

Solutions from OneTick and R

**Portfolio & Risk Analytics
Business Cases**

Andrew Diamond

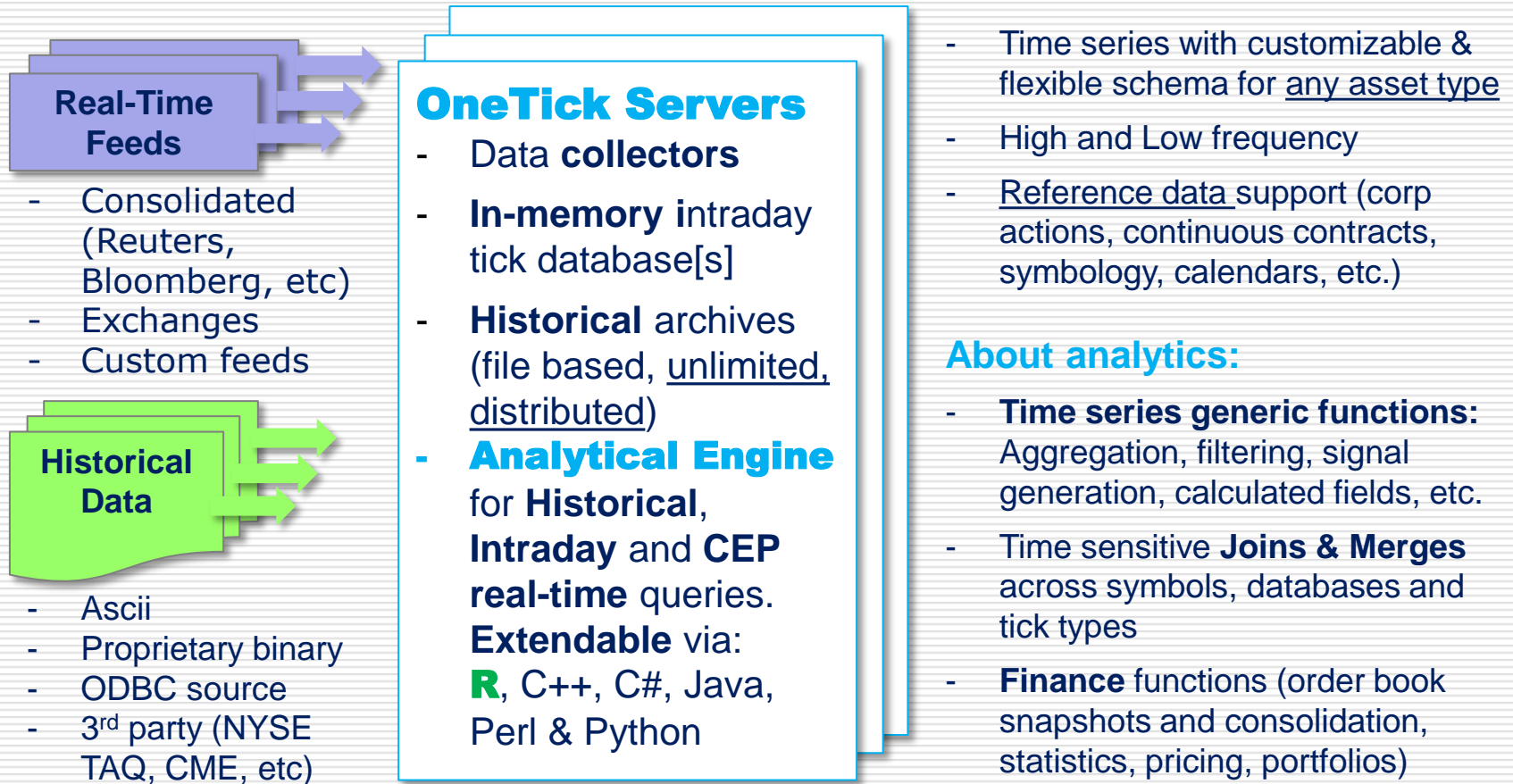
Portfolio & Risk Analytics

Data Requirements & Challenges:

- ❑ **Increasing data granularity**
 - Daily to continuous intraday
 - Milli → Micro → Nano → Picoseconds...
- ❑ **Data cleansing** challenges
- ❑ **Complexity** of data and data consolidation
 - Consolidation across product types
 - Access to complex calculations
- ❑ Increasing data **volumes**
- ❑ **Reference data** (corporate actions, name changes, continuous contracts, etc)
- ❑ Access to both **High** (e.g., Price) and **Low** (e.g., Volatility) **frequency** data
- ❑ **Security master** maintenance
- ❑ Database **schema changes**

... vs Consolidated Risk and Portfolio Analysis

What is OneTick: Overview

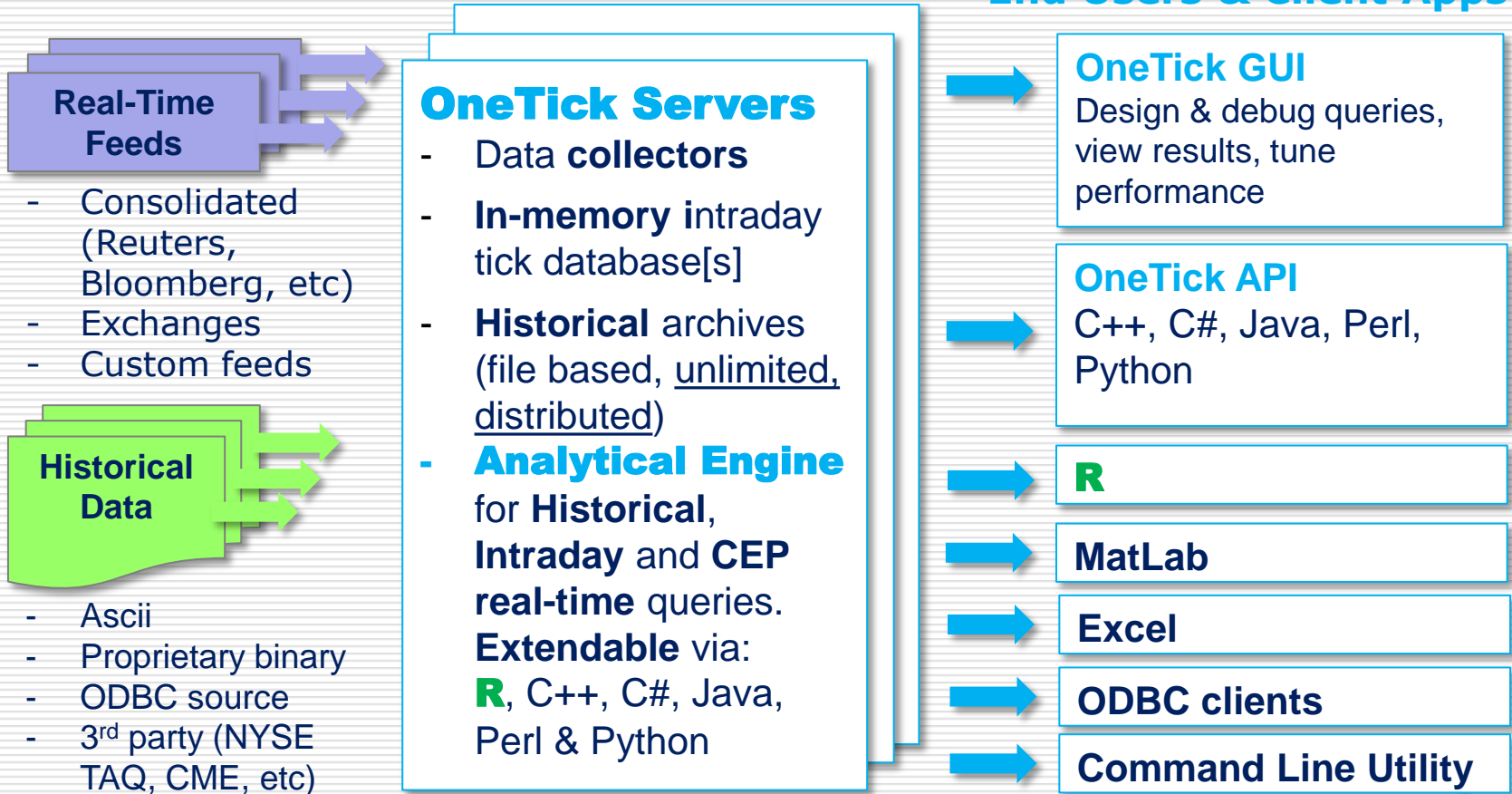


➡ Real-time Out-of-box or custom API

➡ Batch Out-of-box or custom API

What is OneTick: Client Side

End Users & Client Apps:



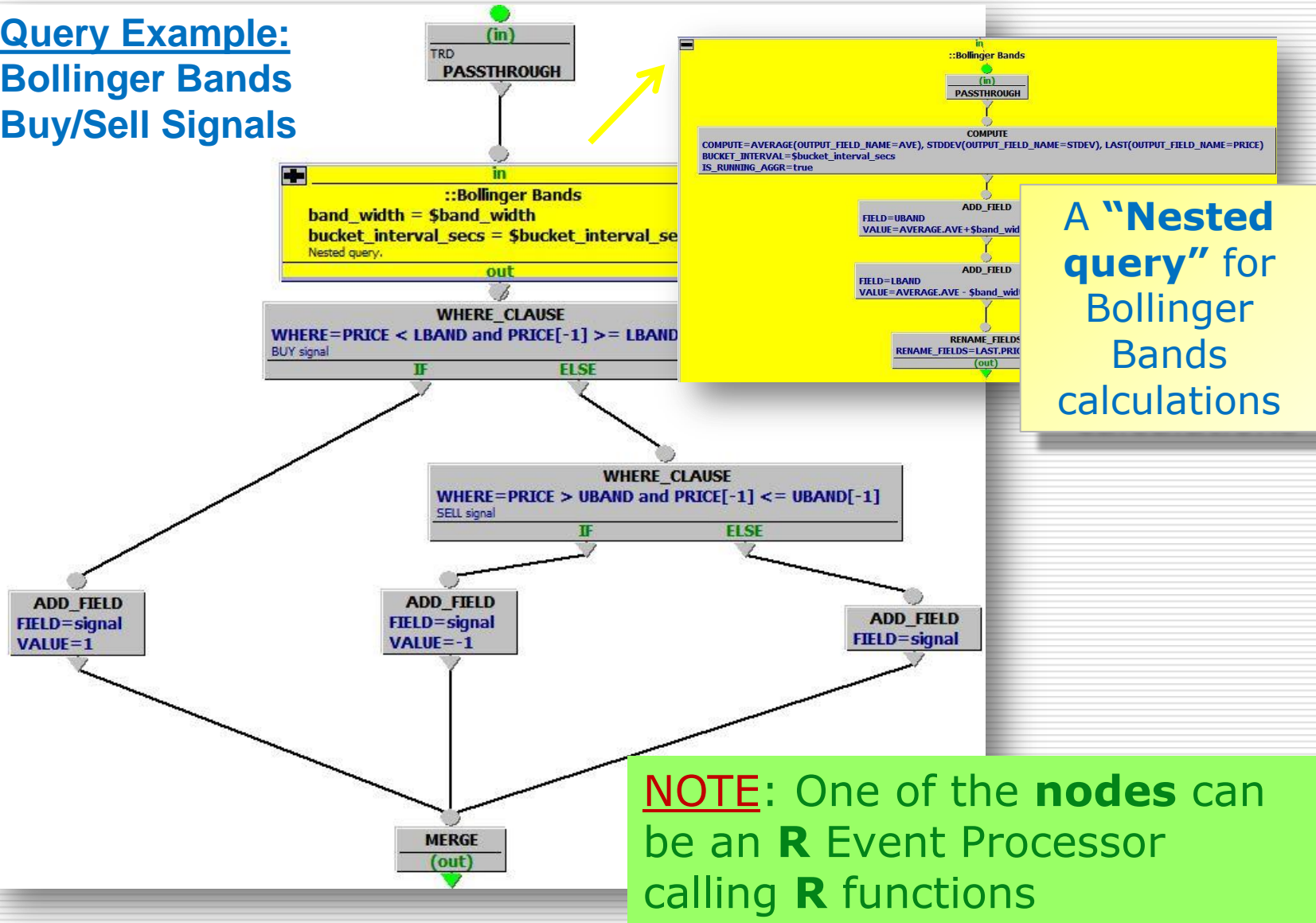
➡ **Real-time** Out-of-box or custom API

➡ **Batch** Out-of-box or custom API

➡ **TCP/IP Real-time** or **on-demand**

What is OneTick: GUI Analytics

Query Example: Bollinger Bands Buy/Sell Signals



What is OneTick: View Results

Viewing Query Results in GUI: Bollinger Bands Buy/Sell Signals



Symbol	Time	AVERAGE.AVE	STDDEV.STDEV	PRICE	UBAND	LBAND	signal	
O::MSFT.	2010/03/01 15:25:45.065	28.580000000000	0.000000000000	28.580000000000	28.580000000000	28.580000000000	0	CE
O::MSFT.	2010/03/01 15:25:45.066	28.580000000000	0.000000000000	28.580000000000	28.580000000000	28.580000000000	0	CE
O::MSFT.	2010/03/01 15:25:45.075	28.580000000000	0.000000000000	28.580000000000	28.580000000000	28.580000000000	0	CE
O::MSFT.	2010/03/01 15:25:45.117	28.580000000000	0.000000000000	28.580000000000	28.580000000000	28.580000000000	0	CE
O::MSFT.	2010/03/01 15:25:45.257	28.584000000000	0.008000000000	28.600000000000	28.584080000000	28.583920000000	-1	CE
O::MSFT.	2010/03/01 15:25:45.281	28.586666666666	0.009428090415	28.600000000000	28.586760947570	28.586572385762	0	CE

NOTE: This query can be called from **R** passing query output back to **R** vector

Q&A

Contacts:

Andrew.diamond@onetick.com

Tim.king@onetick.com

support@onetick.com

Notes:

- All query samples are available on demand and for demos
- VaR samples are for discussion only and are based on the calculations described in "Options, Futures and Other Derivatives" by J.C.Hull