	-	-	-	-	-	-	-	-	-	○					○
	Confidentiality	6	Confidential training record	●	●	●	●	-	-	-	-	-	-	-	-	-	-	-	○			○		
Other	Cloud subscription	7	Application for Digital Collaboration Environment User Registration	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	○		○	○		
	LICENSE	8	CATIA V6 authentication-key (*. LIC Files)	-	●	-	●	-	-	●	-	-	-	-	-	-	-	-	○					○
		9	Microsoft Licensing Info (Mail)	-	●	-	●	-	-	●	-	-	●	-	●	-	-	-	○					○
		10	Microsoft license deletion info (Mail)	-	-	-	-	-	●	-	●	●	-	-	-	-	●	●	○					○

[Send data to e-mail address]
HRAP Business Partner Digital Collaboration Help Desk
Telephone: 065-5076490, 065-5076567
HRAP_VMC_HELPDESK_SUPPLIER@honda.th.com

[Mailing address of original paper]
14 Surasak Rd, Silom, Bang Rak, Bangkok 10500
Asian Honda Motor Co., Ltd.
To : Kenji Aikawa

Application-related documents

Company registration

#1 License Agreement

Honda Cloud Development Environment License Agreement

THIS AGREEMENT (the "Agreement") is made and entered into as of the month day, 2024 by and between Honda Motor Co., Ltd., a corporate duly existing under the laws of Japan, having its principal office at 2-1-1 Minami-Aoyama, Minato-ku, Tokyo 107-8556 Japan (hereinafter referred to as "Honda") and [Licensee name] a corporate duly existing under the laws of [Country], having its registered office at [address](hereinafter referred to as "Licensee"),

WITNESSETH

WHEREAS, Honda has prepared the Software (as defined below) as a cloud development environment in order for Licensee's development and sharing information of parts, systems and/or other components for Honda products and Honda is ready for, and also has right and title to grant license of, providing such development environment for Licensee,

WHEREAS, Licensee is desirous of using such Software in accordance with the terms and conditions as described herein,

Contract agreement between Honda and supplier
How to get :
- Step1. Download from Sharepoint
- Step2. Supplier review the agreement
- Step3. If OK, Supplier provide the below
  - -Company name
  - -Address of company
  - -Information of Signer
- Step4. Honda will send document by post

How to submit :**Send Original paper by post**

#2 Confidentiality check sheet

Assessment Sheet for supplier's security rule
How to get : **Download from Sharepoint**
How to submit :**Send Excel file by e-mail**

#3 Confirmation sheet of teleworking rules

Assessment Sheet for supplier's security rule
How to get : **Download from Sharepoint**
How to submit :**Send Excel file by e-mail**

[Send data to e-mail address]	[**Mailing address of original paper**]
HRAP Business Partner Digital Collaboration Help Desk Telephone: 065-5076490, 065-5076567 HRAP_VMC_HELPDESK_SUPPLIER@honda.th.com	14 Surasak Rd, Silom, Bang Rak, Bangkok 10500 Asian Honda Motor Co., Ltd. To : Kenji Aikawa

Please submit above document per company at first time.

Application-related documents

User registration

#7
User Registration Form

Per User [Free and Charged]

#4
Confidentiality Pledges for Developer GE

#5
Public key (*.pub)

Charged plan only

#8
CATIA V6 authentication-key
(*. LIC Files)

#9
Microsoft Licensing Information

After joining confidential training

Per User [Free and Charged]

#6
Confidential training record

[Key Notes]

-#7 User Registration Form
Please get signature from the manager of HRAP designer before submitting

-#4 Confidentiality Pledges for Developer GE
Please attach a copy of ID card/Passport with sign

-#5 Public key
Please generate public key for each user
(*Please download manual to create the public key from Sharepoint)

-#8 CATIA V6 authentication-key, #9 Microsoft Licensing Information
Please get these information from Sales Agent

-#6 Confidential training record
After receiving user registration form, HRAP will hold confidential training.
Please join the training, then share the record to us.

-How to get #4/#7 form
Download from Sharepoint

-How to submit
Send original paper by post : #4
Send data by e-mail : #4, #5, #6, #7, #8, #9

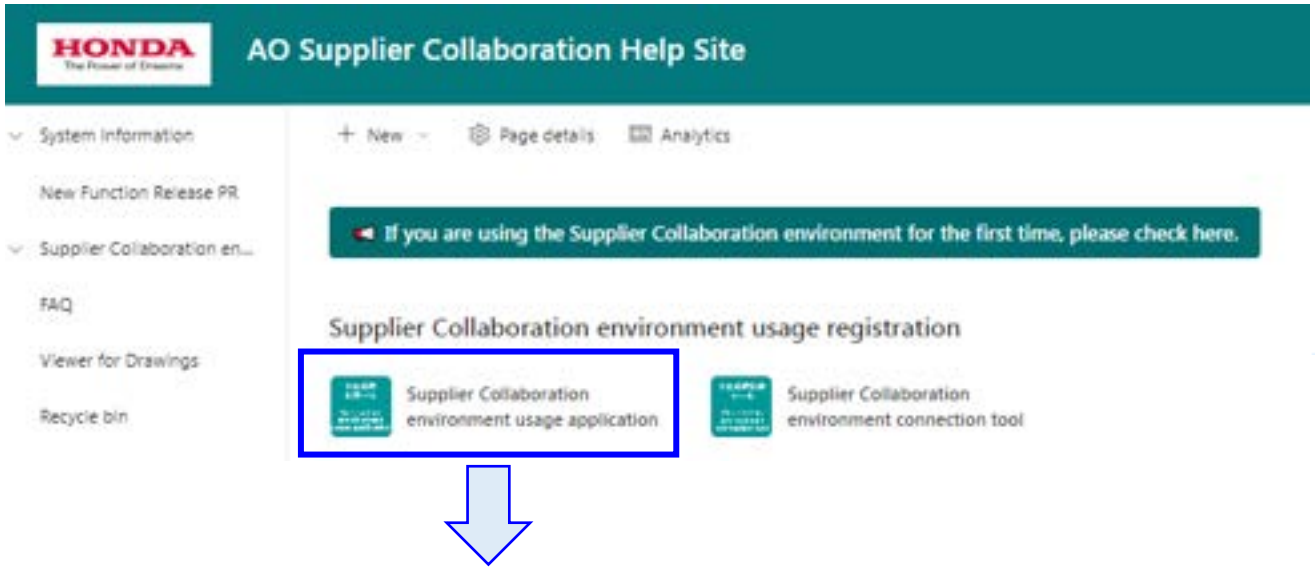
[Send data to e-mail address]	[Mailing address of original paper]
HRAP Business Partner Digital Collaboration Help Desk Telephone: 065-5076490, 065-5076567 HRAP_VMC_HELPDESK_SUPPLIER@honda.th.com	14 Surasak Rd, Silom, Bang Rak, Bangkok 10500 Asian Honda Motor Co., Ltd. To : Kenji Aikawa

Please submit above document per user.

Storage of application-related documents

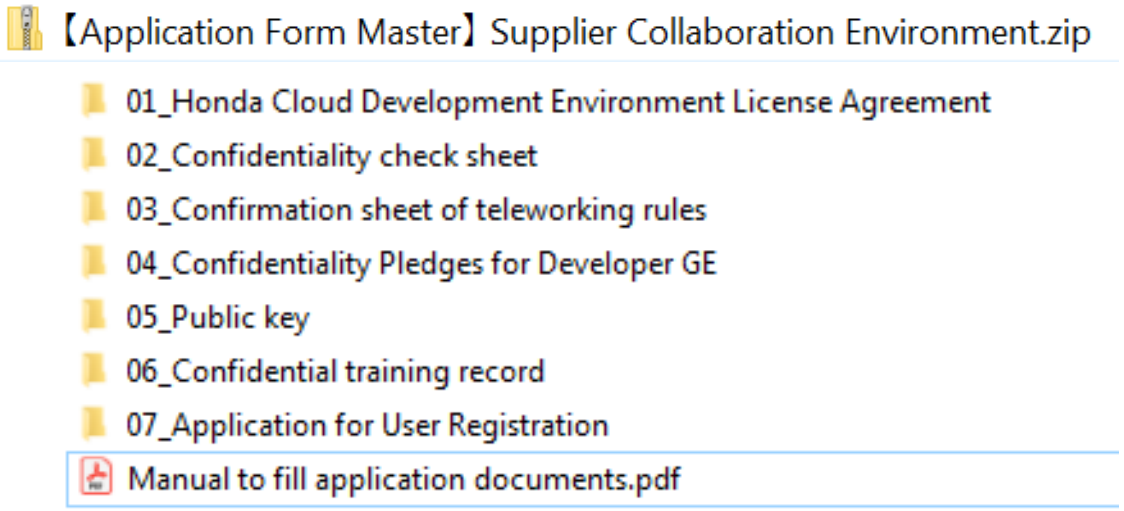
The contact person of the supplier should download various documents and share them within your company.

AO Supplier Collaboration Help Site (Link)



Contact Information: If the Help Site is not accessible

Please contact AO VMC Supplier Helpdesk
E-mail: HRAP_VMC_Helpdesk_Supplier@honda.th.com



Supplier Collaboration environment usage application

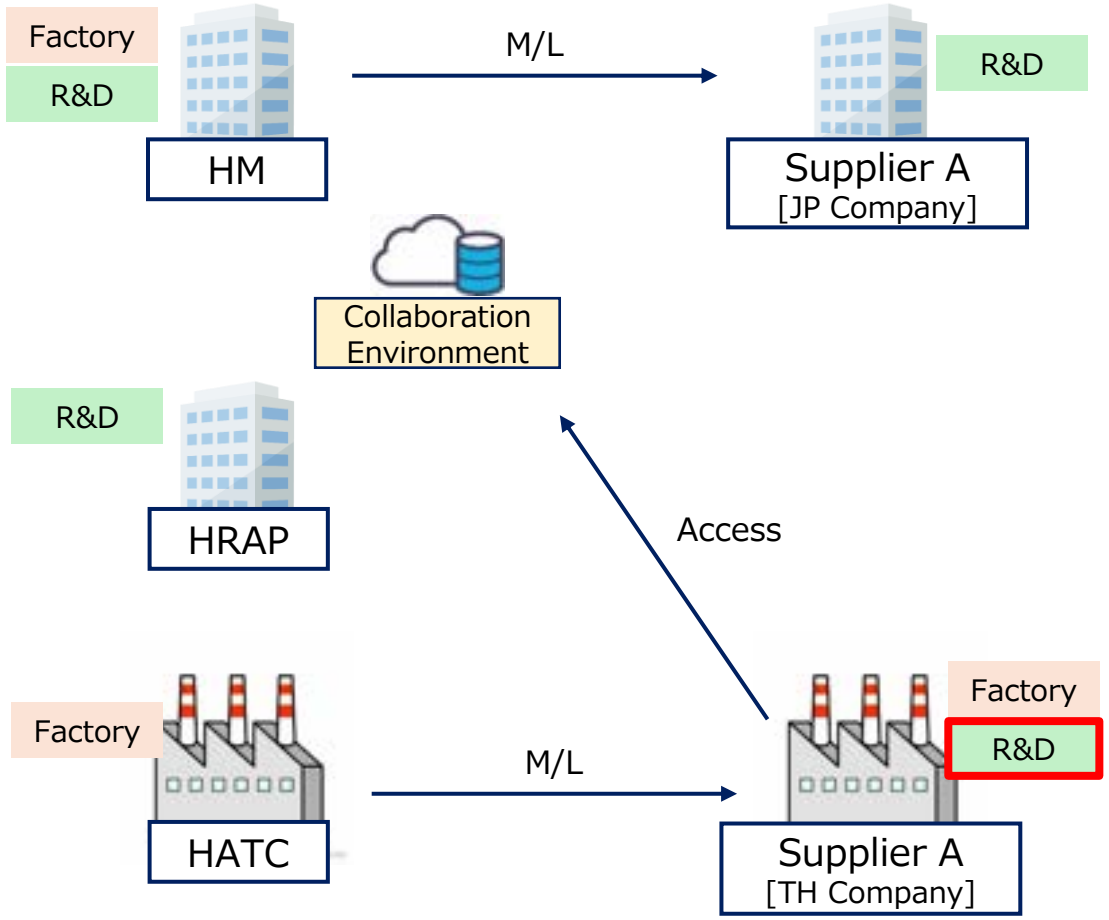
1.Complete application format

We will release a set of application document and application procedures for using the digital co-creation environment.

No	Title	Format	Link
01	【Application Form Master】Supplier Collaboration Environment Form	Zip	Download

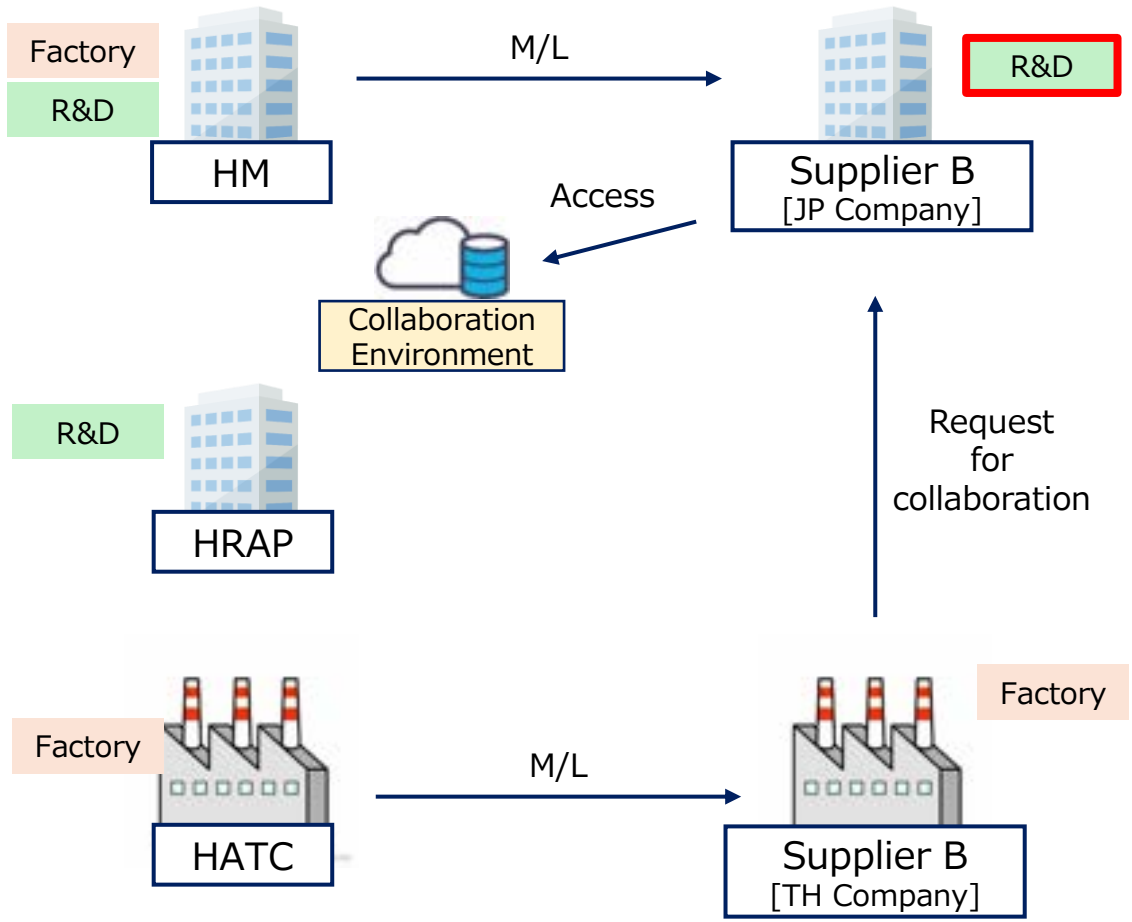
Case of usage for collaboration environment

Case) Supplier's R&D function in TH company



-Please submit application form by TH Company
-TH Company can use "free of charge" until 2 person depends on M/L

Case) Supplier's R&D function in JP company



-If JP Company already use the environment, **No need to submit application form**
-JP Company can use "Free of charge license" until 2 person depends on M/L

If your company has different case, Please consult with Helpdesk

Agenda

Explanation : 70 mins
Q&A : 45 mins

No.	Item	Time (Minutes)	Presenter
1	Opening speech ▪ Today's purpose	5	HRAP Funakoshi SMG
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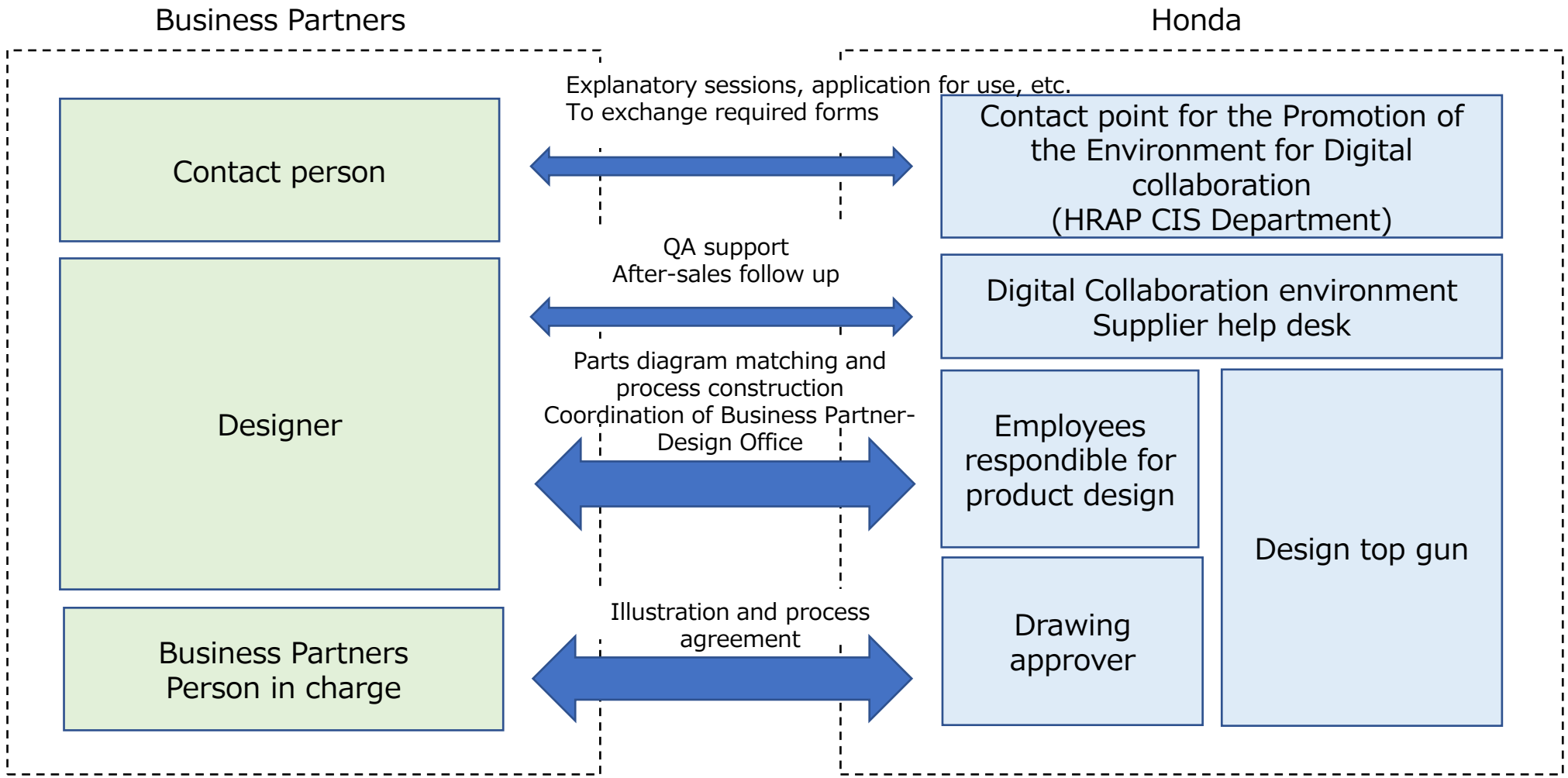
Implementation system



Provide illustration and agree on process building, including both management

About Honda-Digital Collaboration Environment Phase1&2

■Purpose

Prepare for practical application of CATIA V6 and Digital Collaboration Environment by suppliers and designers.

■Goals and methods

	Goal of practical application	How to proceed
Illustrated alignment	The prospect of drawing and drawing out of the applied part in CATIA V6 new drawing form shall be established.	Individual adjustment for each part between suppliers and Honda Design
Process matching	Between suppliers and HONDA designers, **Agreement has been reached on an implementation plan for parts development that does not require rework in accordance with the model schedule.**	

■Activities

Explanatory meeting

Sharing VMC measures and objectives
Confirmation of the system for planning the execution plan
Procedure and setup check

Tool learning

To understand the operation/mechanism in the training course for the actual machine or to learn about using materials disclosed to Resonance

Illustrated alignment

Consistent illustration of 3DA + attribution diagrams

There is a lot of Sections and par

Process alignment and execution planning

Create execution plan with digital schedule

Practical execution

Sections and parts with less rework

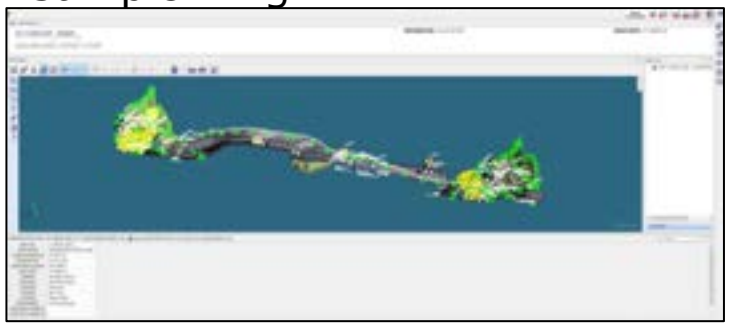
Preparing to use the Digital Collaboration Environment in actual operations

List of submissions ～Illustrated alignment～

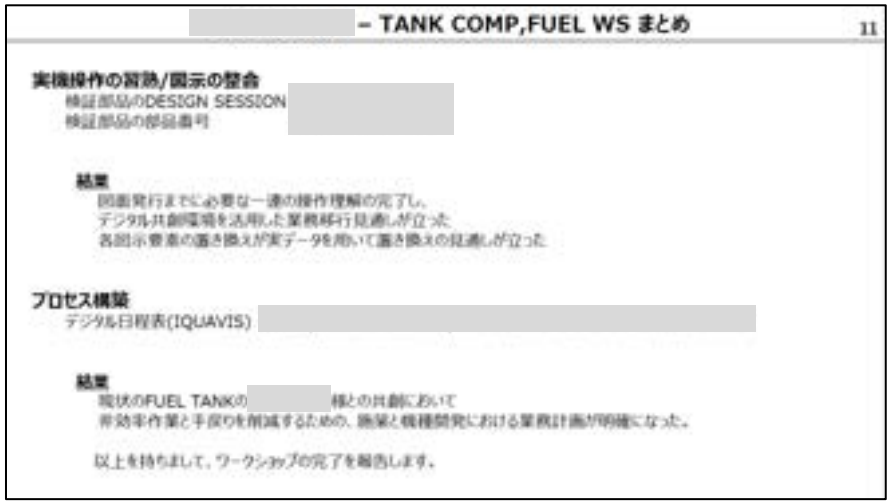
Application List of Illustrated instruction

分類	項目	備考	活用	作図予定日
部品管理情報	部品番号			
	部品名			
	部品構成			
	更新履			
	NOTE情			
	質			
	単発図			
	ソフトウェア			
3Dデータ種別	SOLID			
	SURFACE			
	ASSY/COMP			
図面種類	シングル図			
	A/U図			
	マルチ図			
部品特性	材質			
	熱処(種類/深度)			
	CHF（色・シボなど）	主に内外装のデザイン部品		
	HOLE(プレス・樹脂)	プレス・樹脂部品の穴指示		
	HOLE（締数）	締物部品の穴指示		
	MANUFACTURING DATA	樹脂部品/部品属性指示（主に内外装部品）		
	FLEX	検品（納入）時型とASSY完成車は形状が異なる部品		
図示要素	VIEW /ANNOTATION			
	SECTION/ANNOTATION			
	範囲の指示			
	3DC形状がない場合の指示			

Sample Dwg



Result & Conclusion



[redacted] – TANK COMP,FUEL WS まとめ 11

実機操作の習熟/図示の整合

検証部品のDESIGN SESSION [redacted]

検証部品の部品番号

結果

図面発行までに必要な一連の操作理解の完了し、
デジタル共創環境を活用した業務移行見通しが立った
各図示要素の置き換えが実データを用いて置き換えの見通しが立った

プロセス構築

デジタル日程表(IQUAVIS) [redacted]

結果

現状のFUEL TANKの [redacted] 様との共創において
非効率作業と手戻りを削減するための、開発と機種開発における業務計画が明確になった。

以上を持ちまして、ワークショップの完了を報告します。

Alignment sheet of Illustrated instruction

分類	項目	概述	確認	備考
	PART STRUCTURE		完了	
	SPEC図		完了	
	SET SHORT PARTS		完了	
	WORK'S ルール		完了	
	VIEW/SECTION/ANNOTATION CAPTURE		完了	
	対象		完了	
	質感		完了	
	HOLE		完了	
	CHF（色・シボなど）			対象外
	MANUFACTURING DATA			
	原価管理(MANAGEMENT INFO)		完了	
	BASIC SPEC		完了	
	FINISHING SYMBOL		完了	
	COMPOSITION PARTS		完了	
	NOTE/注記		完了	
	表示要素(TABLE)		完了	
	FLEX		完了	

Concern & C/M

[Supplier Part Name] 課題と対応 28

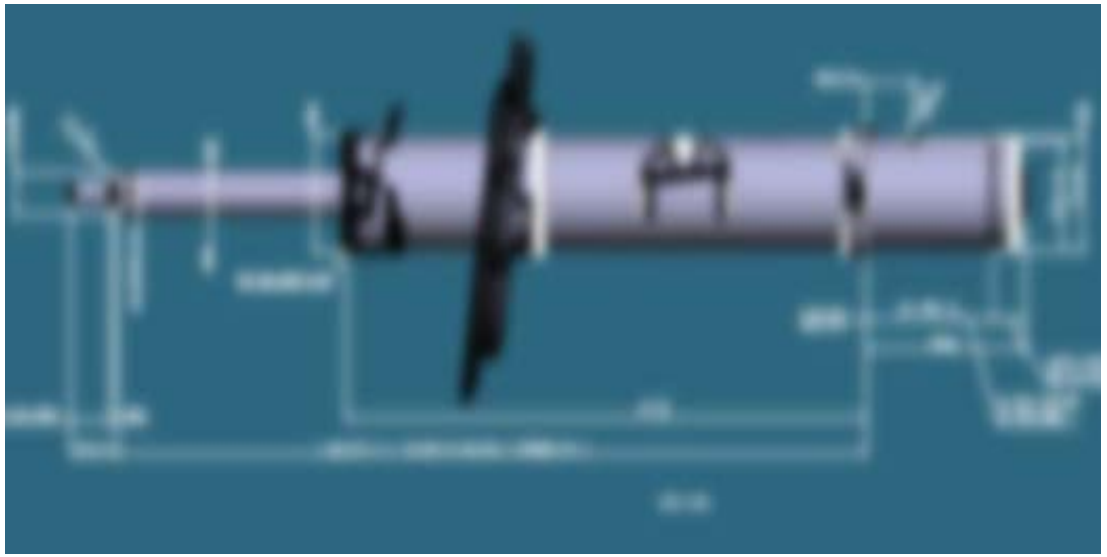
Parts	Detail	Answer / correspondence	Responsible	Term

If there are any remaining assignments, decide at the summary meeting who will complete the assignments by when and how to report on completion.

Illustrated alignment

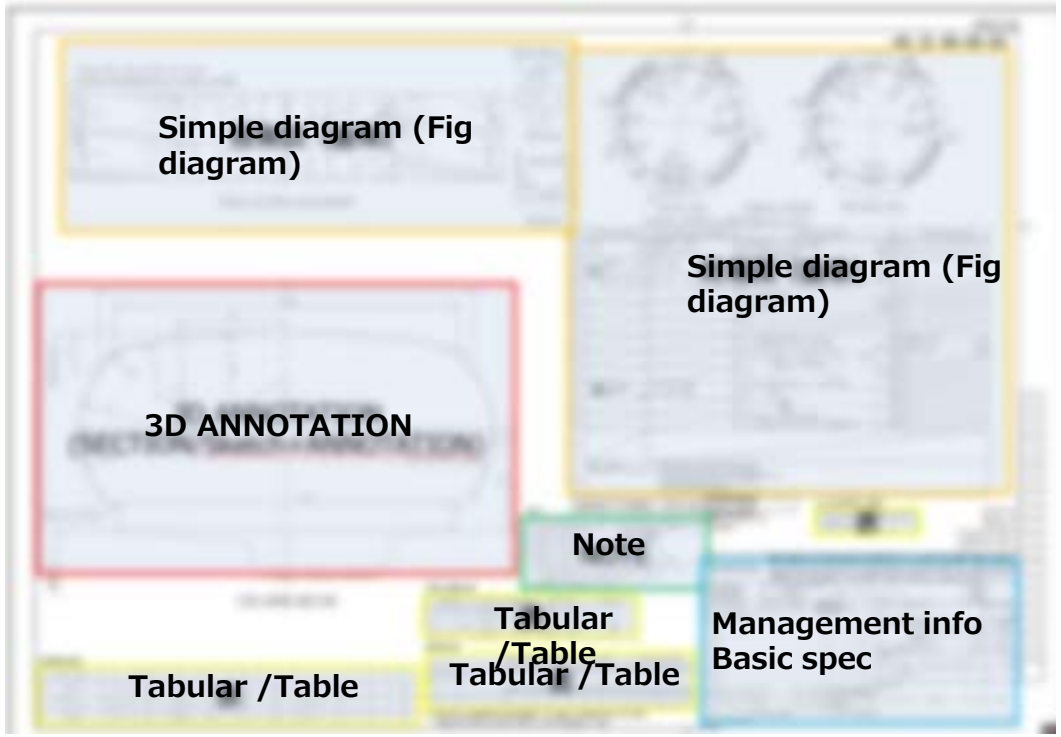
Goal of WS completion	Deliverables
The prospect of drawing and drawing out of the applied part in CATIA V6 new drawing form shall be established.	Graphical consistency result table Lot3 completion check sheet

■Procedure example ①



Drawing with actual parts and verification/matching

■Procedure example ②



With each drawing in a new form based on the current drawing
Match what elements are illustrated

Please submit the "Diagram Consistency Results Table" along with the completion confirmation sheet.

図示整合結果表

図示整合表

整合手順書として活用ください

SECTION	対象部品No	部品名	お取引先
F999	99999	SAMPLE. ASSY	VMC株式会社
お取引先担当者	HM設計担当者	整合完了日	Design Session
宇都宮三郎	芳賀四郎	2023’2/30	prd8888888888888888

自領域内の水平展開に活用ください

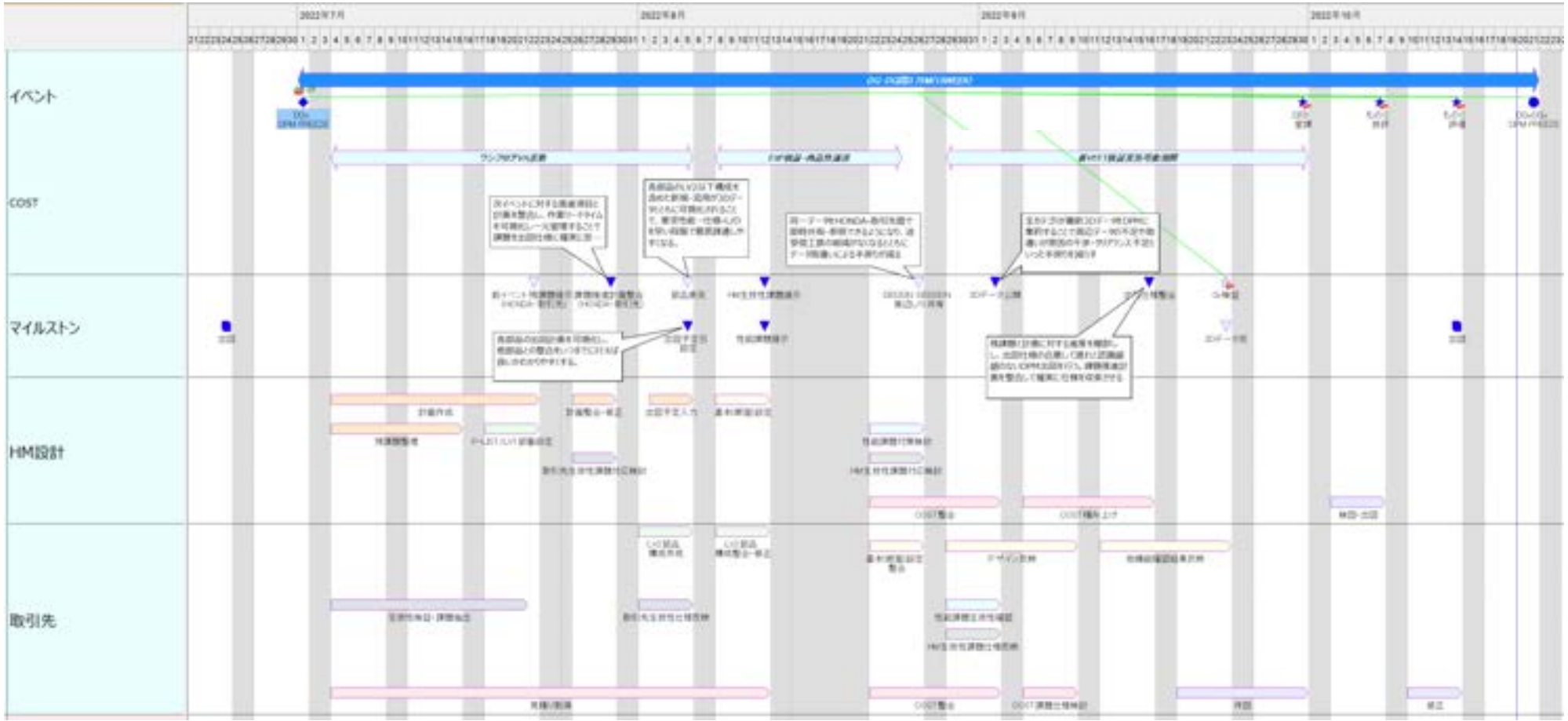
分類	項目	観点	結果	備考
部品構成関連	PART STRUCTURE	構成部番の粒度(部品,部材の構成)や、 部品番号、部品名、構成No.を整合出来たか？	完了	
	SPEC図	新図面形態に伴うSPECIFICATION(部品仕様書)図について、 追加・廃止・記載する内容の改訂について整合出来たか？	完了	
	SET SHORT PARTS	新図面形式でのSSP作成内容について双方で確認出来たか？	完了	
3D上の図示・属性指示（CAD指示項目）	WORKテンプレート	全ての構成部番に対し、どのWORKテンプレートを設定するか整合できたか？	完了	
	VIEW/SECTION/ANNOTATION /CAPTURE	従来の図面に記載されていた個々の寸法・注釈等の指示を 3DAおよび新しい図面形態でどのように図示するか整合できたか？	完了	
	材質	新図面形式での材質指示内容を双方で確認出来たか？	完了	
		新規材 ？	完了	
	接合	接着/	完了	
	HOLE	穴属性	完了	
	CMF（色・シボなど）	色・シボ情報などの属性情報指示方法は整合できたか？(主に内外装のデザイン部品)	無	
	MANUFACTURING DATA	樹脂部品の属性指示方法は整合できたか？（主に内外装部品）	了	
標題欄・構成欄・NOTE等(EDITOR指示項目)	表題欄(MANAGEMENT INFO)	MANAGEMENT INFOでの図示内容を双方で確認出来たか？	完了	
	BASIC SPEC	BASIC SPEC図示内容について双方で確認出来たか？	完了	本型品までのWt集計方法は都度整合
	FINISHING SYMBOL	FINISHING SYMBOL図示内容について双方で確認出来たか？	完了	
	COMPOSITION PARTS	COMPOSITION PARTSで記載する内容を双方で確認出来たか？	完了	REMARKS記載内容は室課図面ルールにのっとる
	NOTE,FIG図	NOTE欄およびFIG図の図示内容について整合できたか？	完了	
	表の表現(TABLE)	表を使った図示表現の要否について整合出来たか？	完了	
		表が必要となった場合図示の内容について整合出来たか？	完了	
その他部品特性	FLEX	単品（納入）状態とASSY(完成車)状態で、 形状が異なる部品(ハーネス,ケーブル,潰し設定部品等)の指示方法は整合できたか？	無	

Example

Alignment of Collaboration processes

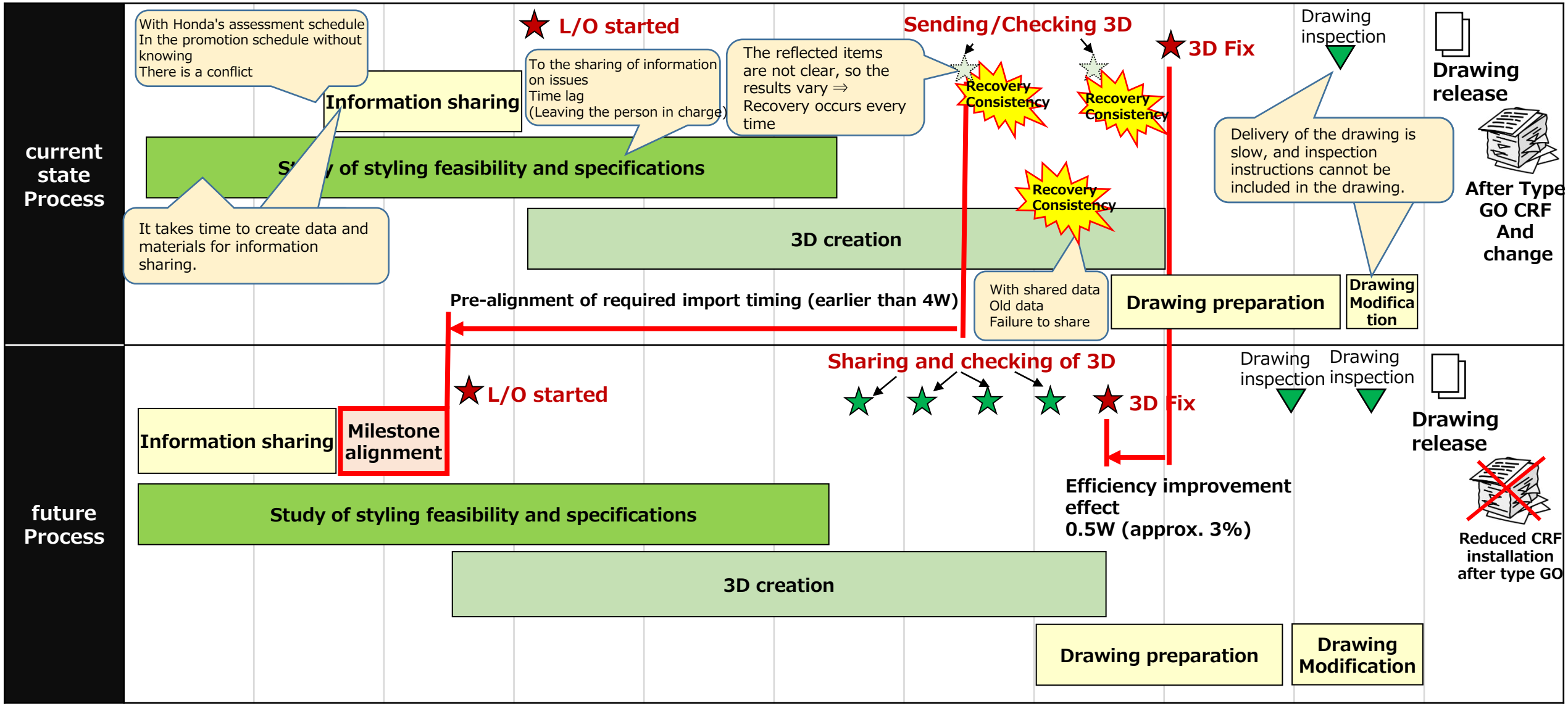
Goal of WS completion	Deliverables
On a newly developed flow and parts development without rework that conforms to the applicable model schedule The execution plan is prepared and consistent with the business partner.	Specific Implementation Plans for New Development (IQUAVIS) Specific and Quantitative Approaches and Prospects of Effects

■ Deliverables (Item Plan)



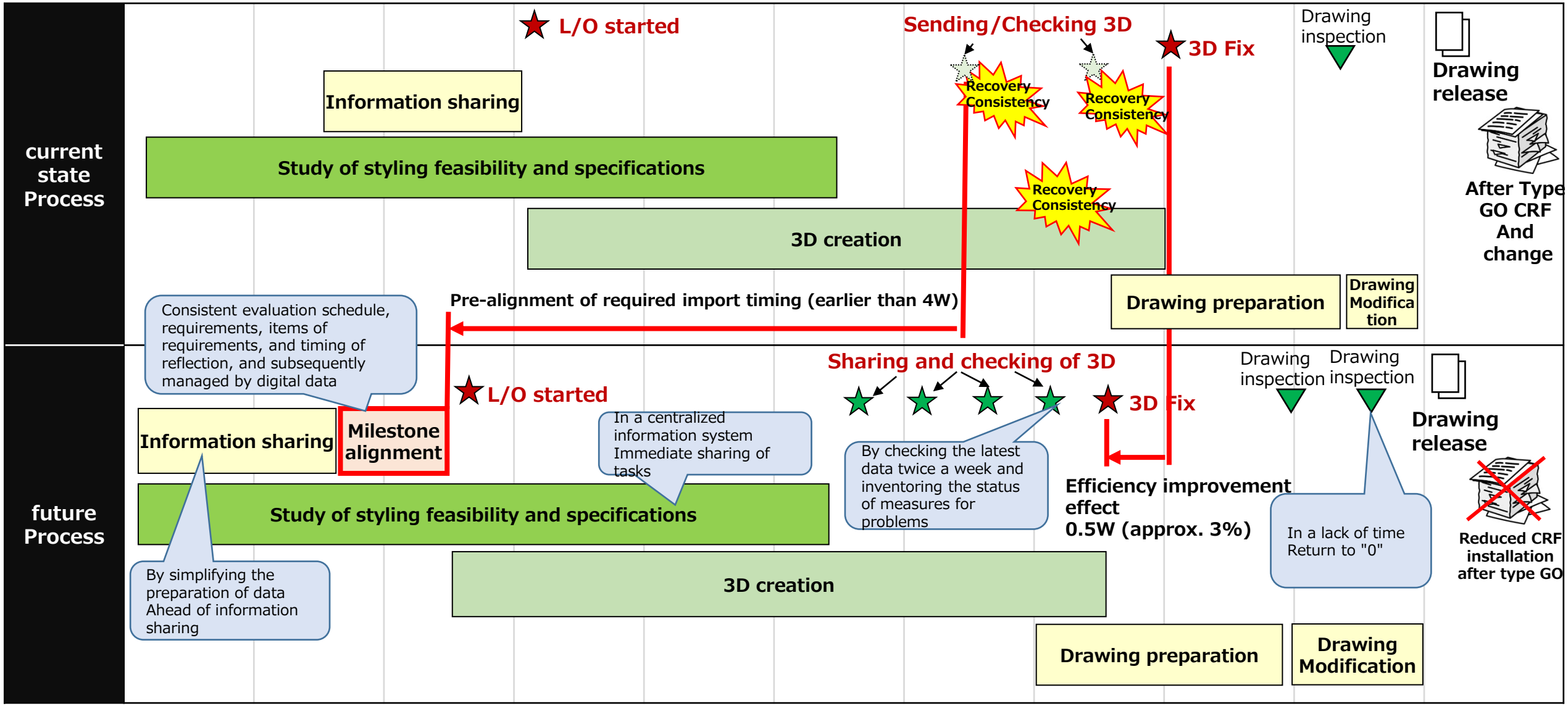
Collaborate with HM designers to digitally schedule IQUAVIS)』URL on a completion checklist

Point of Collaboration process alignment



Specification of each other's requirements and requirements, and clarification of timing of reflection

Point of Collaboration process alignment

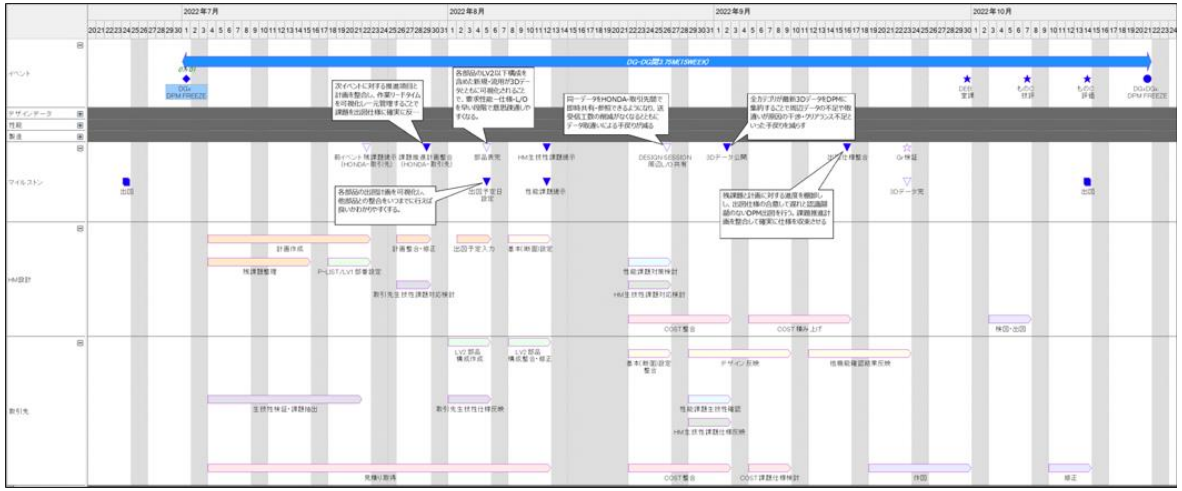


Specification of each other's requirements and requirements, and clarification of timing of reflection

List of submissions ～Process matching～

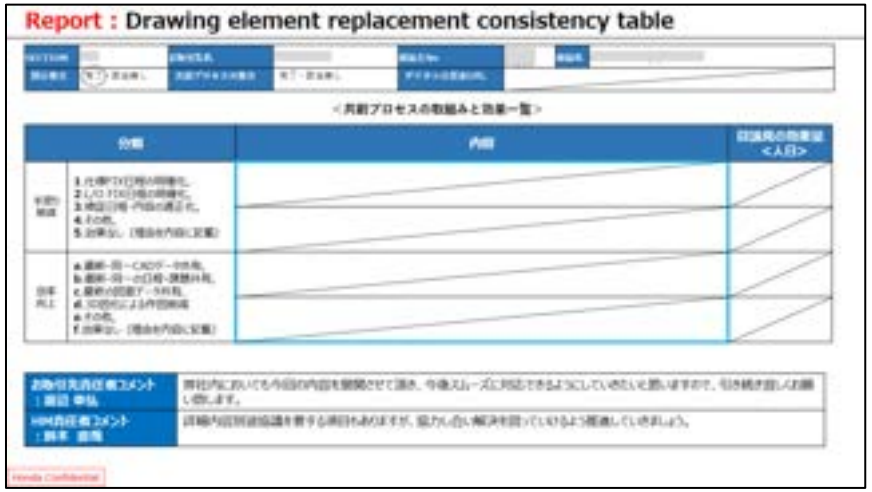
Confirm concern and ideal target

Digital calendar that reflects Collaboration work processes



Initiatives for xxxx of xxxx (~ Quantitative Target)

Completion check sheet



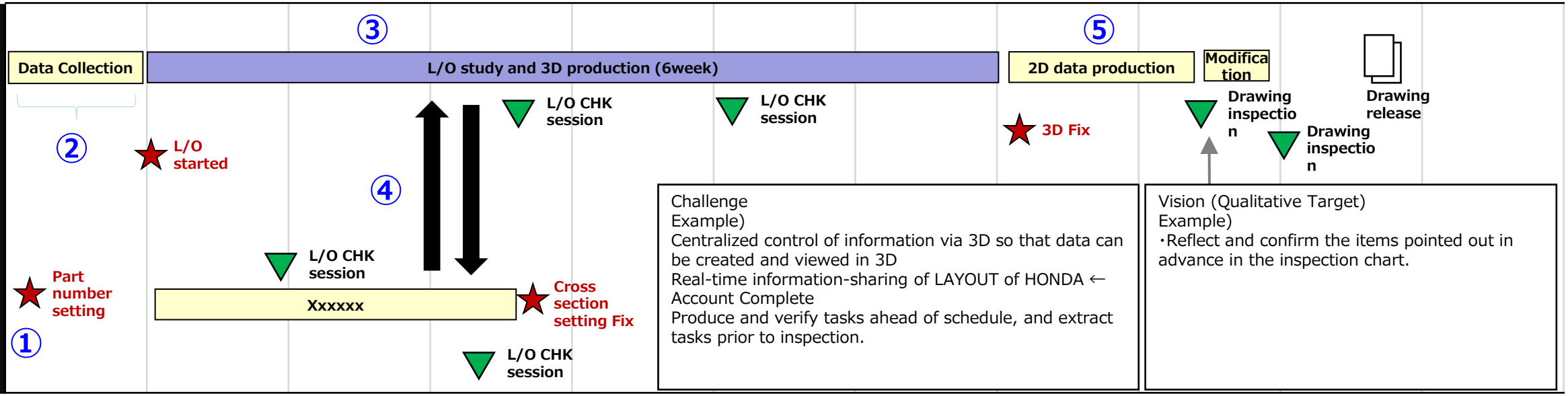
Initiatives for xxxx of xxxx (~ Quantitative Target)

	Job classification	Initiatives	VMC provision measures/functions	Eligibility	DGx	DGx
1	Bill of materials construction	Decide on the concept based on the required performance, build a bill of materials including LV2 below at the specification construction stage, and send out the intention to "what will be diverted and which will be the new schedule". Confirm the specifications at an early stage without any discrepancy in the recognition.	K6 P-LIST PART STRUCTURE			
2	Establishment of specs and creation of 3D	By utilizing the Collaboration environment to share data, including data on peripheral components, and by sharing the latest data at all times with no time lag in transmission and reception, we prevent inconsistencies in L/O	Digital Collaboration environment			
3	Establishment of specs and creation of 3D	**Build high-quality 3D data early by templating and standardizing 3D data settings**				
4	L/O checking	Extract items that have been checked at the time of conventional inspection by L/O checking with the help of experts as soon as possible to reflect specifications.				
5	Drawing and inspection	**Reduce drawing man-hours by eliminating the conventional 2D instruction through 3D drawing**	Drawing of 3DA + A			

Be no longer a DG
It may be an expression.
Also when xx year becomes xx month.
(Goal setting is decided in W/S)

Be no longer a DG
It may be an expression.
Also when xx year becomes xx month.
(Goal setting is decided in W/S)

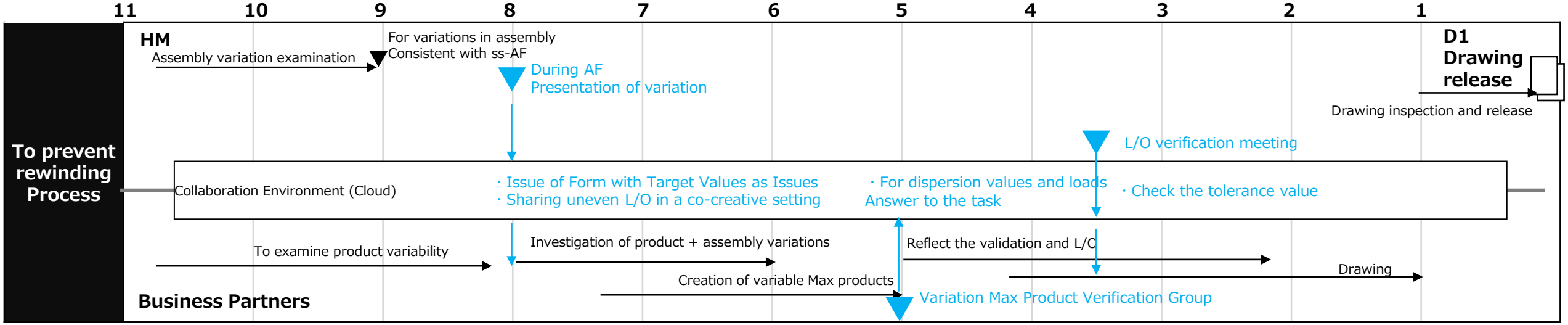
In the future Process



Working on XXXX using digital tools and demonstrating the process of reducing rework

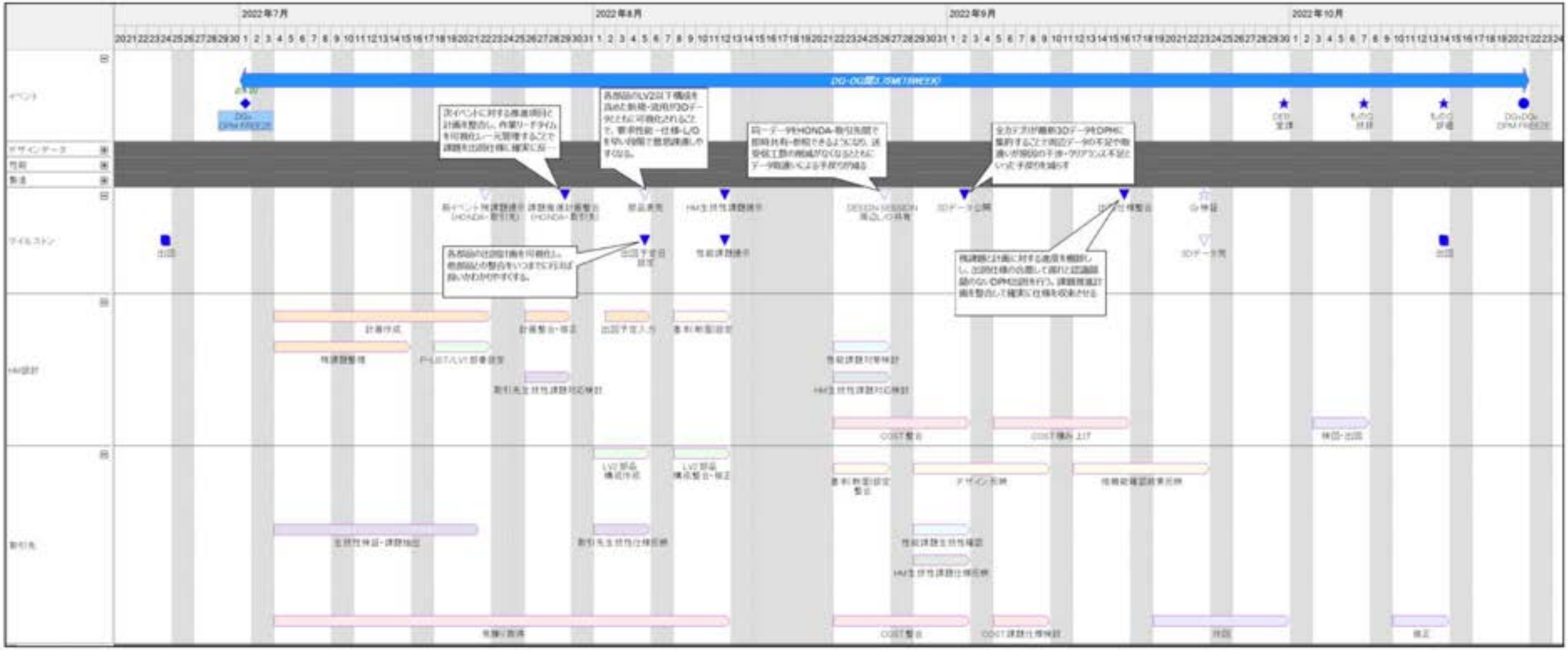
Joint Creation Process Alignment Initiatives and Prospects of Effects

Requirements and requirements	Rework prevention process				
		About what	When	By whom	In any way
Mechanism operating load (**N) or less, including component tolerances and variations during AF assembly	**Presentation**	Presentation of variations during AF	**Month ** date D1 diagram 8 weeks ago	HM	・Execute the task by AHEAD and present the target value (variation and load). ・Create a variation L/O and register it in the Collaboration environment.
	Verification	In a variable Max product Load measurement	**Month ** date D1 Chart 3.5 Weeks ago	Company X	・Prepare a sample of variation max and set a joint confirmation session. ・Clarify the settings of the above example and the assumed tolerances and respond to AHEAD issues.
	Check	Tolerance value	**Month ** date 2 weeks prior to D1 chart	HM	・In the tolerance setting at the time of L/O checking as the consistent value of the confirmation meeting Verify on 3D that they are the same
	Presentation				
	Verification				
	Check				



Execute preliminary arrangement of key-point processes when planning an action plan (i QUAVIS)

Digital calendar that reflects Collaboration work processes



Work on XX using digital tools and demonstrate the process of reducing rework

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Completion check sheet

SECTION	F999	Name of customer	VMC Corporation	Component main No	99999	Part name	SAMPLE. ASSY
Illustrated alignment	(Completed), N/A	Alignment of Collaboration processes	(Completed), N/A	Digital scheduling URL	Iquavis://main/show?ProjectId=1ebdd072-59ff-4fe1-b5de-6f8d0c9cbb7b		

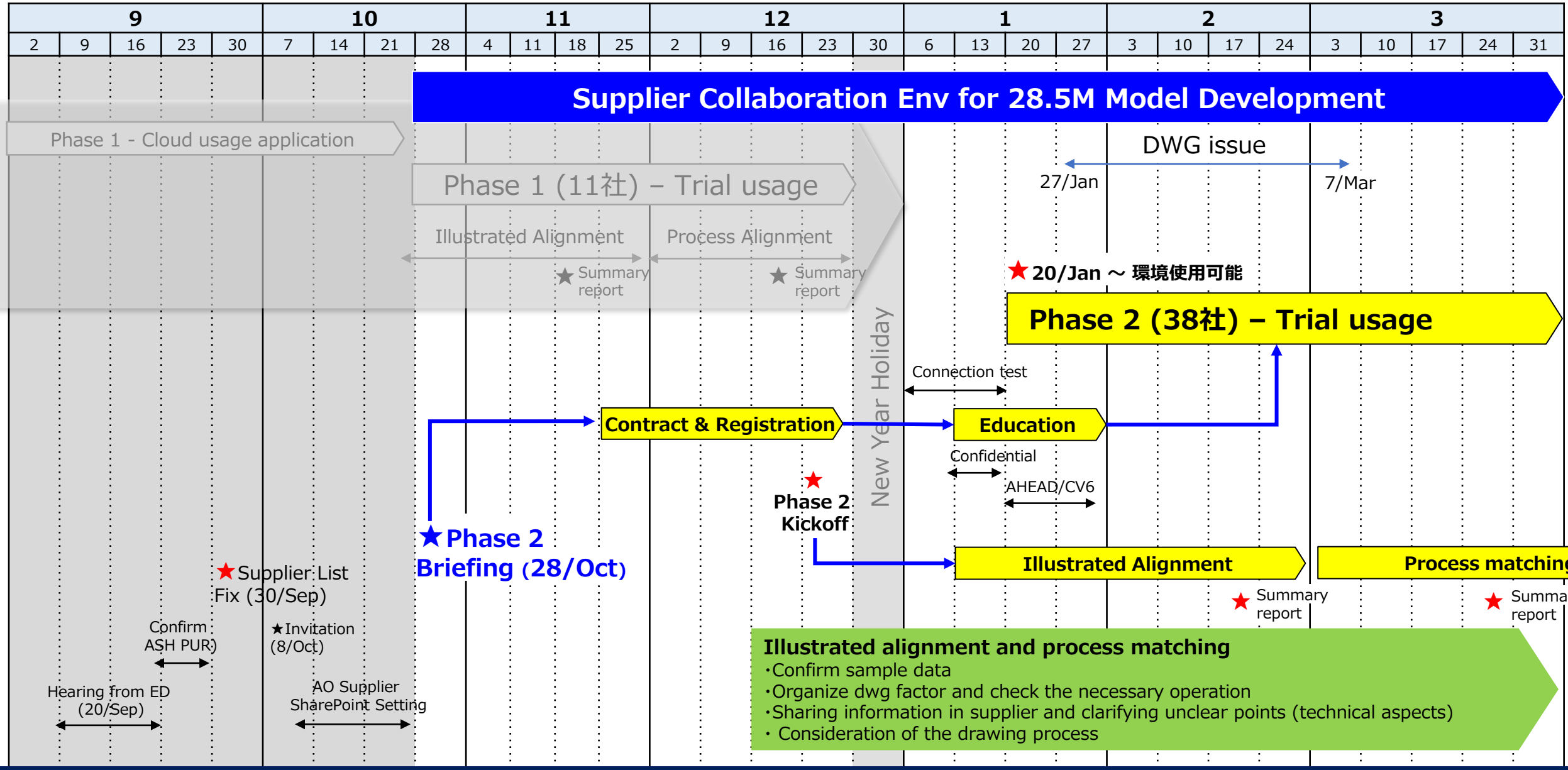
<Initiatives and Effects of Collaboration Process>

Classification		Description	Prospective effect <Person-day>
Rework to reduce	**1. Clarification of the spec FIX schedule, 2. Clarification of L/O FIX schedule, 3. Optimization of verification schedules and contents, 4. Others 5. No effect (The reason is described in the content.)**	By not changing peripheral L/O hardware such as component layout and colliding hardware, Prevent rework of biometric reflection	1.5
		Compone ed in the initial stage of development, so developm	3
Efficiency Improvement	**a. Sharing the most recent and same CAD, b. Sharing the latest and same schedules and issues, c. Sharing the latest drawing data, Reduced drawing by d.3D plotting e. Others f. No effect (The reason is described in the content.)**	By working on a schedule while sharing the newest L/O and issues with each other Can efficiently reflect production skills	2

Example

Contact Comments : Taro tochigi	Thanks for the process alignment. Now that development issues and responses related to production skills have been materialized and their effectiveness has been clarified, we will ensure that planning is carried out in the model ***.
Comments from HM Manager : Jiro honda	Thanks for your understanding and cooperation in our efforts to improve efficiency. We believe it is essential to reflect this plan in development and products, so we request your cooperation in practice as well.

Deployment plan – Phase 2



Please cooperate with HRAP designer for Illustrated alignment and process matching from Jan'24

Agenda

Explanation : 70 mins
Q&A : 45 mins

No.	Item	Time (Minutes)	Presenter
1	Opening speech ▪ Today's purpose	5	HRAP Funakoshi SMG
2	Outline of Honda initiatives ▪ Evolution of Honda's development-process and key measures Business Partner Collaboration Initiatives ▪ Vision for Joint Creation with Business Partners ▪ Collaboration environment evolution	20	HRAP CIS Attawit
3	Environment cost and system configuration Administrative Procedures for Starting Use of the environment	20	ASH IT Aikawa
4	Methods for Applying CATIA V6 Practices Deployment plan	20	HRAP Funakoshi SMG
5	Summary	5	ASH IT Aikawa
6	Q&A	45	ASH/HRAP/HM ALL
7	Closing speech	5	HRAP Funakoshi SMG

Today's summary

■Today's purpose

Supplier Collaboration project will be started from trial phase.
Honda will provide one free user for each company as trial phase before submitting M/L.

■Request

Category	Task	Due date
License Agreement(#1)	Please review the agreement. If supplier can accept the agreement, please inform below information to "HRAP VMC Supplier Helpdesk" 1. Company name 2. Address of company 3. Information of Signer	Nov 08th
	Once you receive document, please sign and submit it by post.	Nov 25th
Check sheet for company(#2,3)	Please fill in the form and submit Excel file by e-mail	Nov 25th
Confidentiality form(#4)	Please fill in the form and submit document by post, and submit PDF file by e-mail	Nov 25th
Public key (#5)	Please create public key and submit data by e-mail	Nov 25th
User Application form(#7)	Please fill in the form and get signature from the manager of HRAP designer. Then submit Excel and PDF by e-mail	Nov 25th

[Send data to e-mail address]
HRAP Business Partner Digital Collaboration Help Desk
Telephone: 065-5076490, 065-5076567
HRAP_VMC_HELPDESK_SUPPLIER@honda.th.com

[Mailing address of original paper]
14 Surasak Rd, Silom, Bang Rak, Bangkok 10500
Asian Honda Motor Co., Ltd.
To : Kenji Aikawa

■Download document

The contact person of the supplier can download documents from our site (Link)

Agenda

Explanation : 70 mins
Q&A : 45 mins

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7	Closing speech	5	HRAP Funakoshi SMG

Q&A

I'm sorry, but due to time limitations, this question is related to "Today's explanation".

If you have any questions, please raise your hand.

Inquiry window :

Supplier Digital Collaboration Helpdesk

E-mail :	HRAP_VMC_Helpdesk_Supplier@honda.th.com
Phone number :	065-5076490, 065-5076567
Business hours :	08:00-12:00, 13:00-17:00
Language :	Thai & English

Agenda

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Q&A : 45 mins

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We have built a digital collaboration environment (CATIA V6+Cloud) for manufacturer drawings to strengthen Collaboration with our business partners.

In the future, in order to develop HRAP models, we will need to deliver drawings using CATIA V6 and have manufacturers draw the drawings at our suppliers using the cloud. We ask for the cooperation of our business partners in implementing this system.

We ask for your cooperation in coordinating the phased introduction between our design department and our business partners.

Finally, I would like to ask our business partners for their continued understanding and cooperation as we strive to realize "strong manufacturing" that will lead to Honda's growth and evolution. Please.

Thank you very much for today.

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The Power of Dreams

How we move you.
CREATE ▸ TRANSCEND, AUGMENT