

JRC – EBA WORKSHOP

18 NOVEMBER 2019



WHO WE ARE

COMPANY

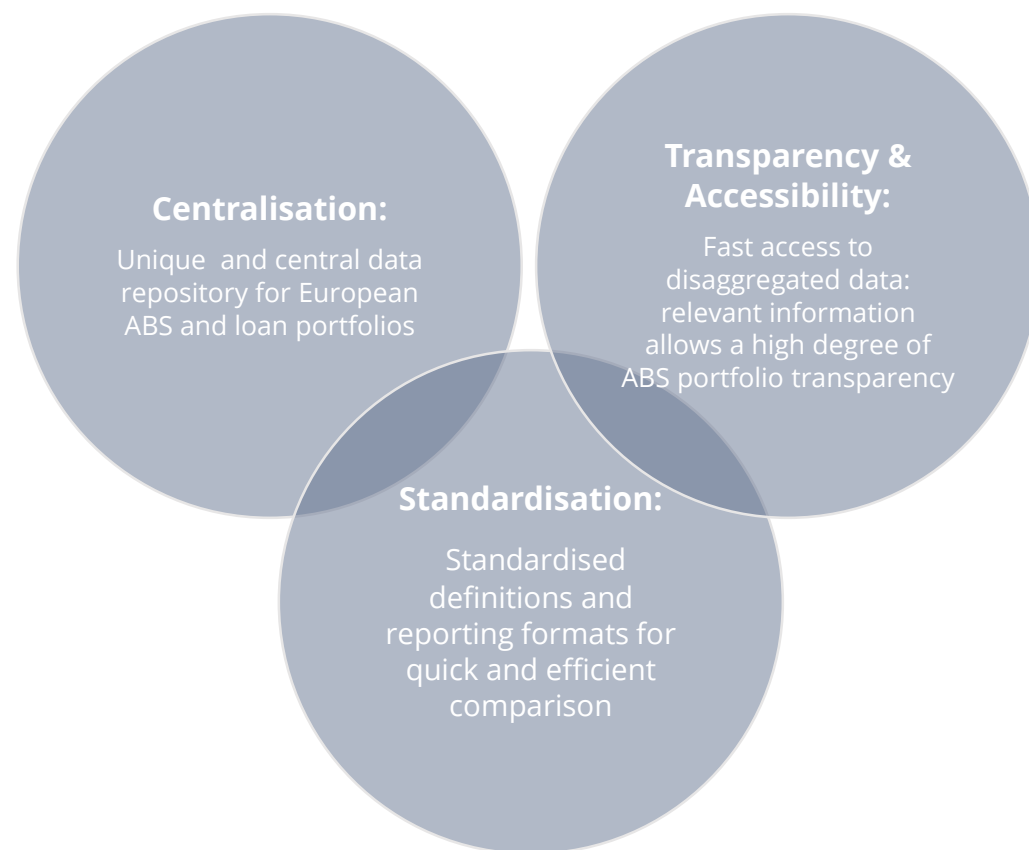
European DataWarehouse (ED) provides loan and bond level data as well as documentation repository services for the fixed income market

ED currently hosts data for over 1400 Asset-Backed Security (ABS) transactions and private portfolios belonging to several different originators across Europe

CLIENTS

More than 500 data owners, data providers and data users are registered with ED

Originators, issuers, sponsors and servicers upload ABS data to ED, while data users including investors, data vendors, rating agencies and public institutions use ED data for monitoring and risk assessment purposes



KEY FIGURES

OUR LLD

> 30,000

LLD submissions

16

average daily
submissions

75 mm

loans or loan parts

> 2 bn

loan records

8m

securitised properties

OUR DEALS

21

LLD submissions per
transaction on average

1463

ABS deals stored in
ED database

15

jurisdictions

7

asset classes

OUR FIRM

28

team members

15

languages spoken

6

years supporting
transparency

KEY FIGURES

Basic statistics of European DataWarehouse database of Public deals by asset class

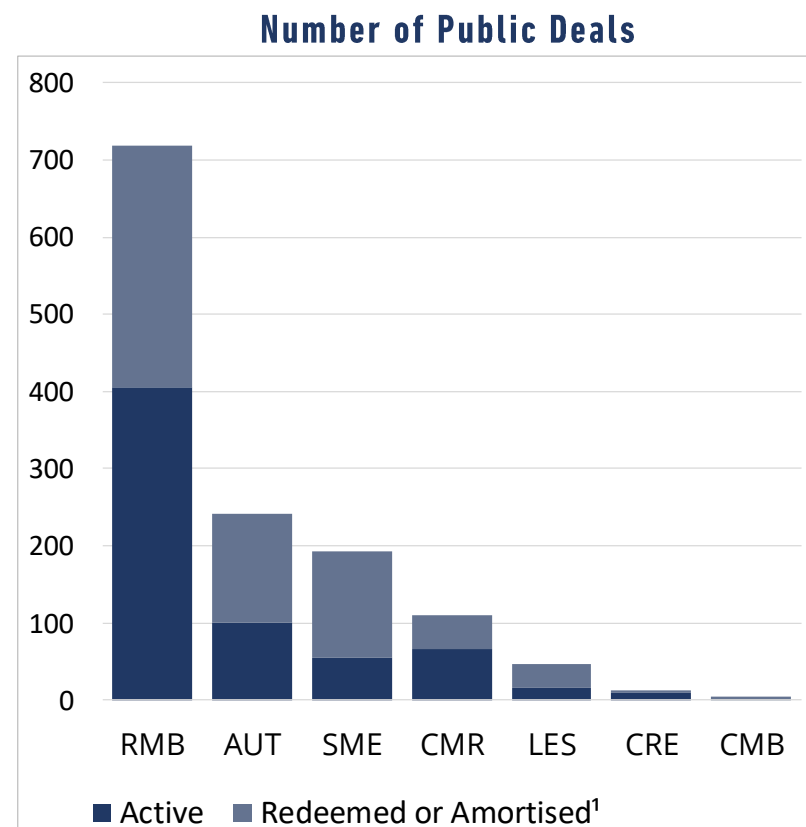
Asset Class	Active	Redeemed or Amortised ¹	Total	Number of loans ²
RMB	406	313	719	15.67
AUT	101	141	242	15.22
SME	55	137	192	1.85
CMR	66	44	110	24.27
LES	16	31	47	0.60
CRE	10	2	12	17.69
CMB	0	5	5	12
TOTAL	654	673	1327	75.31

¹ Upload of loan level data has discontinued, typically due to bond redemptions

² based on only the latest LLD submissions (numbers in Millions)

³ based on only the latest LLD submissions (numbers in Millions)

⁴ Number of loan sponsors in whole numbers



GREEN STORM SECURITISATION

European DataWarehouse hosts the data of the first RMBS Securitisation the Green Storm 2016 issued by Obvion. The only example of a Green Collateral Securitisation in Europe, where the assets backing the bond are green residential mortgages, ie. linked to energy efficient homes, and the proceeds of the bond issuance financing those green residential mortgages.

Following on from their three highly successful and popular Green RMBS's in 2016, 2017, 2018, Obvion issued another in 2019.

➤ Underlying mortgages

The selection of mortgages meet certain eligibility criteria. The mortgages are backed by properties with either:

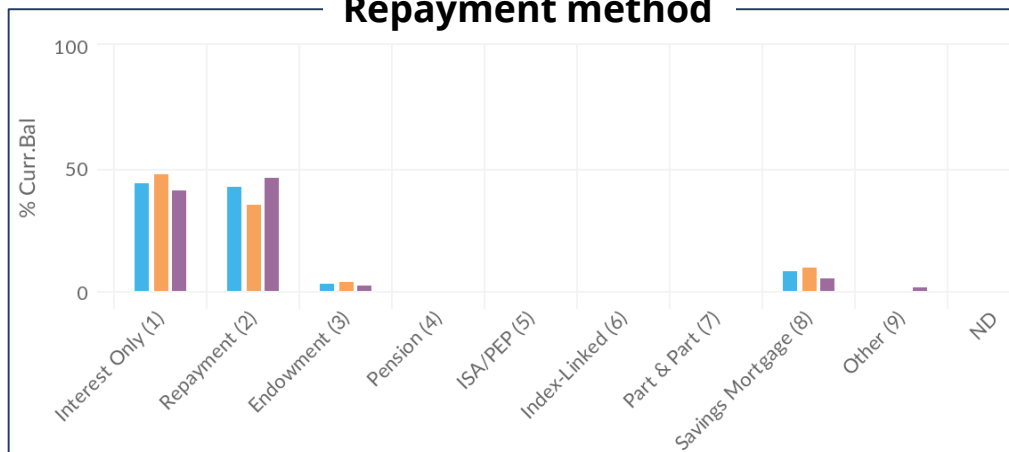
- a provisional or definitive Energy Performance Certificate Class A
- a Definitive Energy Performance Certificate Class C or a Definitive Certificate Class B and realised a calculated improvement of an energy performance certificate by at least two notches

➤ Notes

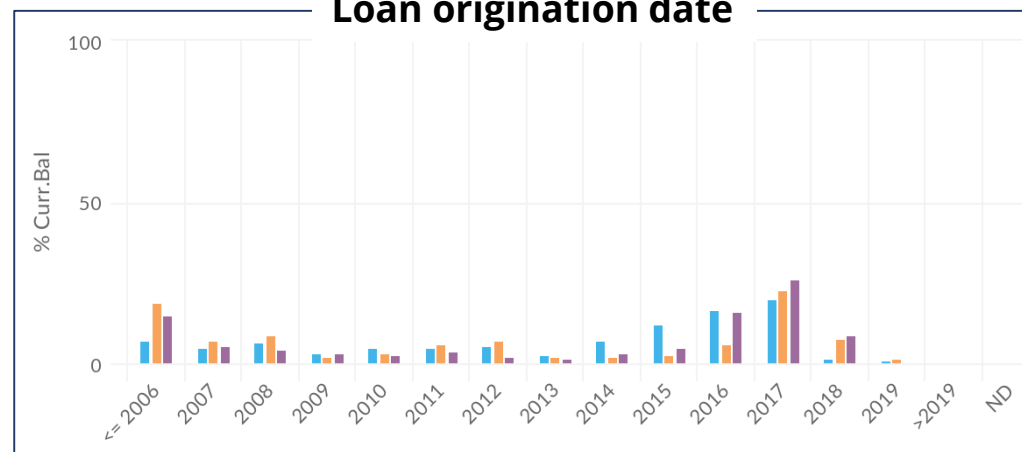
- The Green Storm Notes meet the requirements of the ICMA Green Bond Principles in compliance with the Climate Bond Standard
- Additionally, a CO2 impact analysis conducted by DWA has shown that the selected properties have a lower CO2-emission compared to a similar group of properties with average energy efficiency

GREEN STORM 2018 B.V. COMPARED TO OTHER DUTCH NON-GREEN RMBS

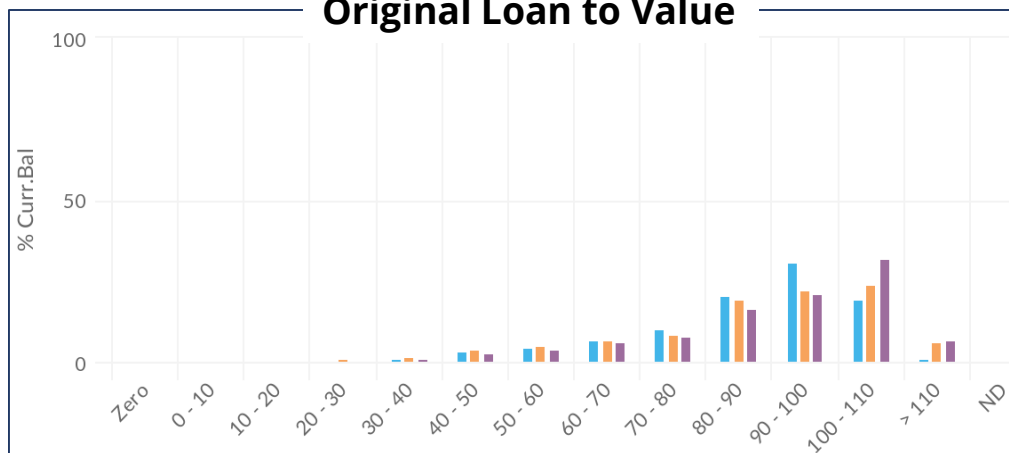
Repayment method



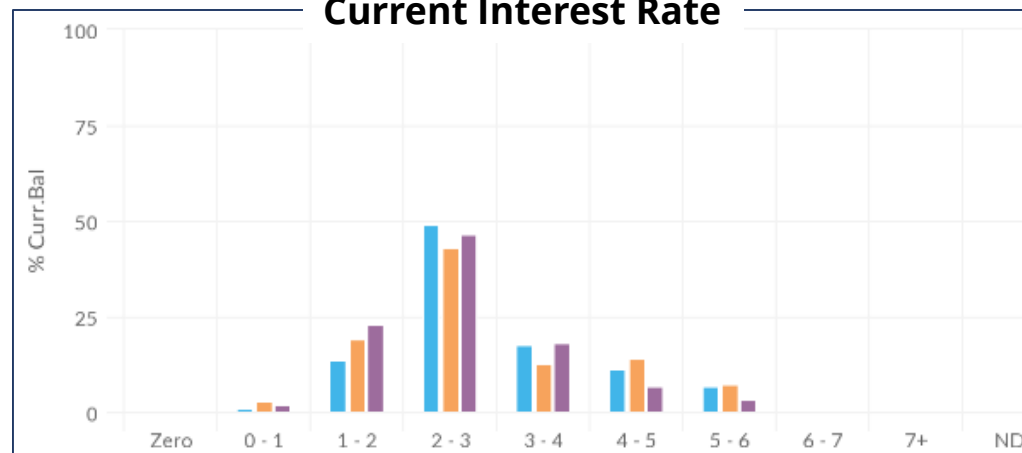
Loan origination date



Original Loan to Value



Current Interest Rate



Green Storm 2018 Other RMBS issued by Obvion in 2018 All Dutch RMBS issued in 2018

CRITERIA FOR IDENTIFYING GREEN BONDS AND LOANS

ICMA Green Bond Principles	Guidelines that recommend transparency and disclosure and promote integrity in the development of green bonds
Climate Bond Initiative	Climate Bonds Standard & Certification Scheme is a labelling scheme for bonds. It sets out criteria for verifying the green credentials of a bond
Rating Agencies	Green evaluation ratings by Rating Agencies: Moody's Green Bond Assessment Green Evaluation by S&P Fitch's ESG scoring system
EU Technical Expert Group on Sustainable Finance	In June 2019, the TEG published a report on EU Taxonomy which is an EU classification system to determine whether an economic activity is environmentally sustainable
AFME	In September 2019, AFME published a Position Paper outlining their thoughts on the development of a green securitisation framework. One key point is that AFME is not supportive of "shades of green" but rather a Green collateral approach
Energy Efficient Mortgages Initiative	In December 2018, the EEMI published a common definition of an Energy Efficient Mortgage (EEM)

ENERGY EFFICIENT MORTGAGES INITIATIVE – EEMAP & EEDAPP



The **Energy Efficient Mortgages Initiative** is a market-led initiative, funded via the European Commission's Horizon 2020 Programme, which aims to deliver a standardised European framework and data collection architecture for energy efficient mortgages

Action Plan (EeMAP)

The aim of **Energy efficient Mortgages Action Plan (EeMAP)** was to create a framework for “**energy efficient mortgages**”

Data Protocol & Portal (EeDaPP)

The **Energy efficiency Data Protocol and Portal (EeDaPP)** aims to design and deliver a **market-led-protocol** for the collection of energy efficient mortgage data through a **standardised template** which will be made accessible via the design of a **common data portal**.

EEMAP – DEFINITION OF ENERGY EFFICIENT MORTGAGE

One of the main objectives of the EeMAP was the definition of the “Energy Efficient Mortgage” (EEM)

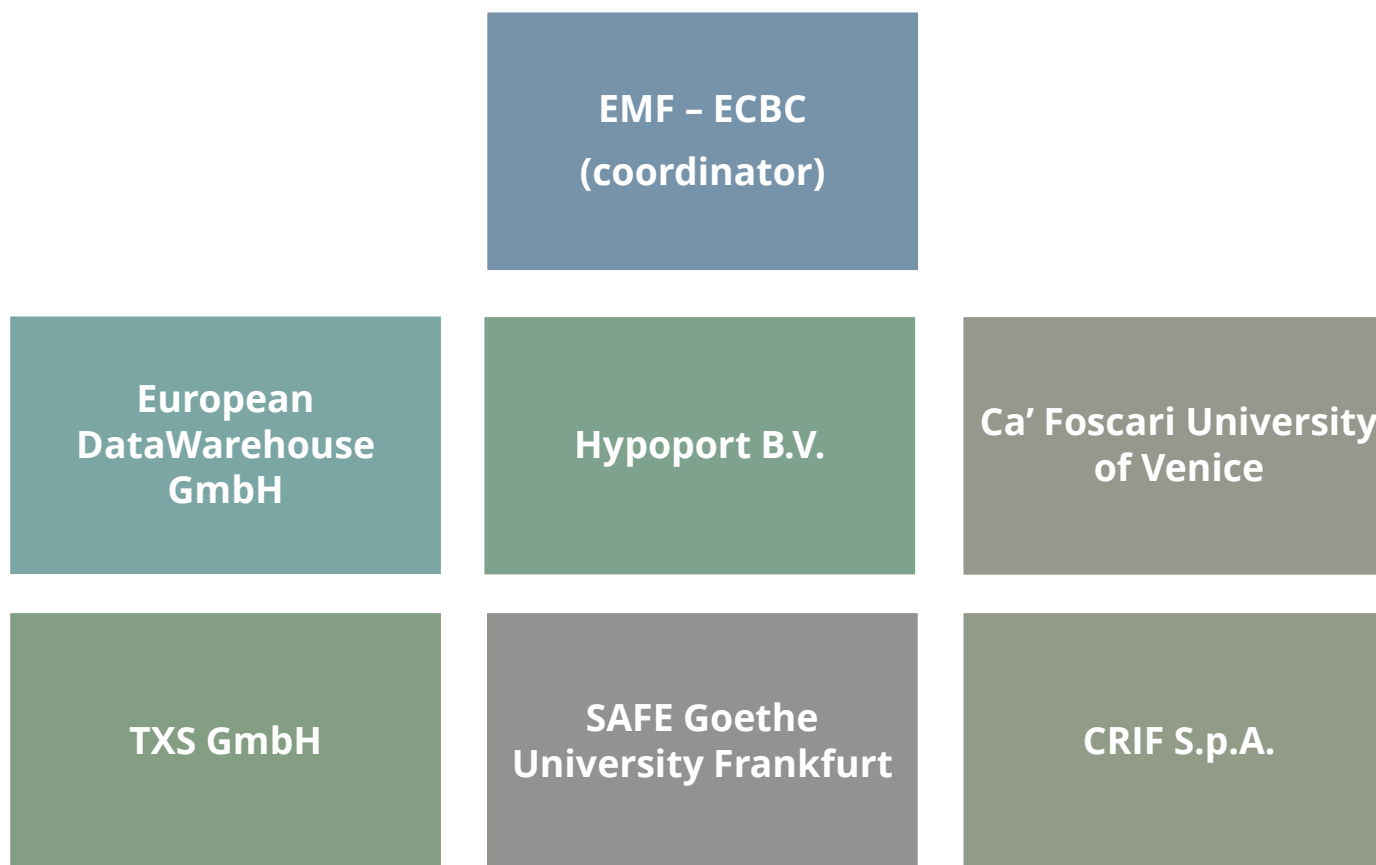
EEMs are intended to finance the purchase/construction and/or renovation of both residential (single family & multi-family) and commercial buildings where there is evidence of:

- (1) energy performance which meets or exceeds relevant market best practice standards in line with current EU legislative requirements
- (2) and/or an improvement in energy performance of at least 30%.

This evidence should be provided by way of a recent EPC rating or score, complemented by an estimation of the value of the property according to the standards required under existing EU legislation. It should specifically detail the existing energy efficiency measures in line with the EEM Valuation & Energy Efficiency Checklist.

EEDAPP – CONSORTIUM PARTNERS

The participants involved in the EeDaPP consortium are listed below.



EEDAPP – PROJECT UPDATE

The following table displays the 5 operational Work Packages, each with a clear set of deliverables for EeDaPP and their status

Deliverable	Status
Identification and summary of best market practices within data systems	Completed
Definition of energy efficiency reporting criteria – “EeDaPP Master Template”	Completed
Design of a standardised data protocol & common centralised portal	Finalised
Data and correlation analysis	WIP
Roadmap for system integration	WIP

EEDAPP MASTER TEMPLATE (1)

Category	Field Name	Description
Identifier	EPC Identifier	Unique key ID of the energy performance certificate delivered
Identifier	EPC Register Identifier	Unique key ID to link and identify EPC register Identifier
Identifier	Property upgraded Identifier	Unique key ID to link and identify, the property including energy performance information recorded (such as EPC rating & date)
Category	Field Name	Description
Property Information	Construction Year	Indicate the year when the property was originally built (YYYY format). In the case of a conversion of a building into flats, the date of conversion should be supplied. If no data available refer to Taxonomy for inputs.
Property Information	Permit deliverance year	Date (year) at which the construction permit was delivered (more accurate than construction year)
Property Information	Energy Renovation Flag	Flag if there is a way to know that the property has undergone energy retrofits in the life cycle of the building
Property Information	Building Codes	precise to which building codes and thermal construction regulation the construction year apply to (NZEB or other)
Characteristics	Address of Property	Street address where the Property is located at, including flat / house number or name
Characteristics	City of Property	City where the Property is located at
Characteristics	Geographic Region of Property	Province / Region where the Property is located at
Characteristics	Property Postcode	Postcode where the Property is located at

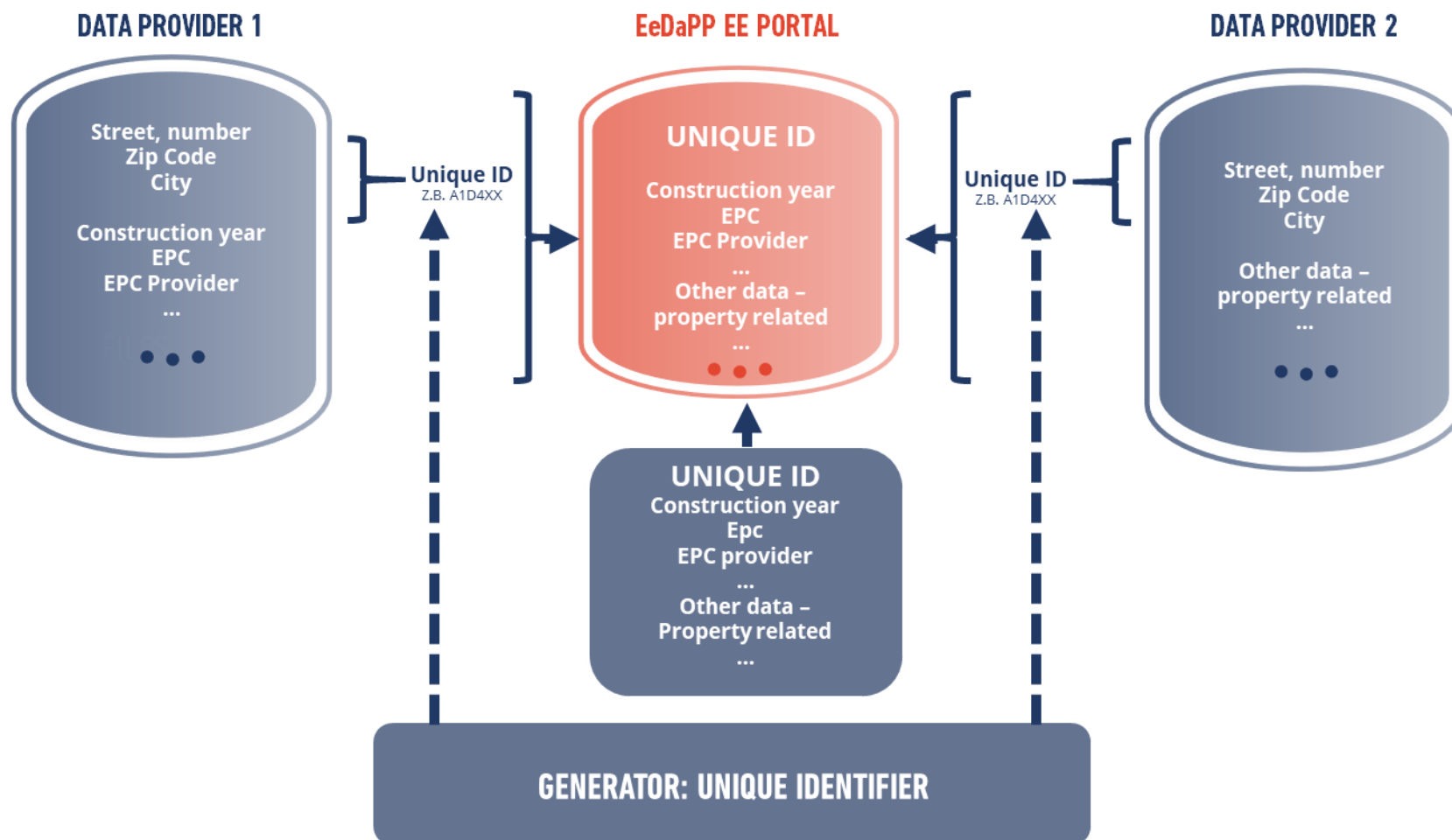
EEDAPP MASTER TEMPLATE (2)

Category	Field Name	Description
Energy Performance Certificate	EPC Register	Type of the EPC register (based on BPIE 2016): <ul style="list-style-type: none"> - Government Body - Third Body - Professional Association - Mixed (Specify)
Energy Performance Certificate	Energy Performance Certificate Provider Name	Enter in the legal name of the energy performance certificate provider. Where a Legal Entity Identifier (LEI) is available in the Global Legal Entity Foundation (GLEIF) database, the name entered shall match the name associated with the LEI.
Energy Performance Certificate	EPC Rating Format	Type of Rating: <ul style="list-style-type: none"> - Energy Label - Continuous Scale
Energy Performance Certificate	EPC Software	The method used in the assessment of the energy performance certificate of the collateral at the time of origination (based on BPIE, 2016): <ul style="list-style-type: none"> - Theoretical public (EPC rating based on a software tool elaborated by the public authorities) - Theoretical private (EPC rating based on a commercial software tool) - Theoretical Mixed (EPC rating based on both public and commercial software) - On-site (EPC rating based on inspection and on-site visit)
Energy Performance Certificate	Energy Performance Certificate Value	The energy performance certificate value of the collateral at the time of origination: A (EPCA) B (EPCB) C (EPCC) D (EPCD) E (EPCE) F (EPCF) G (EPCG) Other (OTHR)

EEDAPP MASTER TEMPLATE (3)

Category	Field Name	Description
Energy Performance Certificate	EPC Score	Score between 0 and 100
Energy Performance Certificate	EPC Qant. Energy	Final energy Consumption estimate (in kWh/m ² /year)
Energy Performance Certificate	EPC Qant. Carbon	Estimate Carbon Emission as per the data delivered by the Energy Performance Certificate
Energy Performance Certificate	Issue Date	Date of deliverance of the EPC
Energy Performance Certificate	Term Date	Date of end of validity of the EPC (depending on the length of validity)
Energy Efficiency financing schemes	Benefitted from EE financing scheme associated to the loan	Yes/No - indication if the loan benefitted from a guarantee and/or subsidy granted by a public institution / governmental agency (example - "zero interest rate" loan)
Energy Efficiency financing schemes	Scheme name	Name and details of the financing scheme (regional/National Level; third parties involved ect..)
Energy Efficiency financing schemes	Amount Received	amount received in monetary terms or interest margin or level of guarantee granted
Energy Efficiency financing schemes	EE Incentive scheme received by the borrower	Yes/no - if the borrower benefitted from a fiscal or lump sump subsidies associated with the energy improvement of its property
Energy Efficiency financing schemes	Scheme name	details of the scheme
Energy Efficiency financing schemes	Amount Received	amount received (in tax rebates or subsidies) in monetary terms

HIGH LEVEL IT PROPOSAL FOR AN ENERGY EFFICIENCY (EE) PORTAL



PROPOSED UNIQUE IDENTIFIER FOR BUILDINGS

The unique identifier will contain a key set of characteristics that will enable users to query and extract information regarding certain buildings and the green credentials including the following details:

1. **Commercial or residential real estate type** (C or R);
2. **Property type** (Field RREC9 – Residential: RHOS, RFLT, RBGL, RTHS, MFHS and OTHR; Commercial: PCMM and BIZZ);
3. **Year of construction** (Field CREC25 – 1999, XXXX – unknown);
4. **Property/collateral identifier** (Field RREC3 – FC8FD726B204B331C0B90CA73C519D59);
5. **Location based on the Eurostat NUTS coding** (Field RREC6 – ITC45, XXXXX - unknown);
6. **Other relevant information that can be updated/changed over time** (size of the property in square meters or other country specific elements);
7. **Incremental number for cases where all previous parameters are the same for two properties** (3 numeric, 001, etc.).
 - . RHOS: House, detached or semi-detached
 - . RFLT: Flat or Apartment
 - . RBGL: Bungalow
 - . RTHS: Terraced House
 - . MFHS: Multifamily House
 - . PCMM: Partial Commercial use
 - . BIZZ: Commercial or Business use
 - . OTHR: Other

THANK YOU//CONTACT US

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