



i<sup>3</sup> forum |

# i3forum Insights

Powered by TeleGeography

# Who is TeleGeography?

- + TeleGeography is a telecommunications market research and consulting firm, with a 30 year track record of providing in-depth research and market data solutions to the industry.
- + We bring both our extensive telecommunications experience and relationships with the carrier community, as well as our expertise in compiling and managing large datasets specific to the industry.
- + Our focus is to provide detailed metrics in a visually compelling, digestible, and actionable way.



TeleGeography



# What are we building?

A secure platform for data sharing, data exploration, and analysis of the international wholesale voice market

This solution will allow us to achieve:

- + **Standardization** of data across multiple carrier stakeholders
- + **Visualization** of actionable KPI data in interactive dashboards and tools
- + **Automation** via APIs to connect industry data more closely to business operations and other internal data sources
- + **Data Quality**, with inputs validated with a combination of machine learning and expert human review
- + **Security**, ensuring that proprietary information is kept completely anonymous, and siloed from other members of the community
- + **Community Engagement**, ensuring that key findings and future feature roadmaps are discussed regularly with an engaged user-base



TeleGeography

# i3forum Insights

Powered by TeleGeography

i3forum Insights is a comprehensive and operationally relevant Market Database for international voice services designed and managed by i3forum members.

You can upload voice traffic data into the system and are able to compare your data with data from participating carriers.

To benefit from the service, you need to agree to contribute data and comply with basic obligations as set forth in the contract.

The solution is available to International Carriers, whether or not they are i3forum members.

**WE ARE SIMPLIFYING HOW CARRIERS SHARE DATA TO BENEFIT OUR INDUSTRY.**



# Core KPIs Tracked

There are three core KPIs being tracked today but with input from participating carriers a roadmap will be developed to expand its scope



## GEOGRAPHIC DATA

- Terminating route, country, and region
- Termination type (Fixed vs Mobile)



## TRAFFIC AND REVENUE DATA

- Wholesale minutes
- Average length of call
- Revenue
- Margin%



## QUALITY DATA

- Service level (Premium vs. Basic)
- Answer-seizure ratio
- Network-efficiency ratio
- Answer-bid ratio
- Roaming support
- CLI offered

# Standardization

One of the biggest challenges in aggregating industry data is defining standards

- + Every carrier has their own data storage systems, naming conventions, internal team and management structure, etc.
- + TeleGeography is providing clear templates and data definitions to contributors on core KPIs

As part of carrier onboarding to i3forum Insights, TeleGeography works closely with every carrier to define a customized ingest process that maps internal data to an industry-wide data model



# Visualization

i3forum Insights moves beyond static reporting

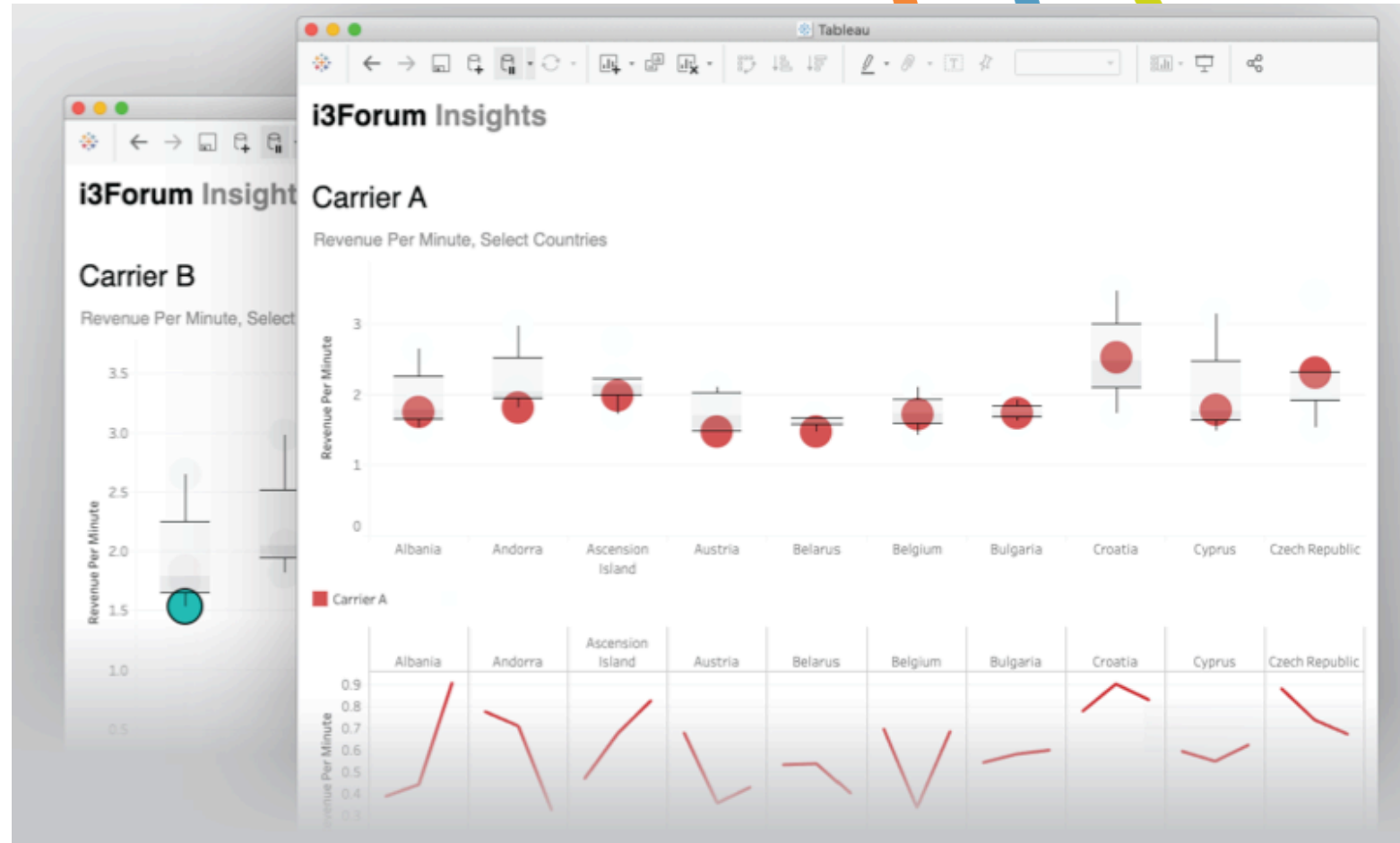
Actionable insights are brought to the forefront with a suite of dashboards and visualizations, highlighting key trends rather than hiding them in static tables or spreadsheets

Powering the i3forum Insights analytics platform with Tableau encourages data exploration via pre-built views, and the creation of customized visualizations on key metrics



# Visualization

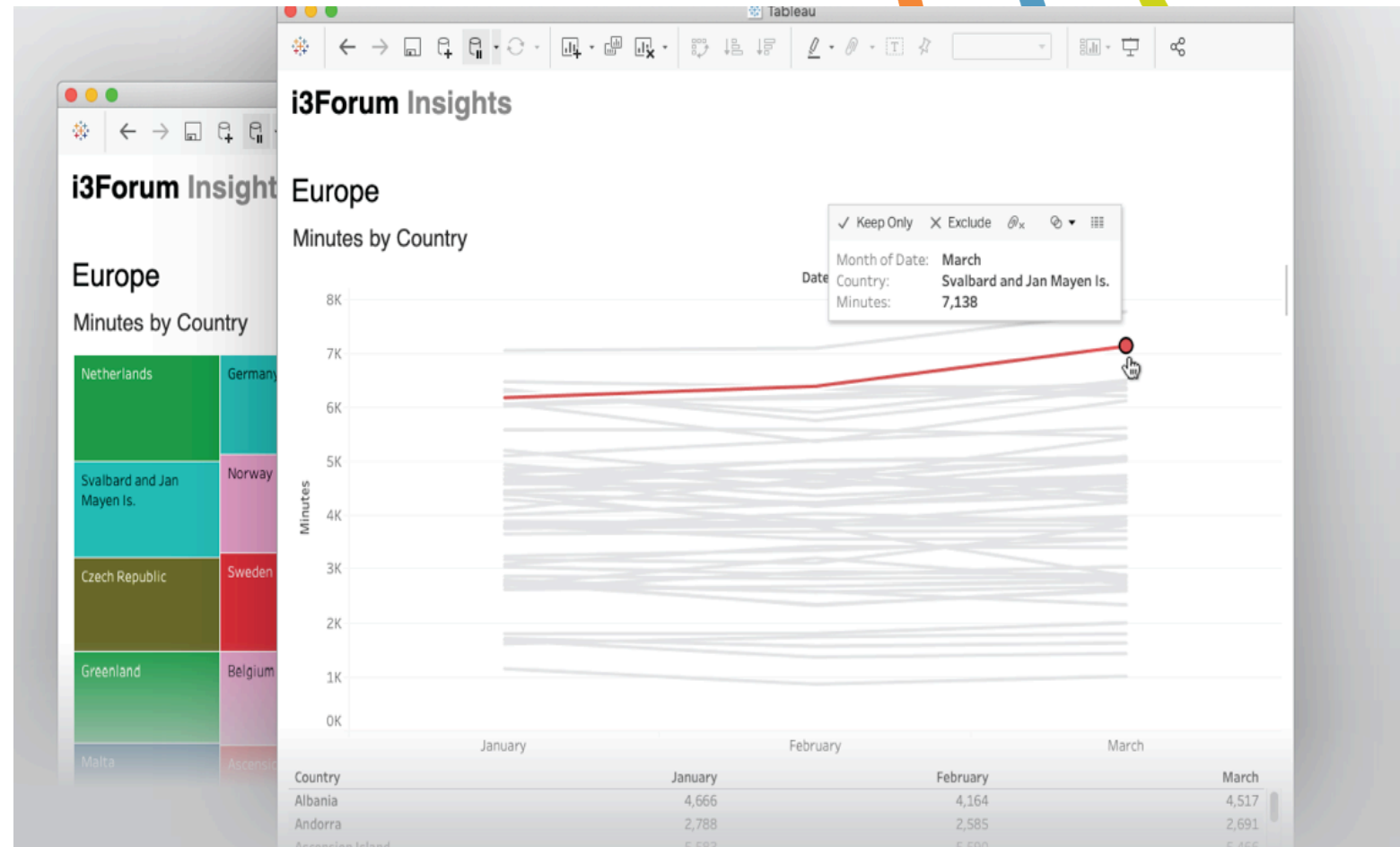
- Competitive Analysis use cases
  - Review own pricing compared to industry ranges
  - Compare own revenue growth by country to industry growth rates





# Visualization

- Trend Analysis use cases
  - Discover countries with fastest rising/falling traffic growth rates
  - Analyze aggregate call quality levels by country and region over time



# Automation

i3forum Insights moves beyond the spreadsheet. APIs into the core datasets allow data to flow freely, and increase the velocity of your business

## Outbound API

- + Allows for integration of key industry data with internal BI tools, or other core business logic.

## Inbound API

- + Allows for automated monthly submissions to the industry database, relieving contributors of additional reporting burden

## Alerts and Thresholds

- + Using the Tableau-powered analytics platform, users may set data-driven alerts rather than manually checking key criteria

```
{
  "data": {
    "termination": [{
      "country": {
        "name": "Benin"
      },
      "carrier": {
        "name": "MSO ABC Benin"
      },
      "price": "0.41",
      "curr": "USD",
      "margin": "10.3%"
    }, {
      "country": {
        "name": "Cameroon"
      },
      "carrier": {
        "name": "MSO ABC Cameroon"
      },
      "price": "0.23",
      "curr": "USD",
      "margin": "15.9%"
    }, ...
  ]
}
```



# Data Quality

Aggregated industry data is only as good as the underlying data itself

TeleGeography is using historical data and machine learning algorithms to learn baseline market behaviors, and automatically flag suspect data

- + Feedback is provided automatically to users for immediate follow-up

TeleGeography SMEs can follow-up on targeted issues and work with contributors to police errors and validate inputs

- + Quality of the aggregate market data is paramount – if data is not sufficiently credible, or underlying issues remain, then data will be actively held out of the solution to protect the integrity of the industry view



# Security

When dealing with proprietary information, security and anonymization of data are key

TeleGeography has experience working with sensitive industry data, and a consistent 30 year track record of working with confidential information without a breach

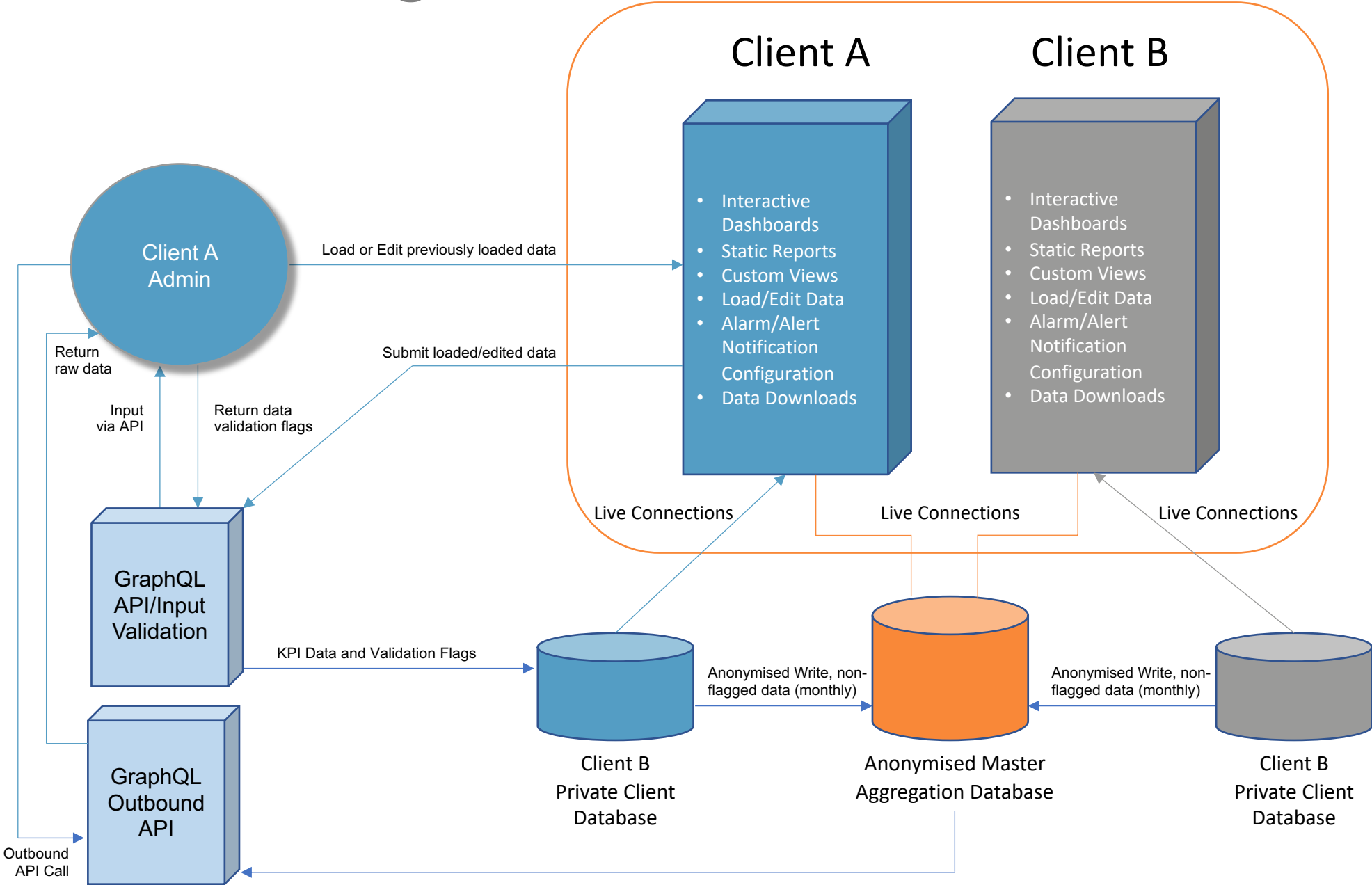
I3forum Insights data for each carrier is siloed in their own logically separate databases, with only anonymized data being promoted to the aggregate industry data store

- + Utilizing industry standard security practices on server administration, access credential management, and disaster recovery policies. All third-party software (e.g., Tableau) adheres to similar security policies and mindset.



# Solution Design

Analytics Solution  
(Tableau Environment)





# Community Engagement

i3forum Insights is not only about the raw data. An engaged community of users provides a great opportunity to share findings, and become more involved in driving the future of the solution itself

Regular meetings of the i3forum Insights users to:

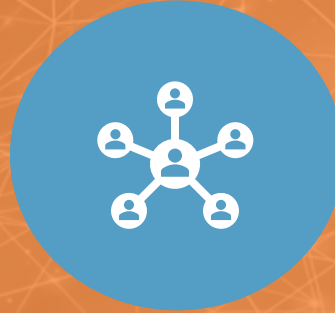
- + Discuss common trends, topics, and insights found in the industry data
- + Share best-practices for ensuring data integrity, and common issues that have arisen in each member's own ecosystem
- + Discuss the future of the i3forum Insights platform, and identify roadmap features and new data streams that would benefit the community



# Join Us Today



Joining “Day 1” ensures that you can use the service right from the beginning of 2020



You can optimize your businesses with the rich carrier data ecosystem, designed by carriers for carriers



Starting now means you can participate in solution design and acceptance with the vendor





# Thank you!

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