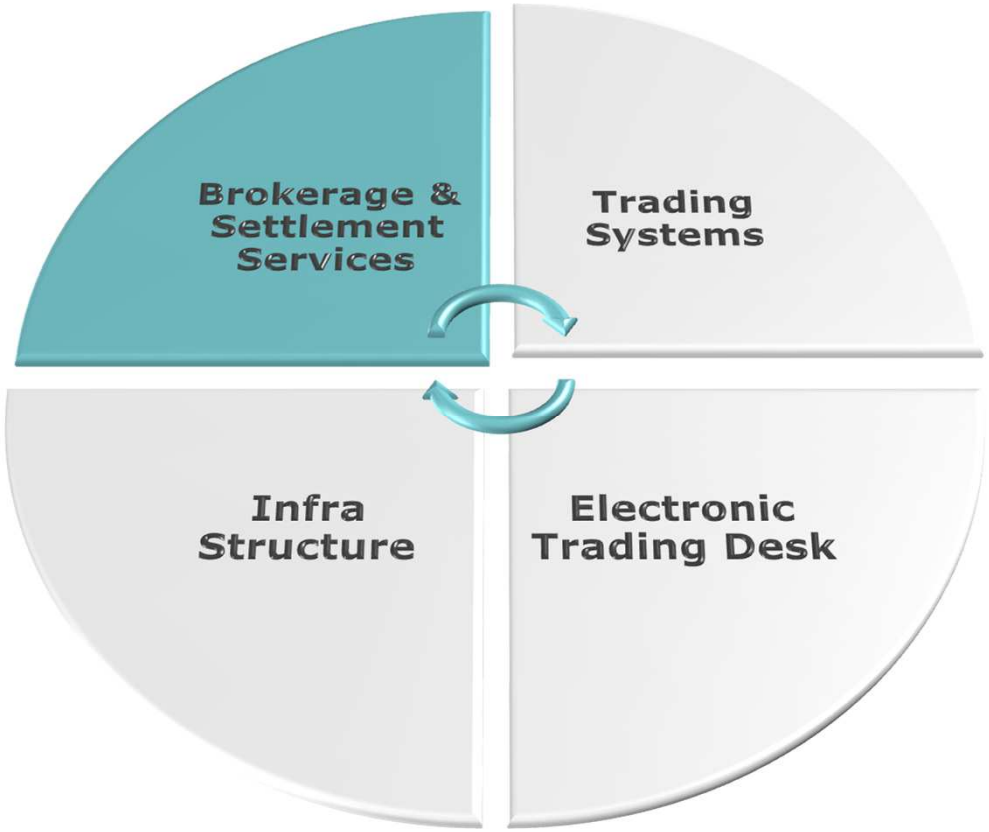
# Ágora's Products and Services

# The Company

- Founded in 1993
- 6-time champion of the Home Broker Ranking of BM&F Bovespa
- 5-time champion of the Ranking Bovespa
- Acquired by Banco Bradesco BBI in 2008.
- Bradesco won the following awards in 2012:
  - Best Latin American bank by LatinFinance
  - Best Brazilian bank by The Banker Magazine
  - 1st place in the 20 greatest financial institutions by Valor Econômico newspaper
  - Top of Mind in the financial category by Folha de São Paulo newspaper.

# Ágora's Products and Services

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# Ágora's Products and Services

## Brokerage

**Bovespa**

- Stocks
- Options
- Forward
- Stock Lending
- IPO

**BM&F**

- Derivatives
- Futures
- Dollar
- Interest Rates
- Exotic Options
- Mini Contracts

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# Ágora's Products and Services

## Settlement Services

- Legal Representation
- Tax Issues Representation
- Local Custodian
- Foreign Exchange book
- Trade Allocations
- EOD and Reconciliation Files

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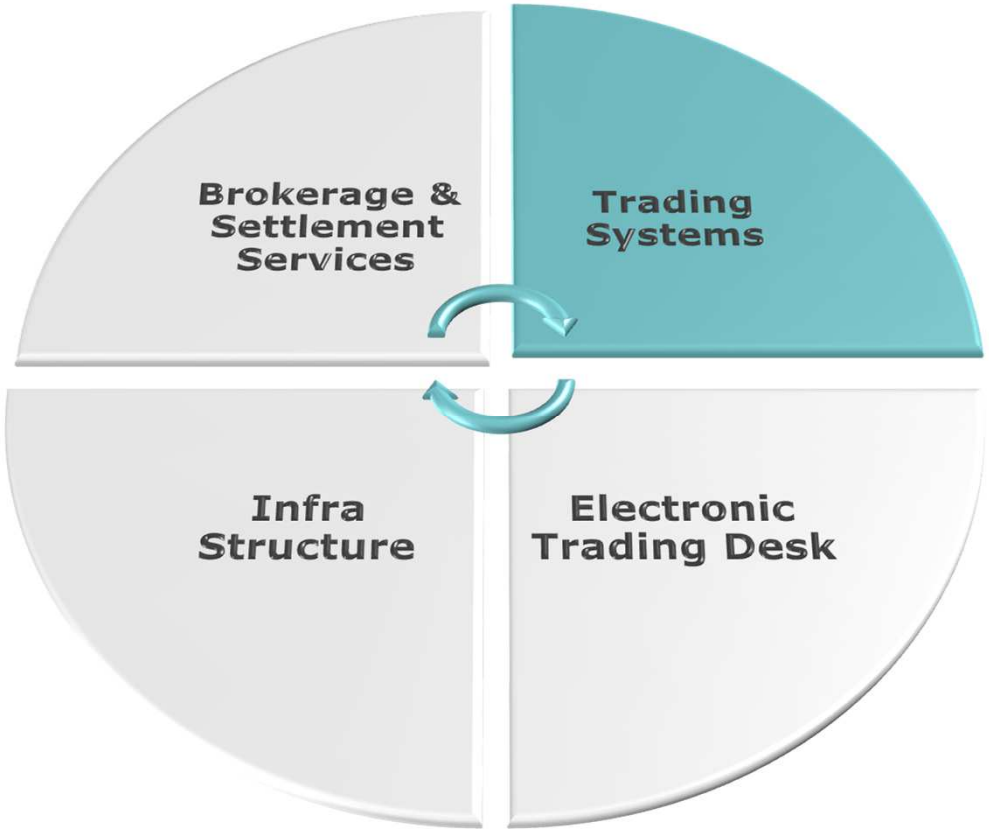
# Ágora's Products and Services

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# Ágora's Products and Services

## Trading Systems – Flow

BI (Broker Intervention)

**ORDER DECISION**
*Broker accepts the order*

**STRATEGIES**
*Algorithmic models*

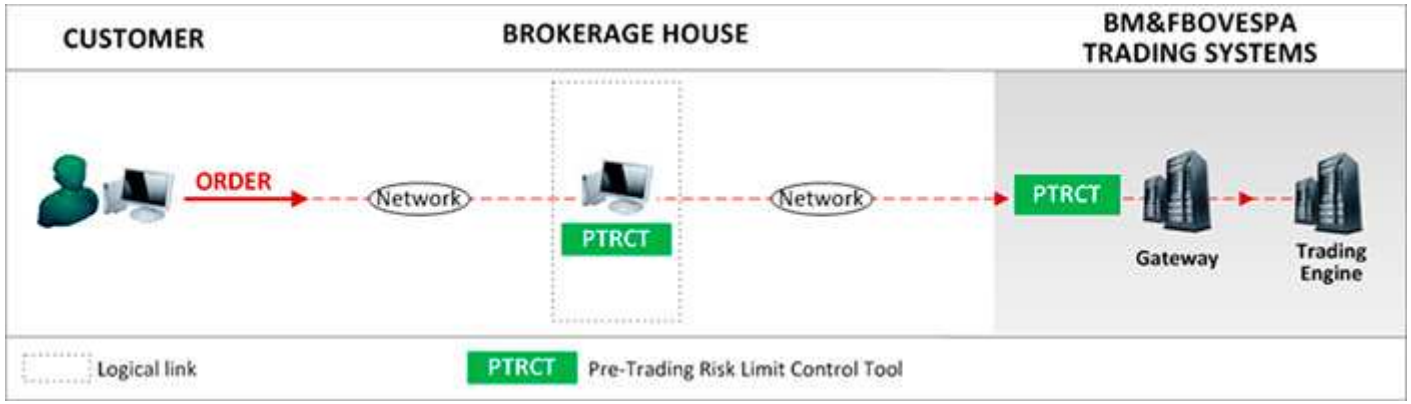
**CLIENT**
*Client trading system*

**ORDER EXECUTION**
*Ágora's Routers*

DMA (Direct Market Access)

## Trading Systems – DMA Models – DMA 1

### Traditional DMA (DMA 1)

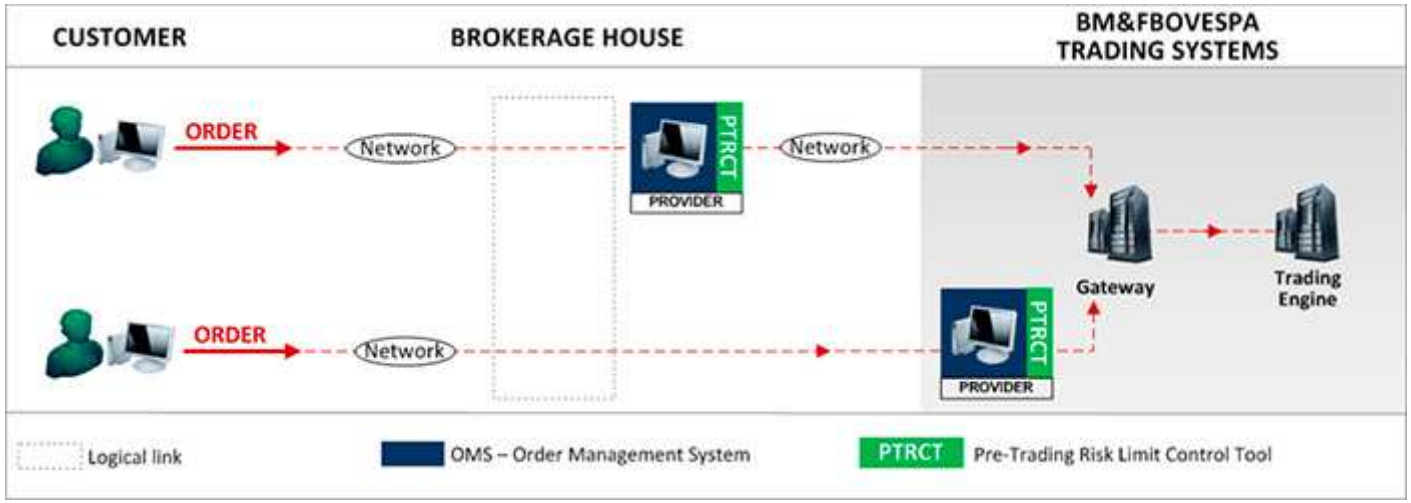



- Orders sent by the Clients are transmitted through Ágora's technological infrastructure before they reach the BM&FBOVESPA electronic trading platform.

- The Clients connects directly to the technological infrastructure of the broker, which in turn connects to the Exchange.

## Trading Systems – DMA Models – DMA 2

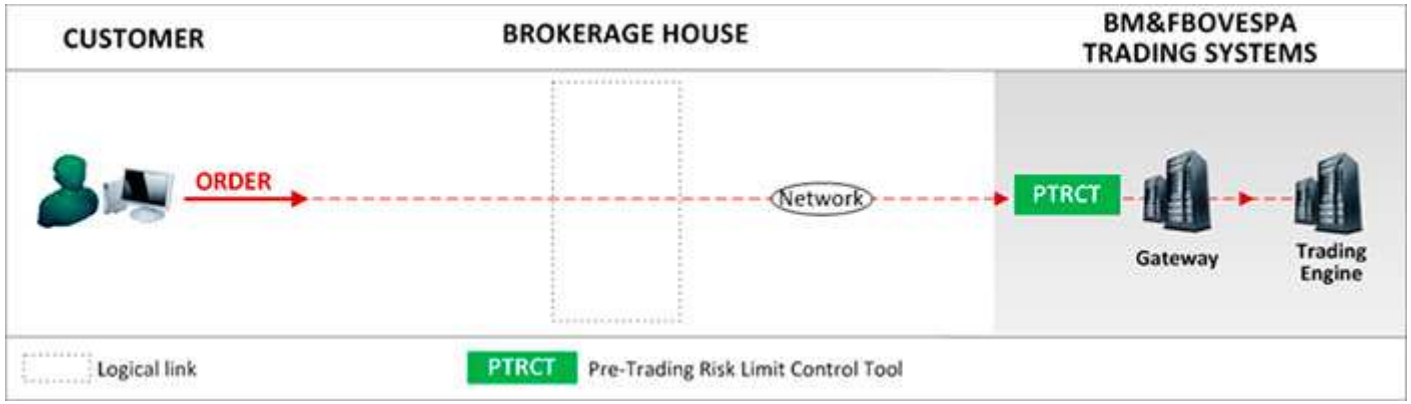
### Traditional DMA use with Provider (DMA 2)




- The customer connects to a DMA provider, which in turn connects to the Exchange.
- The link between customer and broker is maintained.
- The DMA provider can have its hardware and software infrastructure installed near the BM&FBOVESPA data center facilities.

## Trading Systems – DMA Models – DMA 3

### DMA via Direct Connection (DMA 3)

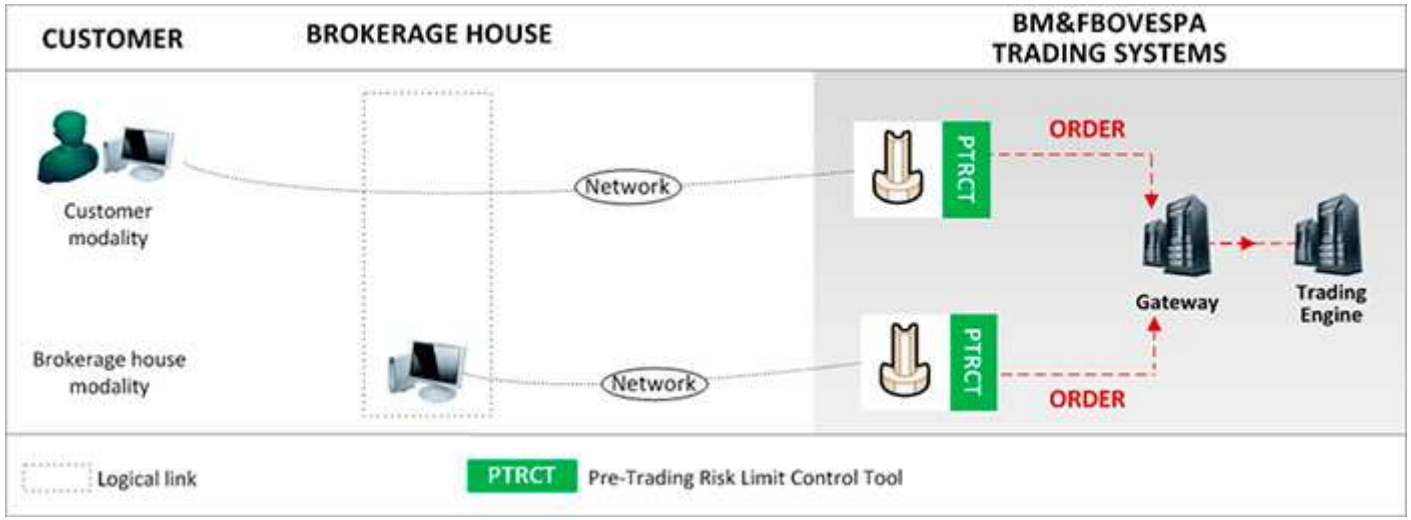



- This model consists of the transmission of orders via a direct connection between the customer and the Exchange without using an intermediary technological infrastructure.

- However, this model entails a link between the customer and the broker.

## Trading Systems – DMA Models – DMA 4

### DMA via Co-location (DMA 4)




- Orders sent by the customer are generated by software running on the customer's server, which is co-located inside the BM&FBOVESPA data center facilities.
- The customer can access the co-location equipment remotely for the purposes of configuration of parameters, monitoring and maintenance.
- Like the other DMA models, this one also entails a link between customer and broker.

## Trading Systems – DMA Models

### DMA via Co-location – Space Costs

| Exchange | ½ RACK (Electric Capacity: 2,0 kVA) | FULL RACK (Electric Capacity: 4,0 kVA) |
|---|---|---|
| BM&F | R$10.000,00/month | R$15.000,00/month |
| Bovespa | R$10.000,00/month | R$15.000,00/month |
| Both | R$15.000,00/month | R$25.000,00/month |

There are other costs involved that may vary like connectivity, hardware and software licenses

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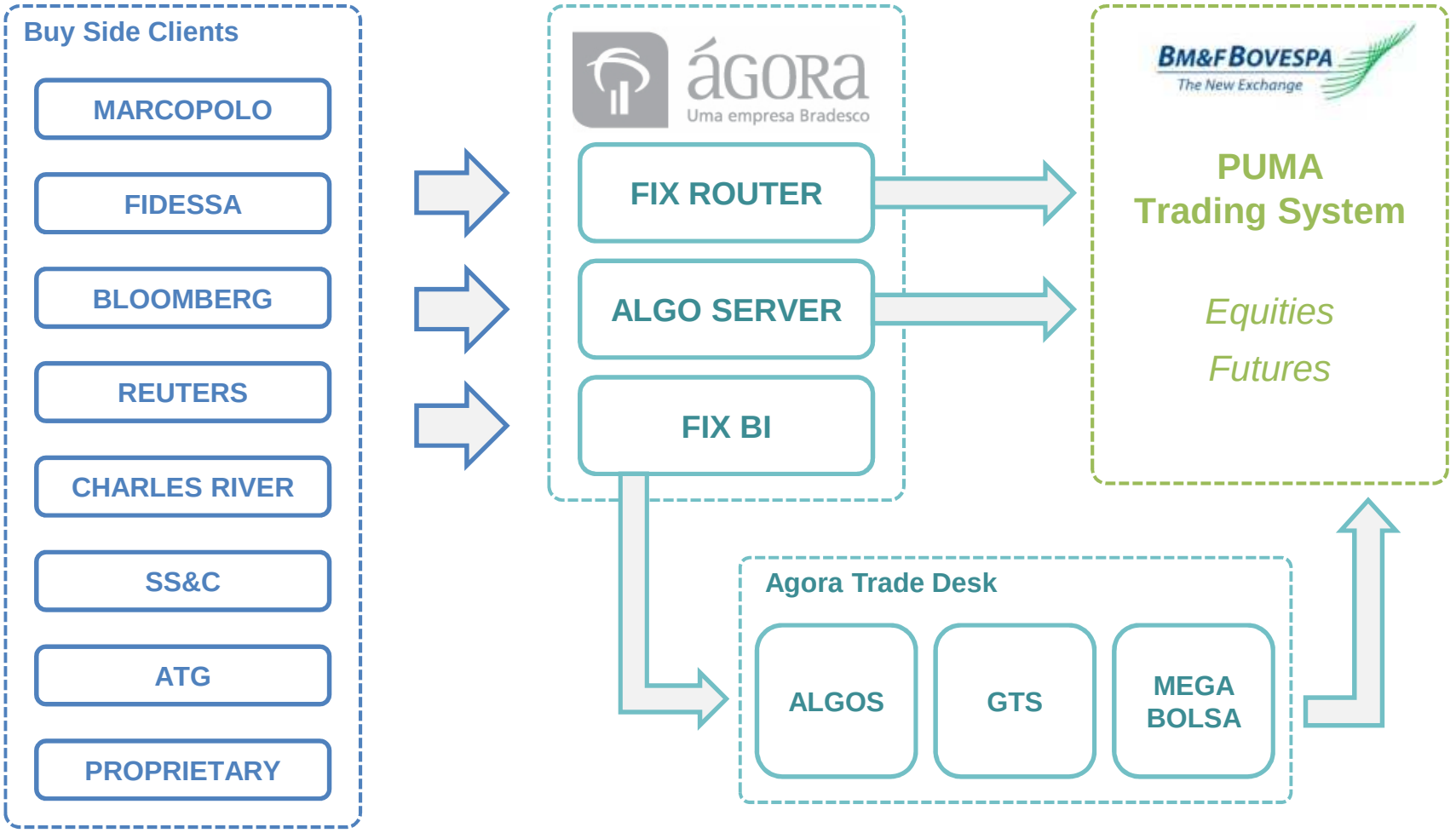
## FIX Connectivity

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## Trading Tools - DMA1

| Valdi Trader (GL) | Broadcast | CMA | EMSX | Plug And Trade |
|---|---|---|---|---|
| ➢ **DMA 1**<br>➢ Bovespa and BM&F real time market data<br>➢ Order routing to Bovespa and BM&F | ➢ **DMA 1**<br>➢ Bovespa and BM&F real time market data<br>➢ Order routing to Bovespa<br>➢ Excel Link for Quotes (DDE) | ➢ **DMA 1**<br>➢ Bovespa and BM&F real time market data<br>➢ Order routing to Bovespa and BM&F | ➢ **DMA 1**<br>➢ Accessible through any Bloomberg information terminal.<br>➢ Order routing to Bovespa and BM&F<br>➢ DMA and Worked orders (BI) | ➢ **DMA 1**<br>➢ Algorithm Trading Platform<br>➢ Bovespa and BM&F real time market data<br>➢ Order routing to Bovespa and BM&F |

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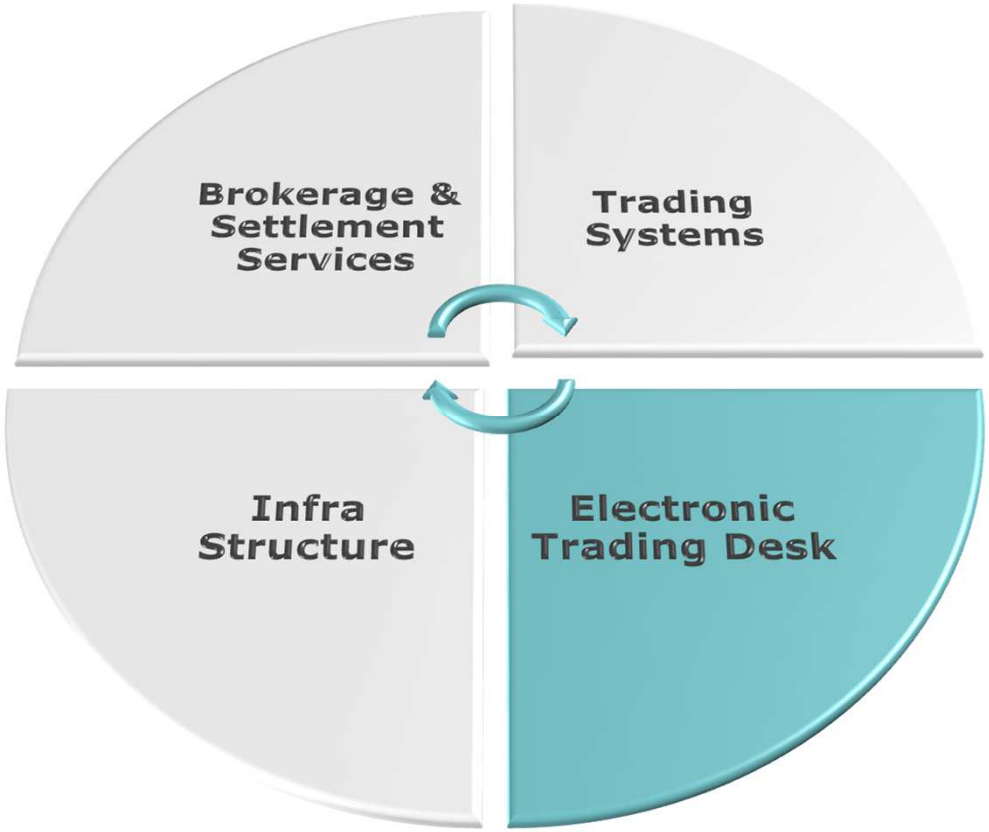
## Trading Tools – DMA 2, 3 & 4

| ATG | Robo Trader | Black Box |
|---|---|---|
| ➢ **DMA 2** | ➢ **DMA 2** | ➢ **DMA 3 & 4** |
| ➢ Fix Gateway | ➢ Algorithm Trading Platform | ➢ CEP platforms |
| ➢ Trading platform | ➢ Bovespa and BM&F real time market data | ➢ Clients' trading strategy |
| ➢ Bovespa and BM&F real time market data | ➢ Order routing to Bovespa and BM&F | ➢ Custom algos |
| ➢ Order routing to Bovespa and BM&F | | |

# Ágora's Products and Services

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# Ágora's Products and Services

## Electronic Trading Desk

Being the first brokerage firm in Brazil to create an Electronic Trading Desk focused in Market Connectivity and Algo Trading, Ágora was pioneer in activities such as:

- Provide Local and International Clients with High Speed and High Availabity Electronic Connectivity to the Brazilian Markets;
- Provide an Algorithmic Trading Platforms
- DMA and Care Orders (Broker Intervention)

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## ETD - Algorithmic Trading Strategies

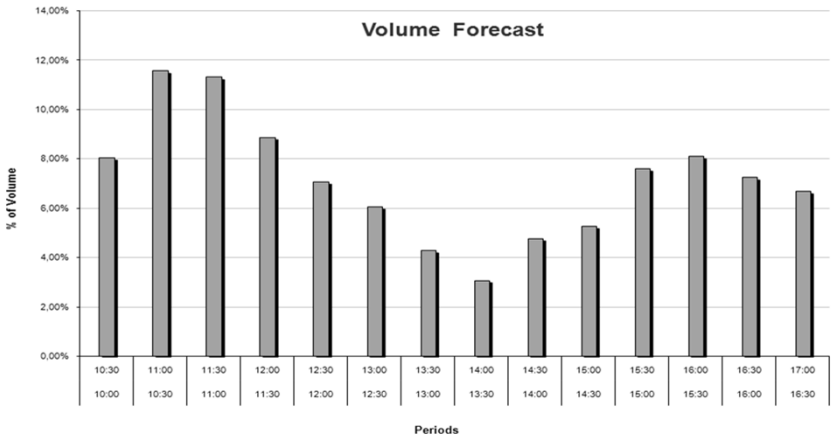
The algorithms can be classified into different segments:

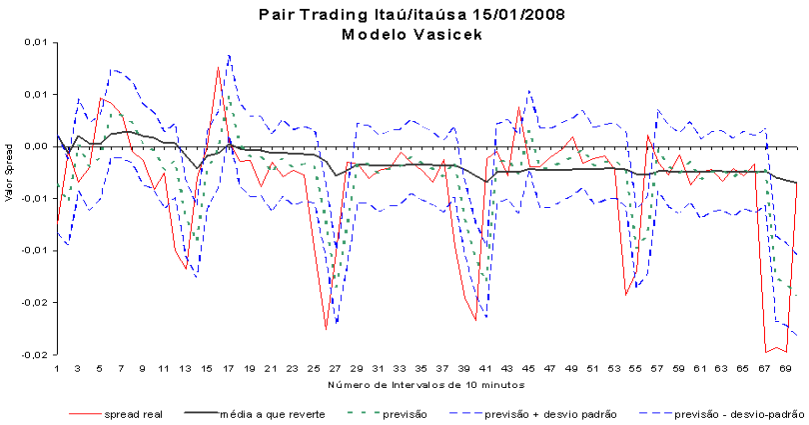
**1. Transaction Cost Reduction**

- Algorithms with focus in the reduction of the market impact, execution cost and prevention against transitory volatility.

**2. Arbitrage**

- Algorithms that use mathematical models with statistics, trading whenever an anomaly in the relationship is noticed, with the idea that the anomaly will correct itself.



# Ágora's Products and Services

## ETD - Algorithmic Trading Strategies

Ágora has the following list of algos. They are used by our trading desk.

- Spread
- MultiLeg Spread
- Delta Hedge
- DI Spread
- Market Participation
- TWAP
- VWAP
- Best offer
- Cash and Carry
- Auction order
- Sniper
- Stop Loss/Start Gain

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## ETD - Algorithmic Trading Strategies

**SPREAD**

- When to use: To trade two assets in the same class, executing a spread defined by the trader. Can be used with the same class of assets or cross-assets (i.e.: Stocks and Options).
- How it works: The algorithm finds the moment in which the price relation between two assets reach the spread defined in the strategy and automatically sends out orders to the market.

**DELTA HEDGE**

- When to use: To trade options without been exposed to the price variation of the underlying stock. It means that the trade will be delta neutral.
- How it works: The algorithm finds the moment in which the price relation between the option and the underlying stock reach the volatility defined in the strategy and automatically sends out orders to the market.

**DI (Interest Rates) SPREAD**

- When to use: To trade interest rates and dollar futures, executing a differential between maturities defined by the trader.
- How it works: The algorithm finds the moment in which the price relation between the two maturities of the same contract reaches the differential specified in the strategy and automatically sends out orders to the market.

# ETD - Algorithmic Trading Strategies

## MARKET PARTICIPATION

- When to use: To trade a percentage of the market volume for an asset during a certain period of time.
- How it works: The algorithm automatically sends orders to the market in order to be in line with the market volume, multiplied by the percentage defined in the strategy.

## TWAP

- When to use: To reduce the market impact of a large execution.
- How it works: The algorithm slices the order quantity in equal parts and distribute the executions in a time frame specified in the strategy.

## VWAP

- When to use: To reduce the market impact of a large execution and pursue the average price of the asset during a time frame.
- How it works: The algorithm slices the order using the historical volume profile of the asset defined by the trader to predict the size of each slice.

## ETD - Algorithmic Trading Strategies

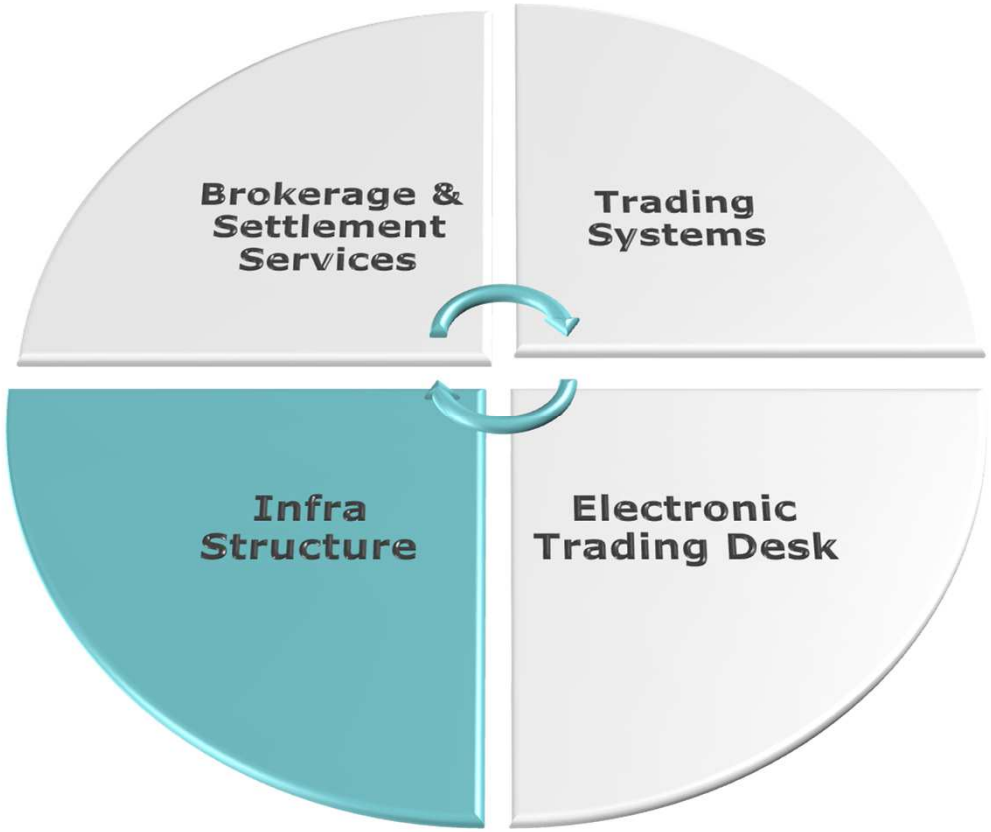
**BEST OFFER (Price and Volatility)**

- When to use: In cases in which is need for enforcement of an order immediately, on market price. The strategy is widely used in other strategies, functioning as an indispensable tool for immediate execution of the order.
- How it works: Always put first the order book offering a partial amount determined by the user. The user also decides how often the algorithm should do that. This will occur until the total amount is reached.

**CASH AND CARRY**

- When to use: To trade two securities that are mispriced with respect to each other, and it expects that misprice will be correct itself. It can be done against Futures, such as Future Index as baskets.
- How it works: The algorithm calculates the theoretical price of the index composition and compares against the future index contract.

# Ágora's Products and Services

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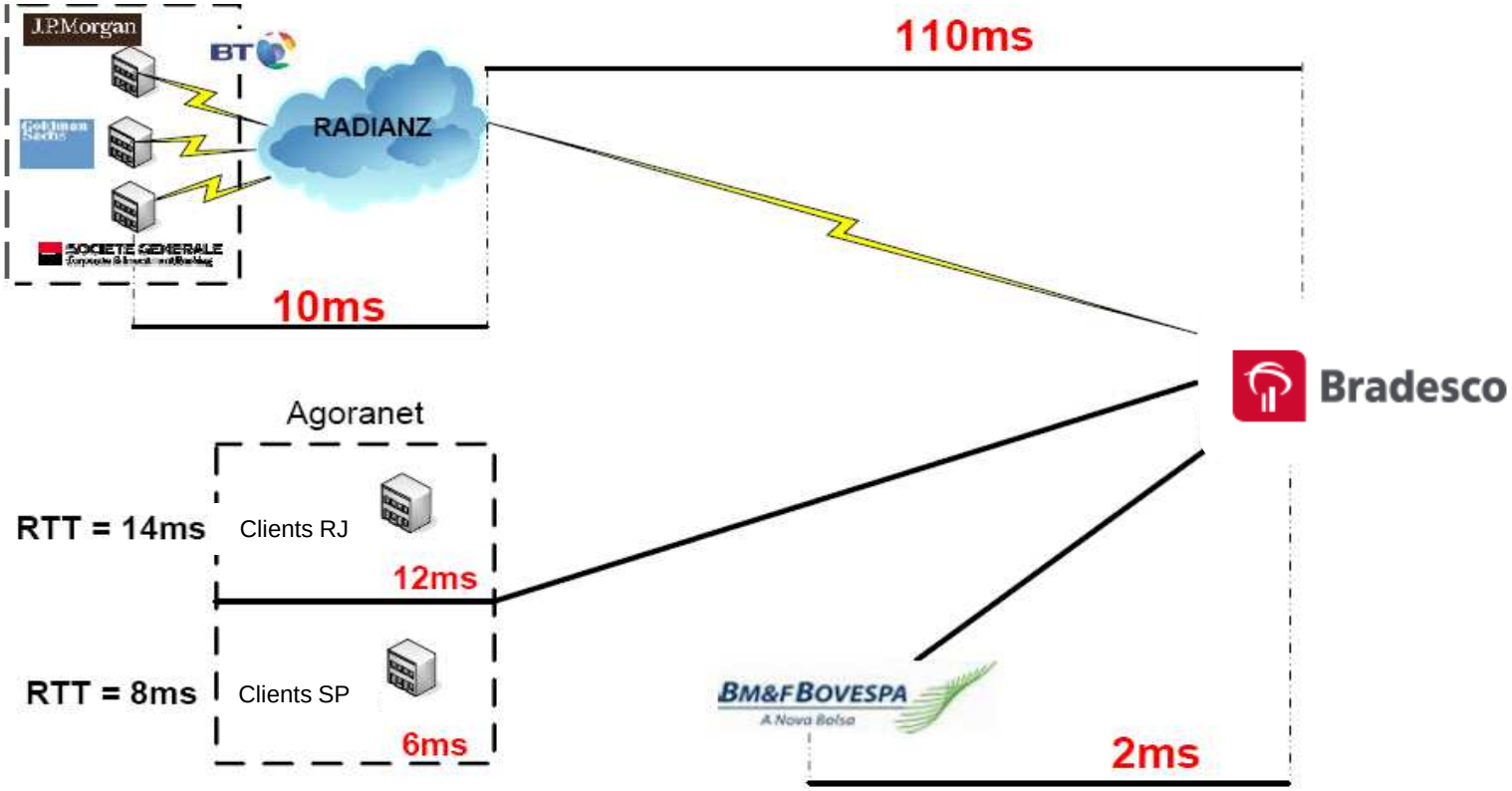
# Ágora's Products and Services

## Infrastructure

Our Infrastructure allow our clients to access the exchanges very quickly

**International Clients - RTT (average) = 122ms**

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