

# Build Exactly What You Want. Faster Than You Imagined Possible.

## Accelerate Your Capital Markets System Development with NxCore

New regulations and market dynamics can challenge outdated legacy systems. **Building** an in-house replacement can be extremely costly, time-consuming, and complex. But **buying** an off-the-shelf system has its own challenges. A particular vendor's system may not meet all of a firm's needs, resulting in complex and costly customizations, operationally risky workarounds, or the need for *several* new systems.

**Numerix NxCore** provides an innovative hybrid solution to this problem. Gain the best of both worlds by *buying a comprehensive development platform – NxCore* – and then using it to *build exactly what you need*. With NxCore as the foundation of your development project, you can rapidly build a broad range of capital markets systems, including trading, risk, XVA, or margining systems, and more.

**Leverage NxCore's best of breed development tools and technologies to dramatically reduce time-to-market and project risk for new system development.**



### COMPREHENSIVE DEVELOPMENT PLATFORM

Utilize a microservices-based architecture plus a wide-ranging set of off-the-shelf microservices, development tools, and interfaces, as the foundation for your system development.



### STREAMING REAL-TIME CAPABILITIES

Why limit your new system to overnight, intra-day or even on-demand calculations when you can have them all, plus true real-time calculations that update continuously as market data or positions change?



### CUTTING EDGE ANALYTICS

From derivative and fixed income prices to risk sensitivities, XVAs, counterparty exposures, market risk measures, margin calculations, regulatory capital, cash flows, scenarios, and more, NxCore has whatever analytics your system might need.



### OPTIMIZED FOR ENTERPRISE-SCALE SYSTEMS

NxCore is built from the ground up for performance, efficiency, consistency, resilience, adaptability, and scalability, which are essential for the mission critical enterprise systems our clients want to build.

## Key Numerix Differentiators

### Proven Technology

Why build from scratch when you can use street-tested, award-winning, industrial-strength technologies and tools? NxCore is currently powering 70+ Numerix clients using Numerix Oneview (our flagship front-to-risk solution built on NxCore) or bespoke client solutions. We built NxCore on deep experience and refine it constantly through testing and client feedback.

### The Best Analytics

Pricing and risk analytics are the core DNA of Numerix. Our cutting edge models and methods include powerful multi-factor hybrid modeling and American Monte Carlo methods for future price calculations. Our analytics library can produce prices and risk for any commonly traded product in any asset class and extends to cover complex user-defined trades.

### Real-Time Graph

Leverage our proprietary graph framework to build high performance market making, trading, and risk systems. Achieve true real-time performance through its intelligent and scalable design, triggering modules only if the data they depend on changes, resulting in continuous and efficient real-time calculations.



# Jump Start Your Development.

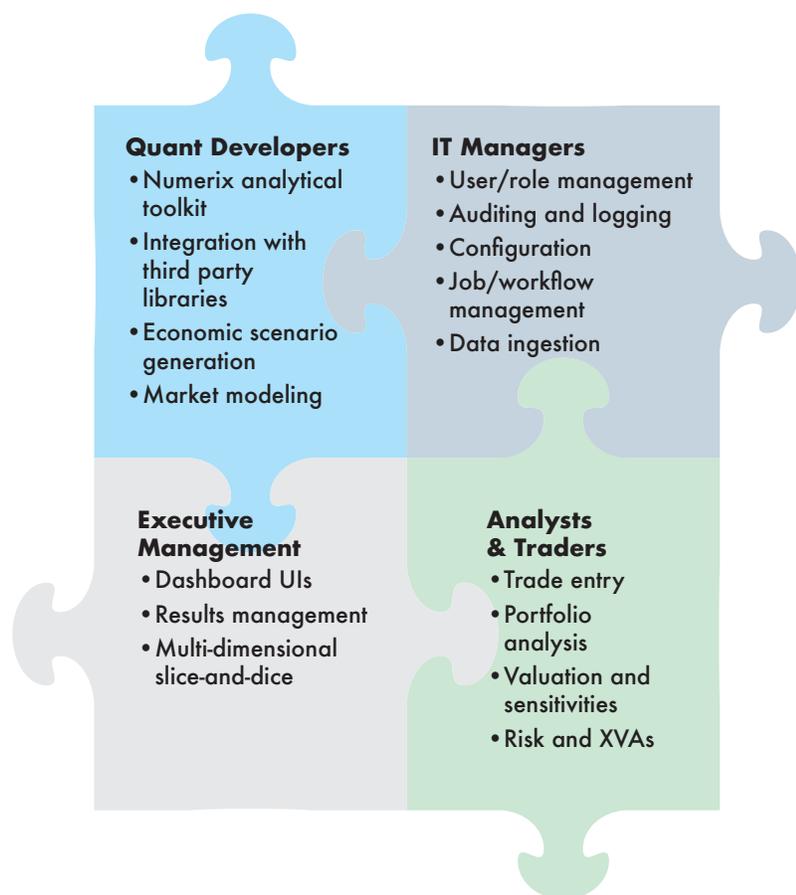
## Everything You Need to Build Your Ideal System

The challenges of implementing a new capital markets solution are common to many firms. How will the quantitative team define and validate models? How will developers implement them? How will system engineers scale that implementation? How will the IT team maintain the system? NxCore is a suite of tools for every team involved in the development lifecycle.

Your solution begins with NxCore's wide range of microservices, pre-built and independently functioning modules for managing data, running calculations and performing administrative tasks. Each microservice communicates over open, documented REST APIs and Python interfaces, so integration with other third-party or proprietary components is simple.

The core value of your system will come from your model, the logic you use to define markets, models and pricing methodologies. Leverage the breadth of Numerix's award-winning analytics library to accelerate development and validation of your model, integrate your own analytical library, or mix and match. NxCore never constrains your options, it only expands them.

As demands on your system grow, NxCore scales with your needs. Solutions can be built in sandbox environments and deployed to large multi-core servers for production. NxCore integrates with the cloud, extending your on-premise solution to AWS, Azure or Google Cloud to meet elastic demand, expand your reporting, or simply cut infrastructure costs.



## The Value of Using NxCore

Gain the following advantages by using NxCore:

- **Fast time-to-market:** leverage off-the-shelf components to speed up development
- **Flexibility:** use Numerix components or your own
- **Customizability:** build exactly what you want using whichever components you want
- **Accelerated system ROI:** your system is completed faster and starts generating returns sooner
- **Greater developer ROI:** empower system developers to focus on high value business functionality rather than infrastructure
- **Lower project risk:** reduce project complexity by using proven tools and components

### • Benefit from a microservices-based architecture:

- Scalability and fault tolerance
- Use different technologies as needed
- Separately upgrade each service
- Ease of extensibility
- Ease of deployment and testing
- Align development teams with specific services to maximize development efficiency
- Composability: applications can be created by choosing from appropriate sets of base services, optional services and custom application services