GALIA DAY 2025

Demand and Capacity Management

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Demand and Capacity Management

Alias “Collaborative Forecasting”

GALIA Demand & Capacity Management workgroup

Workgroup planning

2021

- GALIA 2021 Collaborative Forecasting workgroup

2024

- Share existing difficulties between customers and suppliers (OEM, T1, Tn…)
- Study improvements (DCM internal process, exchange of data, communication and supporting means, …)
- Analyse CATENA-X DCM use case (e.g. Multiple tier forecasting…)

2025

- Reflect on implementation plan

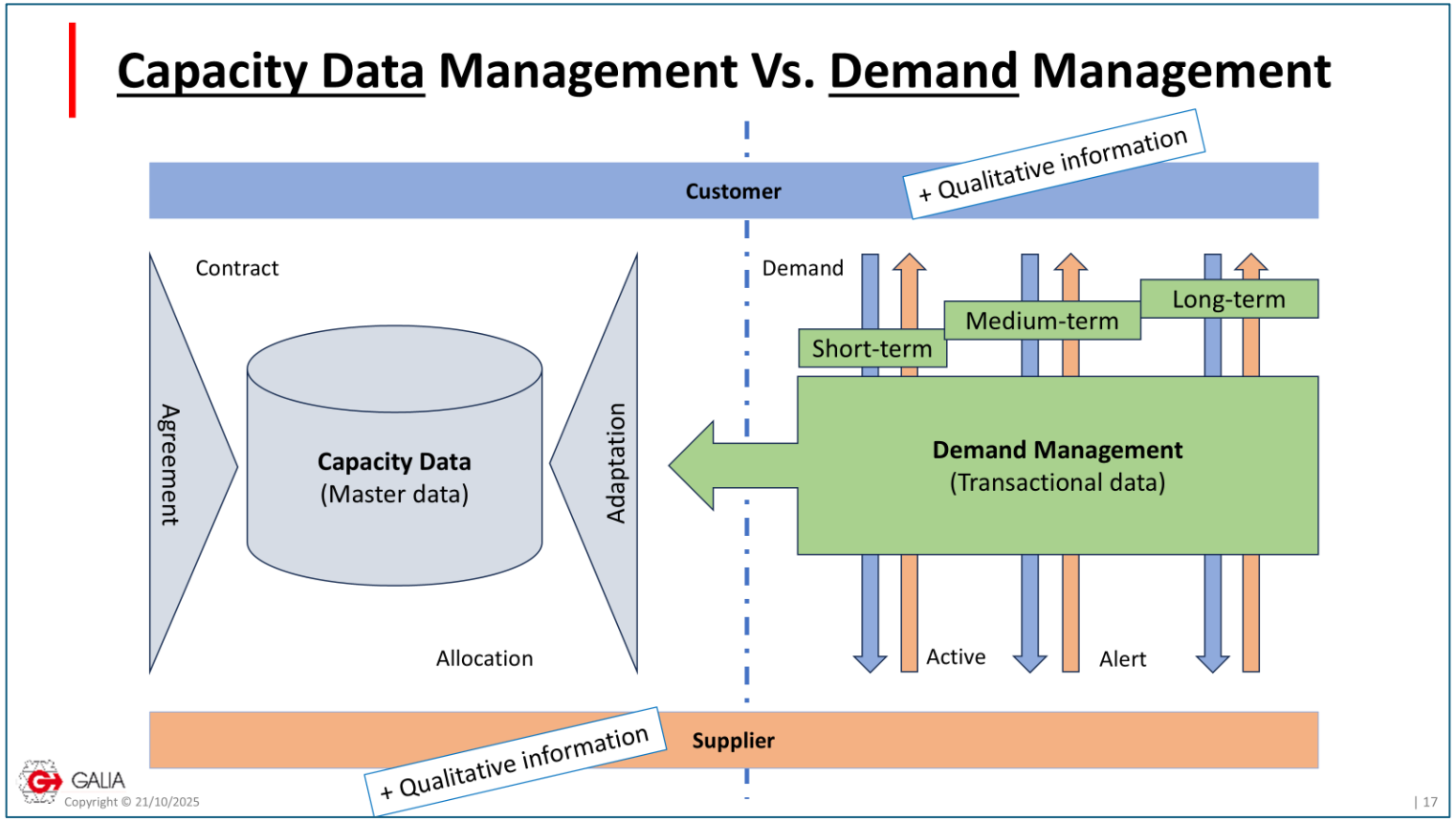
- **Links with** Catena-X Your Automotive Network

GALIA Demand & Capacity Management workgroup

Thanks to the workgroup contributors

GALIA Demand & Capacity Management workgroup

Key takeaways (1/3) ➔ Capacity Data Management is key



- Demand Management and Capacity Data Management are 2 sides of the same coin that must not be confused
- Capacity adaptation must comply with the “tunnel of uncertainty” when managing longer forecast horizons

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Key takeaways (2/3) ➔ The supply chain partners must adhere to some “Golden Rules”

Demand & Capacity Management:
Fundamental Structuring Principles (1/2)

1. DCM processes create the conditions for the SC partners to invest efficiently in their resources, to manufacture products in a competitive manner, and to **meet proactively the Demand** from customers.
2. SC partners manage Demand & Capacity processes, during the **full lifecycle of the product ,** insuring continuity from project phase up to end-of-life.
3. SC partners **formally share, agree and manage all the required Capacity Data** such as: Reference Capacity, Extra Capacity, Capacity Step, etc., associated with the lead times, durations and other informative data involved.
4. Demand Management must strive to **elaborate and transmit realistic volumes** to the suppliers on the longest possible/agreed horizon, by considering the known business context at the time.
5. A Supplier who receives the Demand from its Customer, **relays it to the sub-suppliers in a similar horizon**. The current situation may require that some of the SC partners extend data on a minimal target horizon of 18 months.
6. SC partners must cope with an **evolving business** and make their best to adapt industrial answers when the Demand calls for an increase of volumes, considering the **best balance between agility and stability, risks and costs**. Volumes continuously going down are also a concern.
7. In complement of the Demand and Capacity data, the SC partners share **all the useful qualitative information** which favour a clear understanding of the business requirements and enable to implement the most efficient response.

- Collaboration
- Responsibilities
- Pragmatic
- Discipline

Demand & Capacity Management:
Fundamental Structuring Principles (2/2)

8. **Short Term Horizon** (e.g. up to 4 to 6 weeks before Execution): This horizon fine tunes the industrial preparation and guarantees Production will meet the requirements.
   - Demand is communicated by the Customer to its Suppliers **by EDI messages at Part Reference number**, which must **conform to agreed Capacity limits**, due to largely engaged industrial preparation.
   - Customers strive to limit variations in their forecasts and **Suppliers are committed** to prepare Execution according to the requirements in the Demand.
   - **Crisis management**: if a major issue occurs (External cause, key machine breakdown…), leading to a crisis situation, then the SC partners put all their efforts into managing the situation in common and reverting to normal operations as quickly as possible.
9. **Medium Term Horizon** (e.g. up to 1 year before Execution): This horizon is key to detect and process Capacity limitations for most industrial technologies. When anticipated, it enables significant working schedule adaptations.
   - Demand is communicated by the Customer to its Suppliers **by EDI messages at Part Reference number**. These data are **the reference** for industrial preparation.
   - When the Demand is processed, the Customer may detect limiting Capacity constraints. In this case a Targeted Capacity Enquiry will engage the concerned Suppliers in a Capacity Adaptation plan, leading to an Increased Capacity after an agreement on the application date. Demand data should conform with the action plan.
   - Any Supplier who receives a Demand exceeding the agreed Capacity level **must alert** the Customer.
   - When **difficulties** occur (Not matching the Capacity, risk of not meeting Demand…), the SC partners organize a reactivity loop to share their risk analysis, feedback and action plans, in a timely manner.
10. **Long Term Horizon** (e.g. up to 2 years before Execution): This Horizon is important to anticipate investments or long lead time and tier N material reservations.
    - It is recognized best practice to use **EDI messages at Part Reference number** to communicate the requirements. In parallel, **Capacity Adaptation plans** may be supported by other communication means between the SC Partners. For example, OEM forecasts established at vehicle data level are beneficial to all the SC partners.
    - SC Partners must bear with a high level of uncertainty, due to sales forecasts, provisional BOM… Nevertheless, the SC Partners must use these data **to communicate and process alerts**.

- ST, MT, LT Horizons management

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Key takeaways (3/3) ➔ A detailed analysis of the Catena-X DCM standards

- **Goal** (Bottleneck management)
- **Philosophy** (Collaboration; tool)
- **Processes involved** (Demand Management; Capacity Management; forecasting)
- **Data** (Capacity levels; Capacity Grouping; Supplier Delta Production; Load Factor + Unit of Measures; Comments)
- **Alerting process** (Alerts)
- **Utilisation** (Supplier response; Successive iteration of the Demand; End-to-end; Workload)
- **Performance metrics** (Demand Volatility metrics)
- **Deployment** (Implementation; Scope)

We must give it a try

- Pros & Cons
- Beware “Won’t solve everything”
- Real opportunities down the lower tiers of the SC

Catena-X DCM use case analysis

Theme	Key word	Plus	Minus	Comment
Goal	Capacity Management	Detect upcoming capacity bottlenecks		
Philosophy	Collaboration	Facilitate communication between customers and suppliers with a closing of the loop		
	Tool	Propose standard tools to the supply chain partners (3 certified tools are already available)	Could take long to deploy, if Catena-X does not cover all planning functionalities, or in case of partial overlap with existing processes	Shouldn't this tool target as a priority the lower levels of the SC which lack existing structured tools?
Processes involved	Demand Management	Can be based on mirror data from EDI DELFOR messages (avoids discrepancies between 2 sets of data)	Not as frequent as EDI DELFOR messages (weekly updates), which are used to prepare execution of supplier production and supplies	Is not a complete Demand Management tool
	Capacity Management	Detect upcoming capacity bottlenecks	Not a tool to manage capacity evolutions / action plans, which require more than just additional comments (e.g. need for a Capacity Reference database, additional data for simulations, contractual data, action plans monitoring, workflows status, cost impacts...)	Still tributary to the quality of the input data (Customer Demand or capacity levels) and decision making in the supply chain (S&OP arbitrations...).
	Forecasting		Outside of Parts Reference data, other aggregated data can be shared with Catena-X, as long as Customer and Supplier understand each other. Is this a possibility that could be standardised for the supply chain to manage commonly structured data coming from multiple OEM?	There is a need expressed by (T1..Tn) suppliers to collect vehicle aggregated data from the OEMs (e.g. by family, trim, engine, etc...). No satisfactory structured tool in existence today. Could Catena-X offer a proper means to distribute OEM aggregated data down the supply chain?
Data	Capacity levels	Actual, Maximum and Agreed Capacity are sufficient for day-to-day monitoring of capacities when no capacity investment are at stake	To action capacity evolutions, many other data are required : Capacity Step, Implementation leadtime, Duration for Maximum Capacity, costs, ...	These additional data can also be needed for customer internal simulations
			This implies that customer specific portals will remain in use	
	Capacity Grouping	Capacity Group feature is key to manage/update capacities between the SC partners.		Capacity Groups are currently not well managed between the SC partners.
	Supplier Delta Production	Simulated Delta Production provides an easy understanding of supplier's answer (e.g. how he is anticipating Customer Demand)	How to manage the action plan if there is no solution?	Shouldn't Customers request a prior upgrade investigation with the concerned suppliers, if they want to exceed the capacity limit with their Demand? Is it question of fine tuning of the use of the tool?
	Load Factor + Unit of Measures			Suppliers have many other and complex situations to monitor and to action in their production processes
	Comments		No status attached to the comments (e.g. for action plan monitoring...)	
Alerting process	Alerts		There is a debate on the role and use of automatic alerts by the system. E.g. - risk of multiple alerts which are easily solved by the supplier - if the Customer sees the alert but nevertheless sends the Demand over the Capacity threshold, why would he do so? Recuperate an action plan? Anticipate a Capacity Evolution request? - What are the best practice rules to apply	Suppliers have a strong responsibility (not the system) to provided alerts. Alerts must be monitored in common with the customer, requiring clear status (See side examples). Need to reflect on the way the PoCs work.
Utilisation	Supplier response		No real guidance (Outside of "data must be as accurate as possible...")	Customer calendars are not synchronised
			Risk of double work done by suppliers with EDI DELFOR data: - short term supply preparation, managed weekly at the minimum - medium term bottleneck identification and management in Catena-X	To review with the people and processes involved. Return of experience from the PoCs?
	Successive iteration of the Demand	The Demand is never changed by the supplier		But what becomes of the supplier feedbacks after a few iterations?
	End-to-end		Still a one-to-one tool	Inherent to sub tier S&OP processes and multiple customers to manage with different timing?
	Workload		As it does not completely replace EDI DELFOR (and DELJIT) processing, what is the impact of workload for the SC partners?	
Performance metrics	Demand Volatility metrics		Not convinced by this feature	Suppliers want to compare the successive periodic forecasts with the "actuals" (i.e. the execution figures), which requires to archive successive Demands. This includes managing metrics (FAI) concerning the latest weekly updates (e.g. week-1 to week-12...)
Deployment	Implementation	3 certified tools are already available	How difficult and how long does it take to implement (IT) and master the use?	Need to acknowledge the offers from the solution Editors
	Scope		Which companies will be using this use case? On which horizon?	

Demand and Capacity Management

Stellantis project & plan

GLOBAL CAPACITY MANAGEMENT TOOL
GALIA DAY

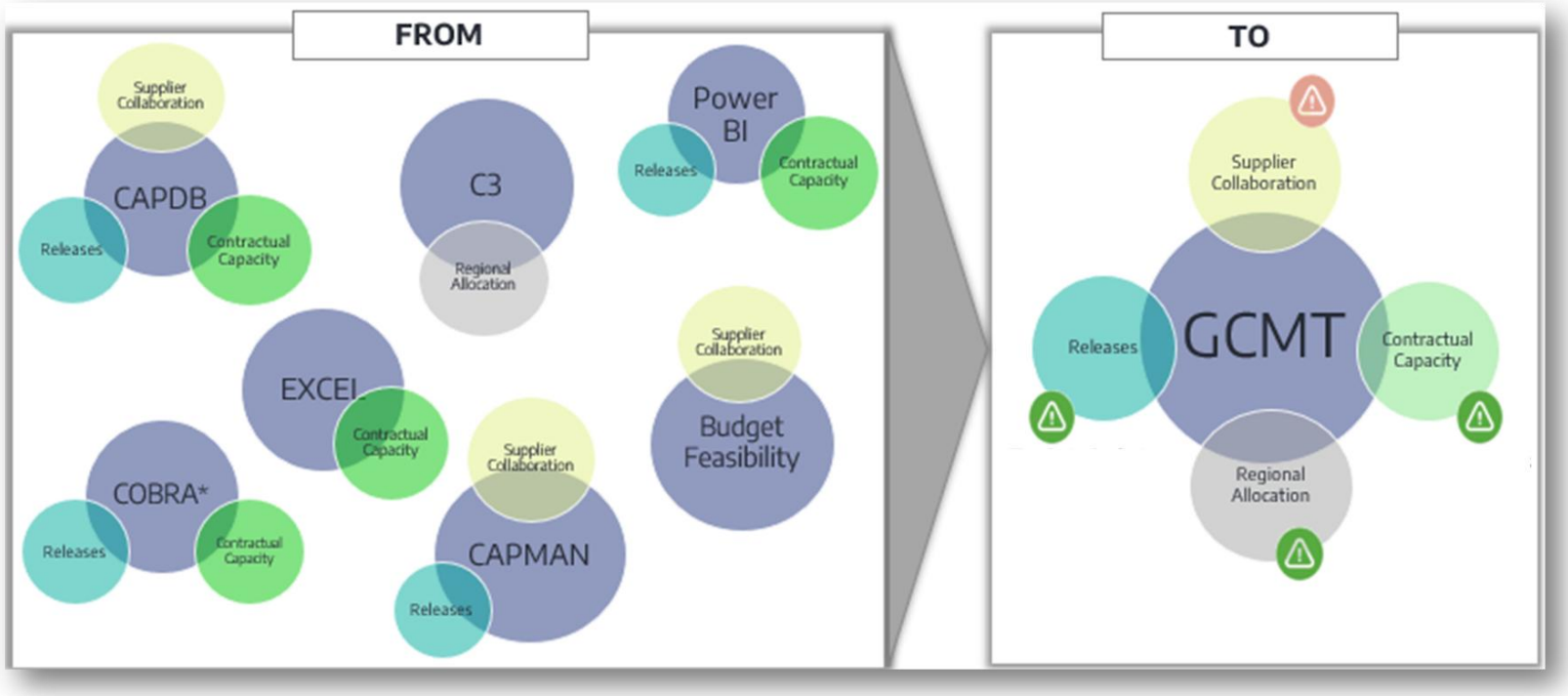
Transforming Global Complexity into Capacity Confidence

GCMT as a single capacity management tool to simplify supplier collaboration with Stellantis & boost efficiency

The Global Capacity Management Tool (GCMT) is Stellantis' new collaborative **STLA owned** platform to make capacity management easier, more transparent, and more reliable. It will be a **central point to check capacity information, manage supply plans against forecasted demands, and collaborate with Stellantis.**

STELLANTIS COMPLEXITY:

- 3 Ecosystems
- Increasing Global parts sharing across ecosystems
- Increasing carryover parts usage across ecosystems



CAPABILITIES & BENEFITS

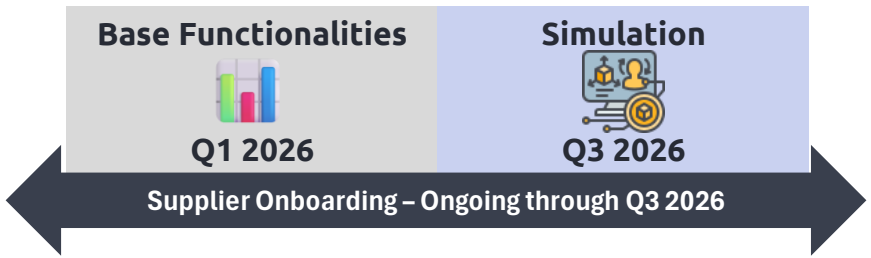
Supplier Capabilities in GCMT

- ✓ **Part Grouping:** Group elements that share the same line, raw material, or process to reflect common constraints and simplify discussions
- ✓ **Capacity Sharing:** Provide regular capacity updates and upload your supply plan to give Stellantis early visibility into risks and enable quick detection of mismatches with their demand plan
- ✓ **Early Shortfall:** Receive notifications and provide responses on capacity shortfalls in a structured, traceable way
- ✓ **Visibility:** See the results from Capacity vs Material Requirements comparison based on 52 weeks up to 24 Month horizon for dedicated parts
- ✓ **Simulation:** Receive dedicated What if Capacity Studies/Request

Expected Benefits for Suppliers

- ✓ **Simplification:** A single global tool as a point of contact makes exchanges with Stellantis simpler
- ✓ **Transparency:** A single source of truth for contractual commitment, ensuring transparency
- ✓ **Single Collaboration Tool:** Enhanced collaboration & communication accelerates problem resolution and increases efficiency
- ✓ **Automatization:** Consolidating manual work and scattered files into one harmonized system saves time and reduces administrative effort

Draft Timing for GCMT

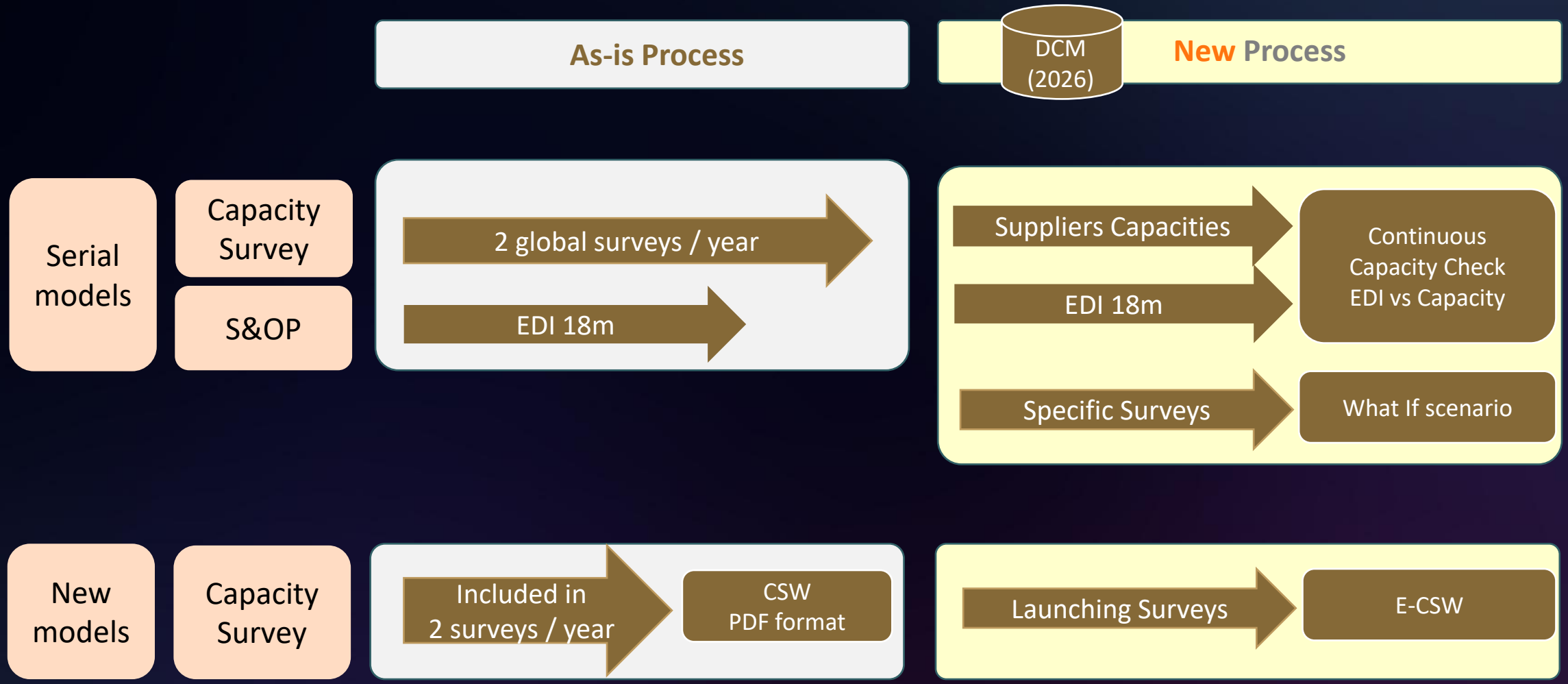


Demand and Capacity Management

Renault Group project & plan

Renault
Group
GALIA Day 2025 Nov 27th
New Capacity Management

New Capacity Process: what changes?



New Capacity Process: more Efficient

more Simple: 1 unique dataset EDI Manage Capacity through alerts detection (EDI vs Capacity)

more Digital: new DCM tool user friendly, including e-CSW

more End-To-End: grouping and update Capacity from Project phase @Launching milestone (CSW) to Serial life (F4)

more Standard: 1 unique set of concepts based on Catena-X for all OEM

more Collaborative: action plan, organization, investment, by workflow, chat tools.

more Agile: new specific Surveys to address business opportunities : to test a What If scenario & to launch a New model.