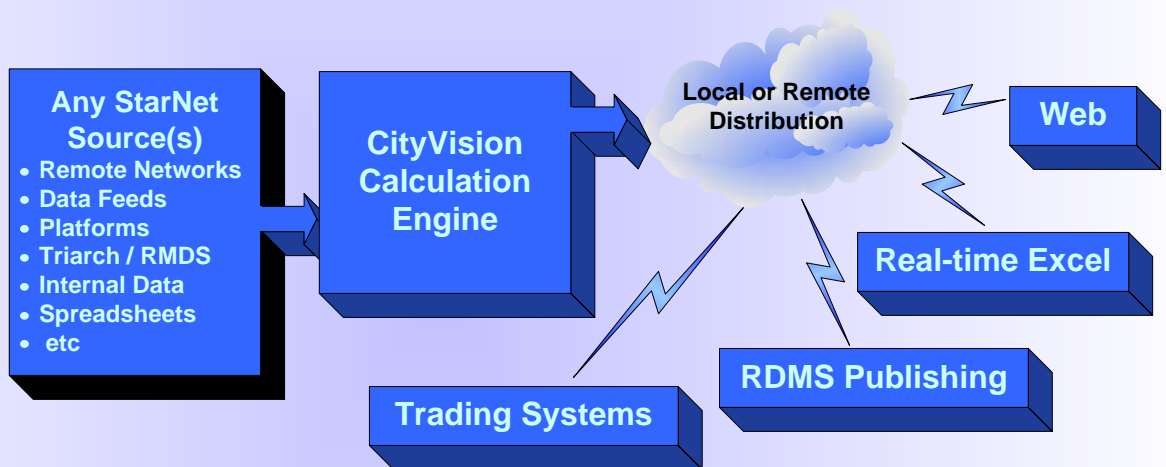


# CityVision Calculation Engine

## Flexible calculations from multiple inputs in real-time

The CityVision Calculation Engine performs streaming calculations on real-time data from multiple sources, producing multiple real-time output datasets.

- real-time, efficient and reliable - thousands of updates per second
- develop 'plug-in' calculations to your own specification
- support for record and chain-based calculations
- distribute results over LANs, Intranets, the Web and RadianzNet
- integrates with market data platforms (e.g Triarch / RMDS)
- Windows GUI for calculation configuration
- Scalable Wintel architecture.



The CityVision Calculation Engine (CCE) allows calculations (or data transformation rules) to be performed on **real-time data**, producing output datasets - also in real-time. A typical deployment will use many calculation modules, performing different calculations such as evaluating spreads, exposure-risk assessment, bad-data alerting etc.

CCE allows **different data sources** and instruments to be configured for processing by one or many calculators. Once activated, it requests the required data from each source and when received, passes the data to each calculator for processing. All subsequent **changes to source data trigger immediate re-calculation** of the results.

The resulting records are available to any other CityVision client applications, such as TraderStation and Excelerator (for real-time **Excel** integration), to **platforms such as Triarch / RMDS** and to custom applications written using the CityVision API. They can also be distributed via LANS, WANS and the Web and **contributed to multiple vendors** using the CityVision MVCS

CCE can watch chains of records and derive corresponding calculated records and chains making index calculations and other aggregation simple.

Any calculation can be applied to any number of instruments from any number of sources, using either the GUI (for manual configuration) or the Calculations API (for **programmatic automation**) to specify the source data and the resultant records.

Multiple CCEs can be configured for scaling, resilience and/or load-sharing.

# CityVision Calculation Engine

## Overview of Features and Benefits

Feature	Benefit
<b>For the user</b>	
Standard windows GUI for configuration, with on-line help. No complex script files or text editing.	Easy to configure and small learning curve for new users.
Support for records and chains, with calculations being applied to each chain member.	Quicker and easier to define calculations on instruments groups, like FTSE 100.
Support for many data sources simultaneously, including direct feeds and market data platforms.	Vendor independence, future proof deployment. Compare sources in real-time.
All calculations performed and distributed to end-users and applications in true real-time.	Fast alerting to trading opportunities, data errors and other time-critical decision support events.
Seamless integration with all other CityVision data contribution and distribution products.	View results globally: real-time in Excel; via the Web; algorithmic trade integration, etc.
<b>Technical</b>	
End-to-end heartbeat and stale-data support.	Use data with confidence, knowing quickly if connection or data source problems exist.
Calculations are implemented as COM objects and can be written in any suitable language.	Flexible implementation and resource usage.
Write your own calculations, use Arcotech calculations and / or combine modules.	Outsource or use in-house resource as appropriate.
Standard Microsoft™ Windows™ platform on industry standard hardware	High performance, low cost, future proof.
True real-time distribution with optimised updates	Fast and efficient, low bandwidth requirement.
<b>Support and Administration</b>	
Comprehensive real-time status reporting with SNMP and API support.	Use with standard network monitor tools and /or write your own custom management applications
Multiple live configuration with automatic fail-over in case of hardware, software or network failure.	Non-stop operation. Support mission critical pricing and trading applications.

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