NextGen IIR RGMI Data Architecture

Methods and Practices

We are pleased to provide you a first look at our *NextGen IIR RGMI Data Architecture*. This offering provides data management and data delivery for the RGMI Platform as well as optional ingestion for use in your own analytical data models.
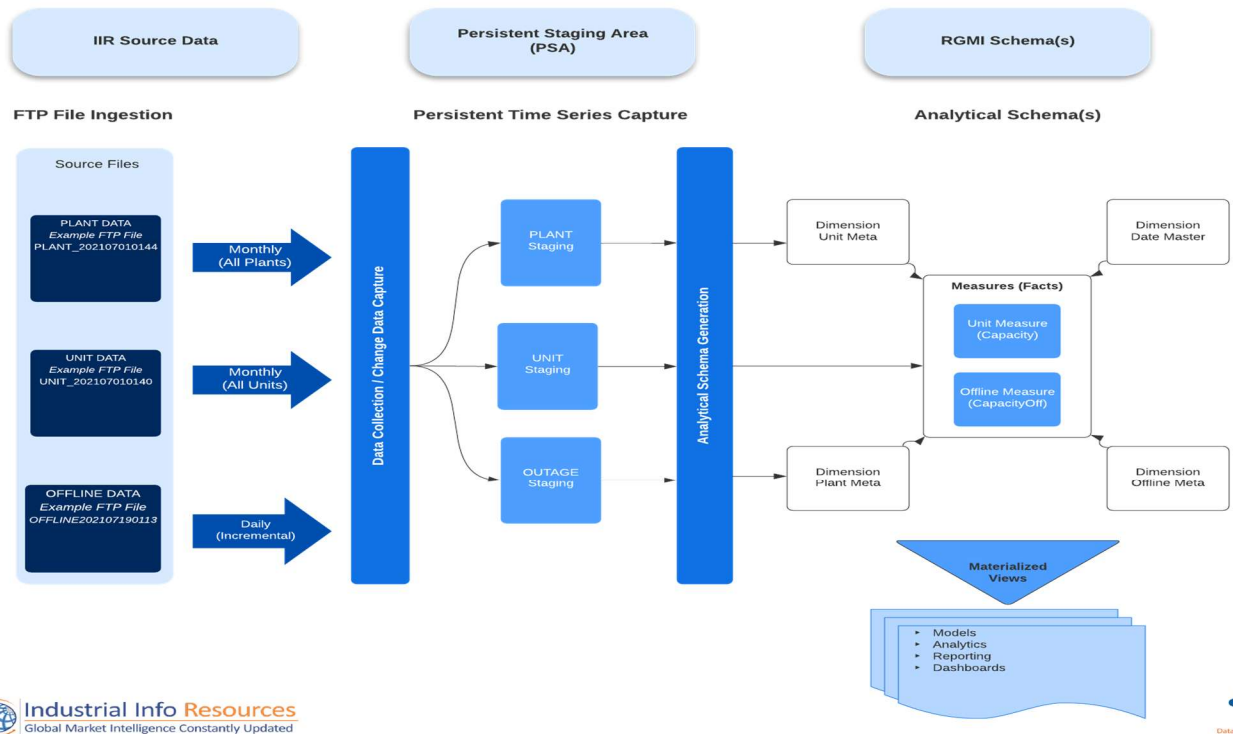
Description

The RGMI analytical time series capabilities are generated from the IIR FTP file delivery process and loaded into data schemas which are optimized for market intelligence. The basic outline of the data pipelining process is:

1. **Data Lake Ingestion:** All of the applicable IIR data is logged into a Data Lake for schema generation. The files accumulate in the Data Lake over time. The Data Lake files are used to generate the analytical tables and are maintained for further use cases as needed.

2. **Persistent Staging Area (PSA) Creation:** An ETL process is used to feed PSA tables which accumulate into a full catalogue of Plant, Unit, and Offline Event changes over time. The PSA is a complete collection of the data into the appropriate tables.

3. **Change Data Capture (CDC) Process:** In order to collate the applicable data into a high-performance time series, the CDC process collects only the PSA table data that has changed. From the CDC process, multiple schemas and materialized views can be generated for the RGMI Platform and for specialized client use cases.

4. **Analytical Schemas:** The schema generation portion of the data pipeline is where the time series views are generated. This database schema is used for the RGMI - Refining Intel Answers Dashboard and could be utilized for other tailored solutions. The option of accessing the views is also available for client use within their own models. Schema generation is flexible and custom views can be delivered for unique client requirements. Access to the schema(s) is via SQL database connection.
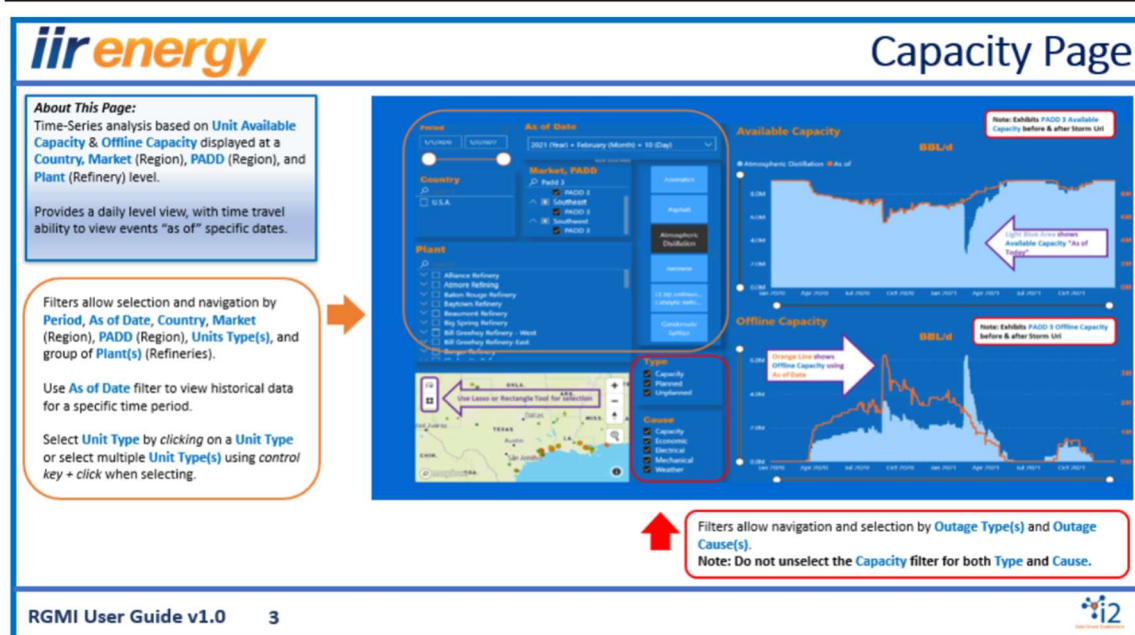
Implications

IIR's **NextGen IIR RGMI Data Architecture Foundation** provides robust data management delivery of either your market data or analytical data models, which can in turn be ingested into your internal processes and/or internal models. Thereby, streamlining your analytical efforts to arrive at insightful marketintel which further leads to educated decisions.

In Practice - RGMI - Refining Intel Answers

We have designed the initial framework for the **NextGen IIR RGMI Data Architecture Foundation** as a result of your requests to receive IIR's Plant, Unit, Offline Event Research records as an Analytical Time Series, A visual representation of this Analytical Time Series can be seen in the **RGMI - Refining Intel Answers** Capacity Page which is exhibited below:
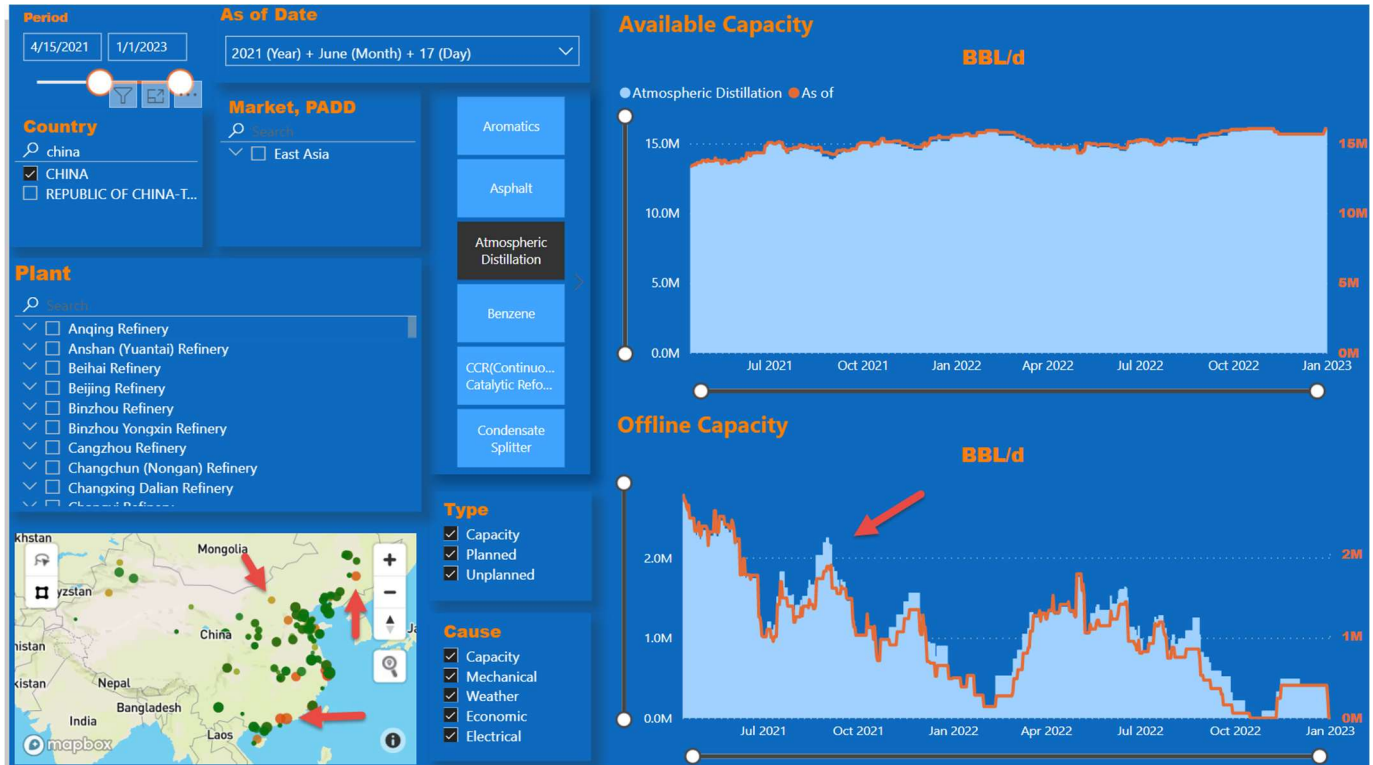
RGMI - Refining Intel Answers Capacity Page

For this week Bloomberg reports...

China's Virus Flare-Up Stokes Oil-Demand Fears

Domestic flights canceled, lockdowns renewed to curb spread Nation's top energy producer sees fuel consumption falling 5% Delta Cases Rise in Mainland China China is renewing restrictions and canceling flights as a Covid-19 resurgence in Asia's top oil consumer sends jitters across the crude market. Local governments are rushing to close off some cities and townships, while tourists are being turned away from popular sights as authorities seek to halt the fast-spreading delta variant during the peak summer travel season. Flights in and out of Beijing have been canceled, with China National Petroleum Corp. estimating jet fuel consumption will be the hardest hit by the new measures. "This round of infection could potentially wipe out 5% of short-term oil demand," Wang Lining, a researcher with CNPC's Economics and Technology Research Institute, said by phone.

One can refer to the example Refining Intel Answers Capacity Page below to view what IIR Research is reporting in regards to the current available capacity in China. Time Travel can also be utilized to ascertain what IIR was reporting at a previous point in time. In the example below, June 17th, 2021, is being used for "As of Date"
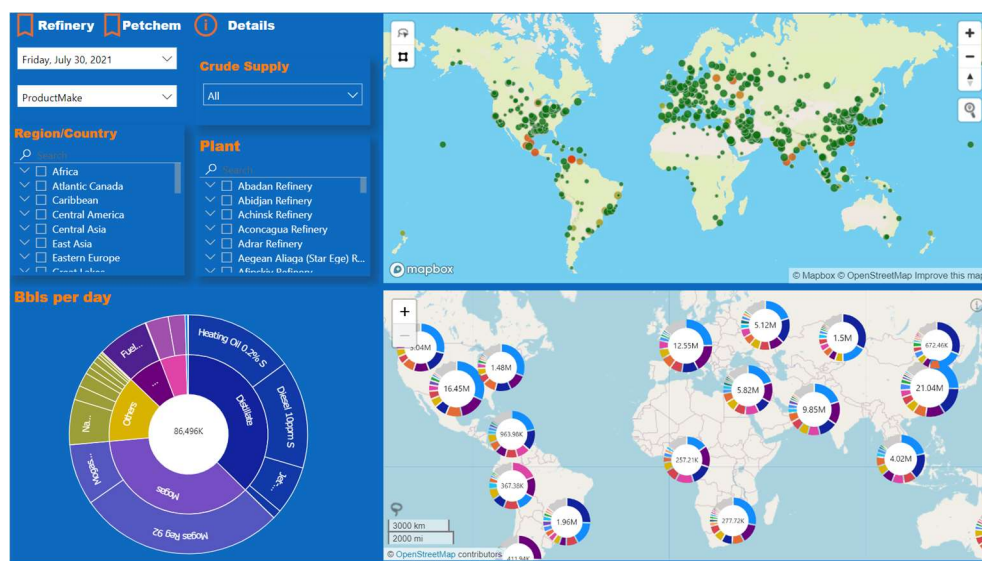
IIR Refining Global MarketIntel (RGMI) Platform   August 2021
Tomorrow's News Today

As we believe that we will both better engage & collaborate in regards to your "..asks.." through this **NextGen Data Architecture Foundation**.. *providing you the pertinent market data &/or analytical data models.. Data which is meaningful to your analytical studies into the global crude & products market.*

For not only will we be making available the Plant, Unit, Offline Event Analytical Time Series there will be the means to receive the following:

- Global Crude Runs(at a monthly level) with utilization -- Market Story Aug. 11th

- Global Crude Slates -- Market Story Aug. 18th

- Global Refinery Operations Intel -- Market Story Aug. 25th

as **IIR RGMI - Refining Intel Answers** is an "..integrated ecosystem.." from IIR's peerless Research on refinery capacity & configurations through to Haverly H/Comet Refinery Operations Intel -- where case studies.. simulations.. and scenarios can be performed

..Let IIR place the Crude & Products world at your fingertips.. Tomorrow's NewsToday..

Your feedback is important to us. Please let us know if we may provide additional color or answer any other market questions you may have by replying to this note or writing dt@iirenergy.com.

Additional IIR Resources:

- *GMI Video User Guide*

- *IIR Team Email: iirteam@iirenergy.com*

- *GMI Team Email: dt@iirenergy.com*

- *latest IIR Crude & Products Market Scorecard*