

CIP

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Nielsen => Buy (NielsenIQ) (RMS , CPS , etc.)

=> Watch (Nielsen)

RMS => (market , product , promotional , time dimension)

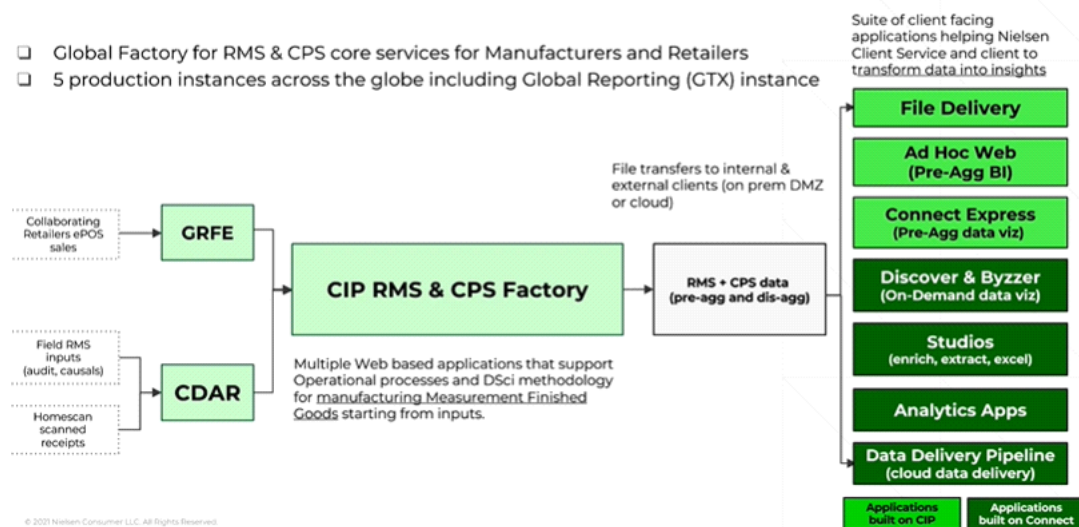
CPS => (market , product , promotional , time dimension and detail about purchaser)

Consumer Information Platform (CIP) => factory in nielseniq

- Refactoring on premise platform to the cloud platform

Data Factory – Consumer Information Platform (CIP)

Consumer Information Platform



CIP is designed initially for the European countries , but instead of having different platforms for EUROPE , LATAM , APAC, US etc. to bring all under a single platform we have made CIP as a platform for all the factories. CIP is a global platform or global factory.

- GRFE is the one which first receives the data from the retailers or manufacturers.
- All the retailers pay the user data to be collected and send it to the GRFE by the nielseniq, for which the retailers are going to get paid. These people are collaborating retailers. And for non-collaborating retailers. We collect data through CDAR , and the data is collected by auditors or dustbins or home scanned receipts.
- GRFE is global retailer front end. In this phase some formatting happens and send to CIP rms and CPS Factory. In CIP rms and cps factory processing happens in this phase. And the aggregated data will shared with Nielsen clients. This provides a high level portfolio to the manufacturer to take next decisions. CDAR doesn't comes under CIP and rest boxes except the dark green boxes comes under CIP.

Factory Components

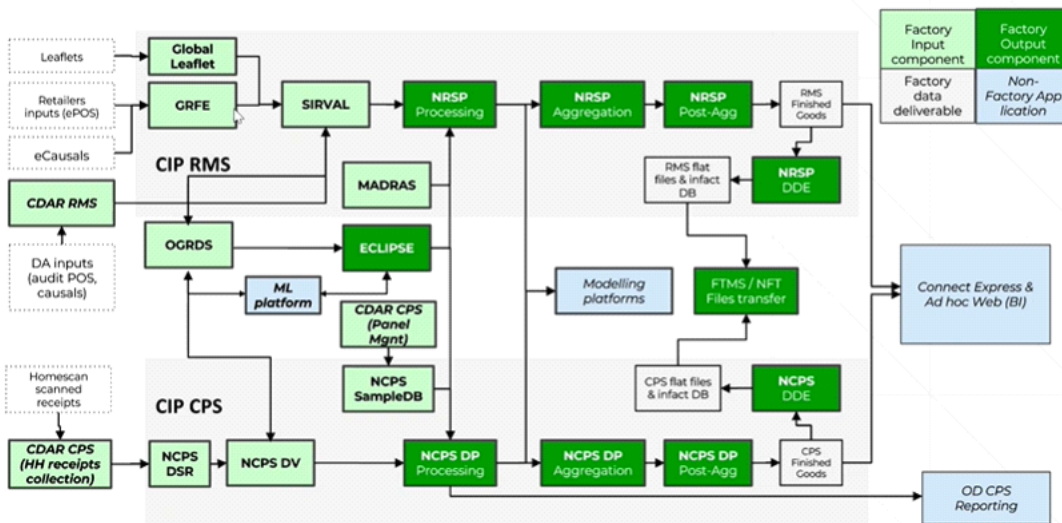
Converges data input and processing

	Process	RMS	CPS
	Client Deliveries	Connect Express(pre-agg), Discover(On Demand), Analytic Apps, Studios, DDP	
	Processing	On Demand Pipeline, Compute Engine, Analytics Engine	
	Instruction	Client Instruction Platform – eclipse (product dimension)	
	Reference	One global reference data system (OGRDS) for Product & Brand Global Store Ref System (GSR)	
	Sample & Projection	Market Definition for Retail Audit and Scanning (MADRAS)	NCPS -Sample DB & Trip Projection calibration engine
	Validation	Standard Input Record Validation (SIRVAL)	Consumer Panel Data Validation (NCPS DV)
	Inputs Reformatting	Global Retailer Front End (GRFE)	Consumer Panel Data Source Reformatting (NCPS DSR)
	Data Collection & Acquisition	Retailers files collection (local)	CDAR Field people visiting shops (RMS) - controlled panels of consumers (CPS)

- Global reference number is NAN key in NielsenIQ , where it is called Nielsen Article Number.

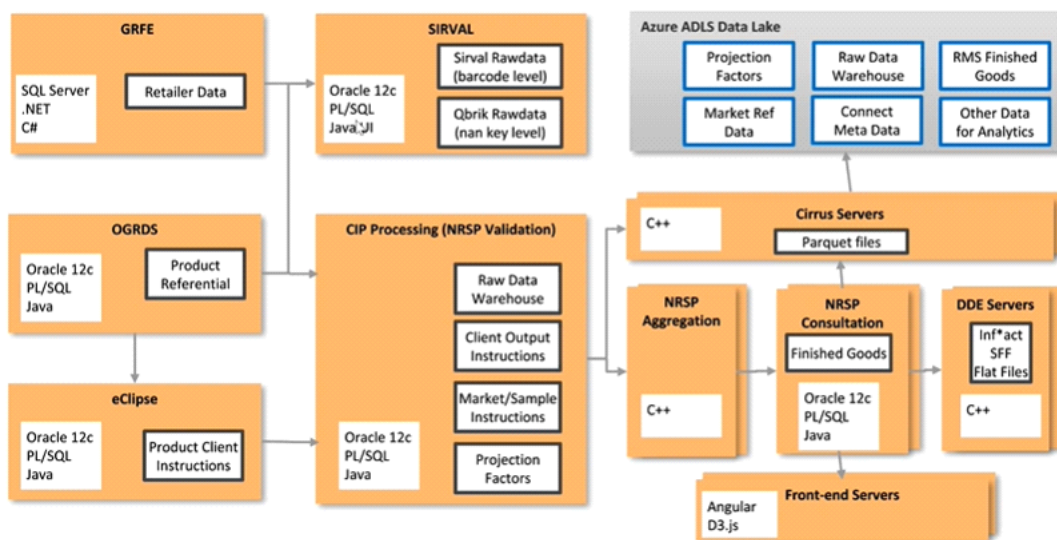
- The process happens from bottom to top approach.

Retail Measurement (RMS) and Consumer Panel (CPS) Data Flows



- SIRVAL validates the sales data that is received and validates the data under product dimension in OGRDS. These validated data will be passed to NRSP processing engine.
- The final output is transferred to the end client use FTMS/NFT files transfer.
- In On premise , except CPP applications all other applications are built in PL/SQL and Java. Java is used to build web based interface and data will be stored in oracle and parquet files. In the PL/SQL applications we use python as the backend.

CIP Components overview - RMS (current state)



In-Memory Parquet Framework

Key Design Drivers for refactoring

- Read-only and transactional batch activities manage large datasets in Parquet files
- Small permanent tables are kept in a relational database (Oracle for now, can be other RDMBS SaaS)
- The Business Logic Layer delegates the data access layer to framework primitives:
 - Parquet files reads and writes
 - Reads from relational tables
- Parquet as a high-performance data format supported by many native cloud platforms and solutions
- Applications can run on prem or on cloud using the **same single code base** with isolated variations to be on prem compliant and cloud compliant

