CGM Programme and RSC Services

MESC - 2 July 2019

Outline

1 **Purpose & Objectives of the CGM Programme**

2 **CGM Programme plan including methodologies**
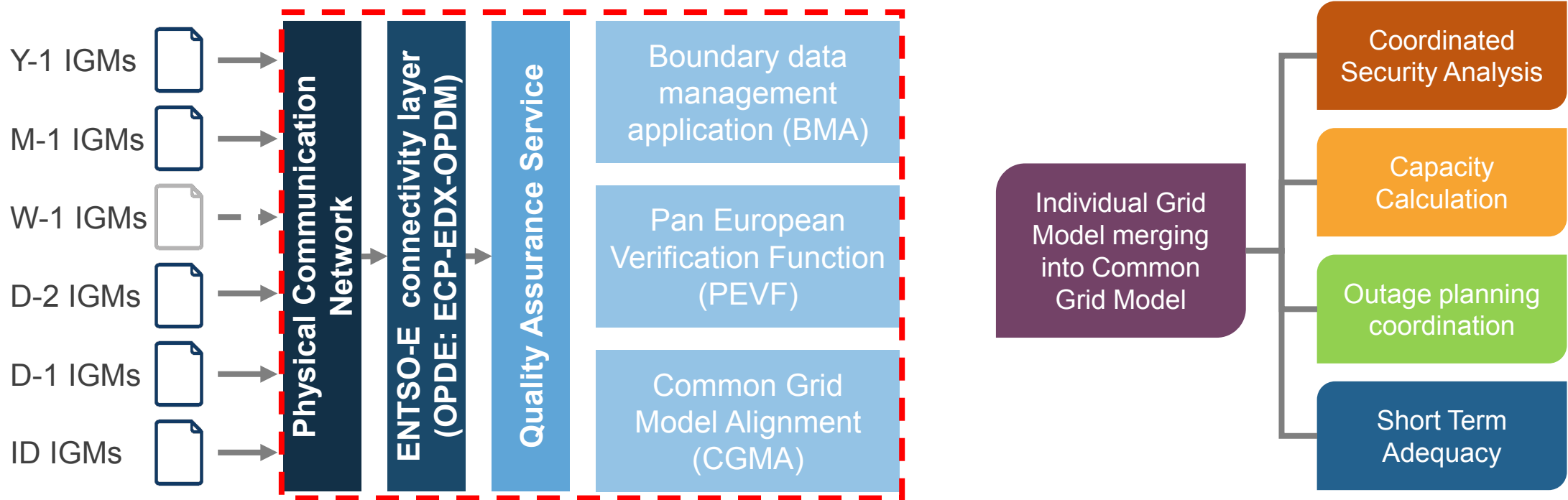
3 **Implications for RSC Services including Capacity Calculation**

Why the CGM Programme?

- The CGM Programme delivers under **EU regulations (i.e. CACM, FCA, SOGL)**

- Its deliverables **enable TSOs and RSCs** to produce **consistent and synchronised calculations** out of an harmonised pan-European Common Grid Model data source

- **The Pan-European Common Grid Model** will be used as a key input to **perform the RSC Services**

- The **scope** of the CGM Programme includes:
  - a **Physical Communication Network** transporting the data,
  - a connectivity layer **- Operational Planning Date Environment -** to allow secure communication
  - and a set of **CGM business applications** to allow the creation of an high quality Common Grid Model

CGM Programme scope summary

Y-1 IGMs

M-1 IGMs

W-1 IGMs

D-2 IGMs

D-1 IGMs

ID IGMs

Physical Communication Network

ENTSO-E connectivity layer (OPDE: ECP-EDX-OPDM)

Quality Assurance Service

Boundary data management application (BMA)

Pan European Verification Function (PEVF)

Common Grid Model Alignment (CGMA)

Individual Grid Model merging into Common Grid Model

Coordinated Security Analysis

Capacity Calculation

Outage planning coordination

Short Term Adequacy

TSOs

CGM Programme

RSCs

Integration of CGM Programme, TSOs and RSCs is key for success

Foundation of the CGM Programme

▪ The CGM-Methodologies work package has successfully developed the relevant CGM methodologies over the past 3 years. These methodologies have been approved by regulators on the following dates:

CACM		FCA		SOGL	
CGMM v1 +	May 2017 (after amendment)	CGMM v2 +	July 2018 (after amendment)	CGMM v3	September 2018
GLDPM v1	January 2017	GLDPM v2	March 2018		

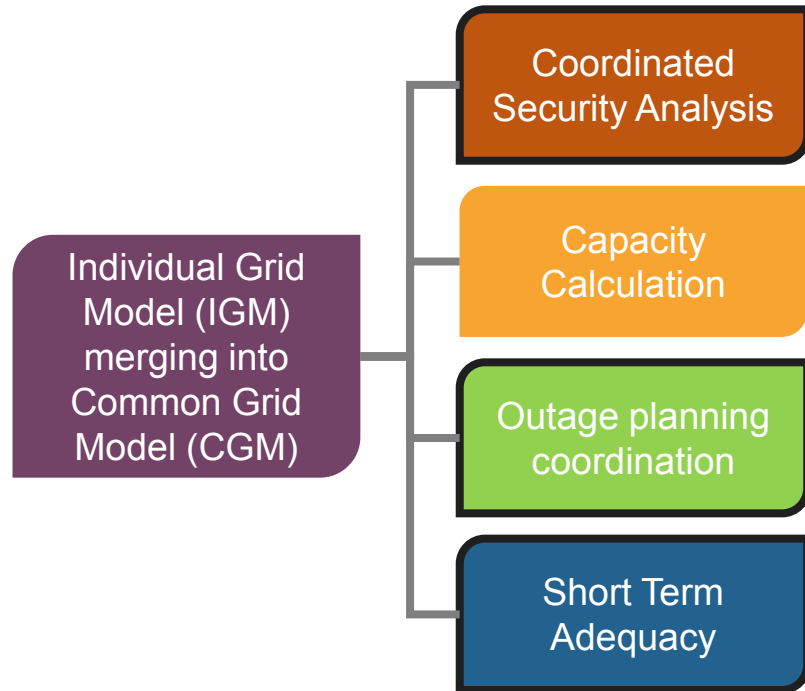These methodologies provide the needed framework for CGM and have defined the following deadlines :

- **OPDE : Article 24(4) of CGMM v1+: "By [December 2017], the information platform referred to in Article 21 shall be operational.** All TSOs, all alignment agents, and all merging agents shall be connected to the information platform and shall be able to make use of all of its features as described in the present methodology."

- **CGM Process : Article 24(5) of CGMM v1+: "By [June 2018], all TSOs shall jointly ensure that the CGM process is operational** and available for use by coordinated capacity calculators."

CGM Programme plan
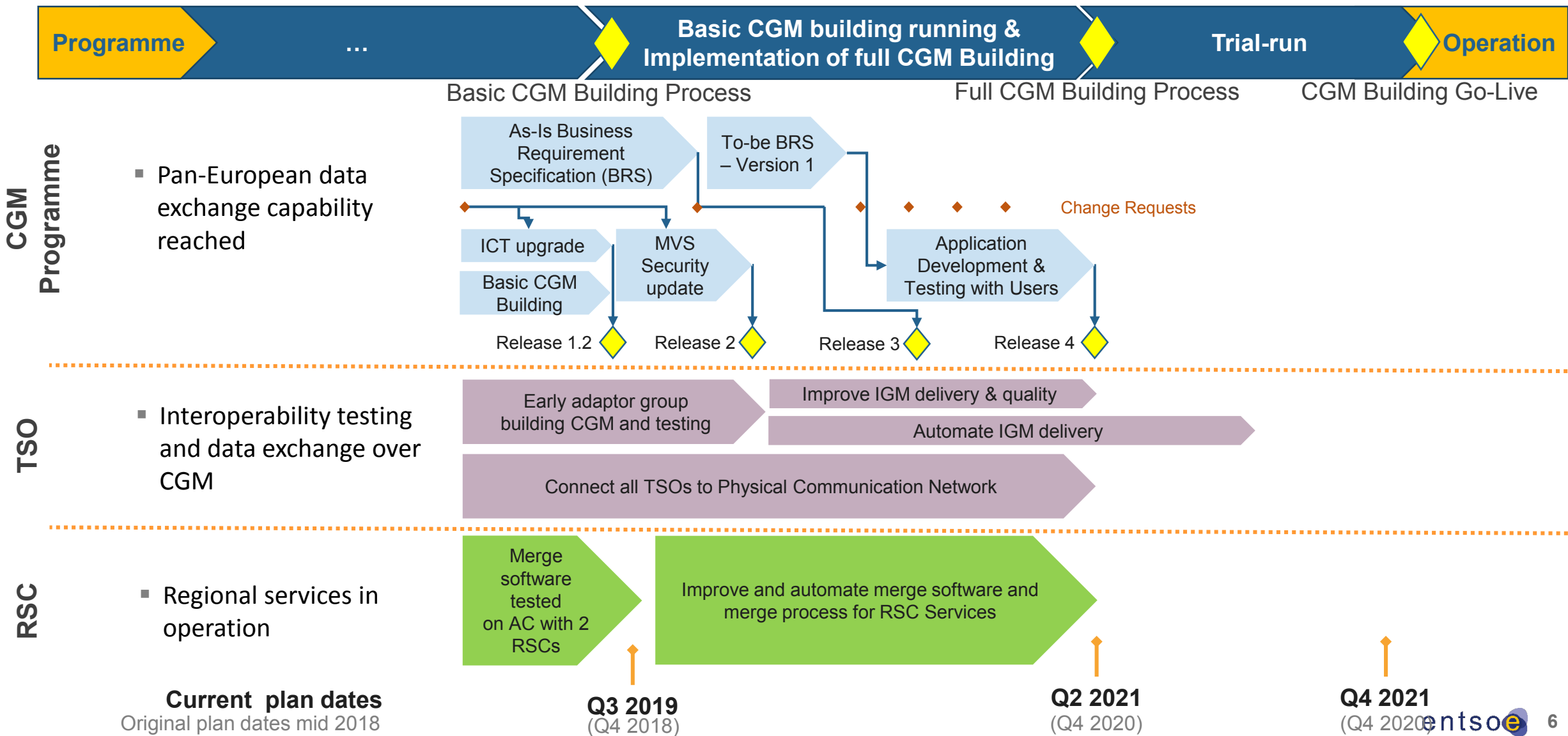
CGM inputs for RSC Services

CGM Programme needs to deliver the following for RSC Services:

Individual Grid Model (IGM) merging into Common Grid Model (CGM)

Coordinated Security Analysis

Capacity Calculation
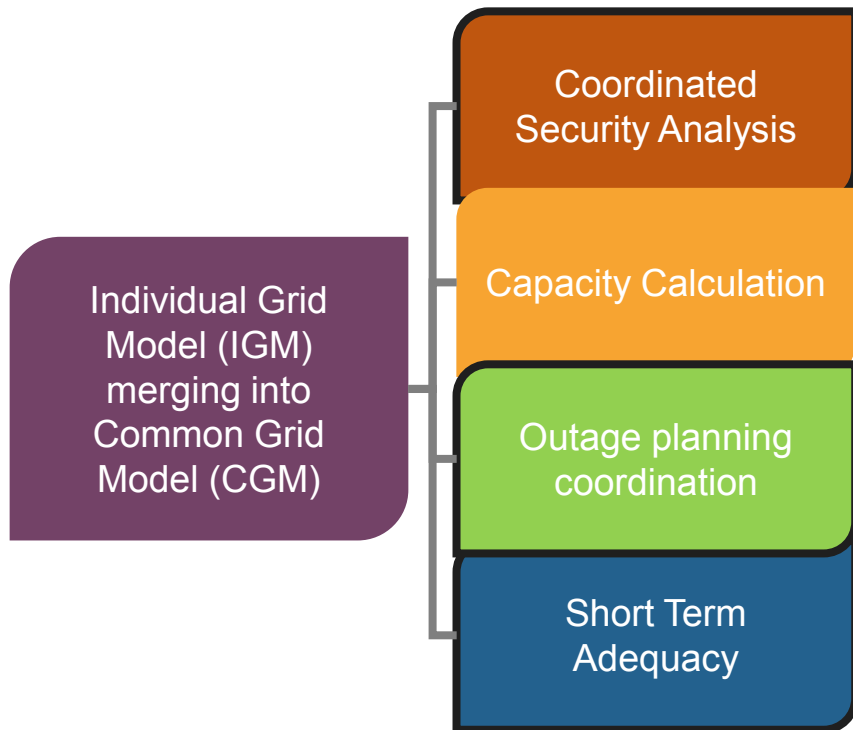
Outage planning coordination

Short Term Adequacy

☐ **Operational Planning Data Environment** exchanging data between TSOs, central business applications and RSCs

☐ **CGM Alignment application** supporting the Pan-European balance of the common grid model

☐ **CGMs after merging IGMs** (i.e. ID, D-1, M-1, Y-1)

Additional requirements (e.g. W-1 CGMs) are currently under discussion

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Timelines for the 5 operational RSC Services

Plan for RSC Services based on Common Grid Model Exchange Standard (CGMES):

1. **IGM/CGM merging: from Q4/2019**
2. **Coordinated Security Analysis: Q2/2021**
3. **Regional Short Term Adequacy forecast: Q4 2020**
4. **Cross-regional Short Term Adequacy forecast and Outage Planning Coordination: Q2 2021**
5. **Capacity Calculation: as per CCR shown in the next slides**

All dates are estimated.

Note that CORESO and TSCNET operate since 2008 and run 5 RSC Services on a data format called UCTE-DEF.

Individual Grid Model (IGM) merging into Common Grid Model (CGM)

Coordinated Security Analysis

Capacity Calculation

Outage planning coordination

Short Term Adequacy

Status of Capacity Calculation under CACM

RSC: Baltic CORESO Nordic SCC TSCNET **Period:** 30/06/2019 **Service:** CSA SMTA **CCC** OPC IGM Con

Capacity Calculation Regions - Art. 15 (1) CACM	Capacity Calculation Methodology - Art. 20 (2) CACM	Capacity Calculators - Art. 21 (4) CACM	Capacity Calculation approach
Nordic	Approved – 07/2018	Nordic RSC	Flow-based
Hansa	Approved – 04/2018	Nordic RSC / TSCNET	Hybrid
Core (CEE + CWE)	Approved – 02/2019	CORESO / TSCNET	Flow-based
Italy-North	RfA – 05/2019	CORESO / TSCNET *	CNTC
Greece-Italy (GRIT)	Approved – 05/2018	Terna / IPTO *	CNTC
South West Europe (SWE)	Approved – 10/2018	CORESO	CNTC
Ireland and United Kingdom (IU)	Approved – 07/2018	CORESO	CNTC
Channel	Approved – 11/2018	CORESO / TSCNET *	CNTC
Baltic	Approved – 08/2018	Baltic RSC	CNTC
South East Europe (SEE)	Approved – 04/2019	ESO *	CNTC

* Nomination formally to be confirmed.

Disclaimer: Preliminary information and columns 2-4 will be confirmed in the ENTSO-E report on capacity calculation and allocation 2019

Timeframes according to CACM: day-ahead, for the day-ahead market and intraday, for the intraday market.

CNTC: Coordinated Net Transmission Capacity

Thank you