



Alberta Market Solutions Ltd. is a team of experts in applying technology to solve the challenges of the world's financial markets. We have provided high-quality, real-world solutions to exchanges, CSDs, market regulators, investment banks and trading firms in more than 30 countries.

We have a unique understanding of the global financial markets, combining deep business and technical capabilities. Our experience includes:

- Setup and management of the first successful options market in Asia
- Implementation of technology solutions for exchanges in more than 20 countries
- Analysis and design of financial market structures for optimizing liquidity in trading of equities, bonds, futures, options, and OTC products
- Business and technology strategy for exchanges, brokers, trading firms and technology vendors
- Design of advanced software solutions for order management, trading, surveillance and compliance, clearing and risk management
- Design and implementation of internal markets and OTC trading systems

Alberta Market Solutions Ltd. provides technology and business intelligence to capital markets.

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## OUR CUSTOMERS

Over the past 15 years, our team has worked with some of the world's most innovative financial markets organizations, including:

- Australian Stock Exchange
- Boston Stock Exchange
- Bermuda Stock Exchange
- BIDS Trading LP
- Canadian Venture Exchange
- Chicago Board Options Exchange
- Deutsche Börse
- Dubai Financial Market

- Goldman Sachs
- Hong Kong Exchanges
- Japan Bond Trading Co.
- Korea Exchange
- Merrill Lynch
- OneChicago
- Saudi Arabian Monetary Agency
- Toronto Stock Exchange

We have also worked with leading financial technology including:

- GL Trade
- IBM
- OMX Technology
- patsystems
- SIA S.p.A

## OUR PURPOSE

In most organizations, technology restricts the creativity and flexibility of the organization while imposing high cost burdens. Because of technology limitations, executives cannot execute their plans when they need to, or at a reasonable cost.

However, we believe that technology can be, and should be, an invisible business medium, allowing an organization to implement its strategy in much the same way as a shark swims effortlessly through water.

Our goal is to create and support technology-enabled businesses. In a technology-enabled organization, technology directly supports the creation of new business value. We use our financial-market experience and expert knowledge of technology to help capital markets organizations and solution vendors realise the maximum benefit from technology and to eliminate its barriers.

## OUR TEAM

Alberta Market Solutions can provide experts in business strategy, market and financial product design, systems analysis, application architecture and design, technical architecture, and project management and implementation.



We have proven credentials in the following areas:

Major market exchange and clearinghouse [executive management](#)

[Business strategy](#) for exchanges, CSDs and investment banks, including identifying opportunities for [improving liquidity](#), setup of Alternative Trading Systems, and designing new financial products and markets

Design and implementation of [internal markets](#) for a major global investment bank

Design and development of innovative systems for [pre-trade interest discovery](#) and trade reporting

Design and development of highly scalable [order management and trading engines](#)

Design of [cross-asset class](#) trading systems

Design of high-speed, [adaptive smart order routing](#) systems

Design and development of [central registry and depository](#) systems

Analysis of [regulatory compliance](#) and tax issues

Design and development of FIX and FIXML protocol engines

Design and development of [clearing and settlement](#) solutions for cash and derivatives markets

[Research](#) studies covering trends and drivers in the capital markets for exchanges, regulators, and technology firms

[Process analysis and requirements definition](#) for order management, trading and STP solutions for broker dealers and banks

Design and development of a rapid launch, Internet-based [trading platform for OTC markets](#)

Analysis and design of a system for [convertible bonds](#) trading

Analysis and design of cross-asset [risk management and margining models](#) for clearinghouses

Design and implementation of [options pricing and risk analysis models](#) for futures and options dealers

Design and implementation of systems for investigating [insider trading and market manipulation](#)

[Project management](#) and implementation of solutions to major financial organisations in more than 30 countries around the world

## OUR SERVICES

Our team can leverage our unique combined experience to provide a range of services including the following:

- Business and technology strategy
- Market structure and financial product design
- Business requirements capture and analysis
- Software architecture and design
- Project planning and project management
- Technology planning and technical architecture
- Enterprise systems integration
- Technical problem solving, system performance reviews, and performance optimization

## Capital Markets Intelligence and Technology Today

We have delivered technology and business solutions across the landscape of capital markets for more than 15 years. That means we have seen the trends, the growth, and the impact technology has. It all amounts to us having the know-how to apply innovative thinking and best business practices and the right technology to today's marketplaces.

## OUR PEOPLE

Our experience includes close collaboration at EFA Software Services Ltd., a leading provider of technology to exchanges and clearinghouses.

**Mark Beddis:** Mark has over 20 years international experience as a senior executive, consultant and analyst providing solutions to business problems for exchanges, brokers, commodities trading firms and software companies. From 1992 to 1998, Mark was an Executive Director of the Stock Exchange of Hong Kong, where he developed and headed

the Traded Options division. Mark has consulted for exchanges and regulators in the US, Canada, Australia, Europe, Korea and Hong Kong; commodities trading firms in Europe and Australia; global securities dealers such as Goldman Sachs and Prudential Securities; and technology firms offering solutions to the financial markets including IBM, GL Trade and patsystems. Mark has taught and lectured on financial markets in academic and management courses, and as written extensively on issues in securities and derivatives markets. He was a senior consultant to EFA on product and market strategy and business development.

**Paul Hanson:** Paul is a strategist and analyst on financial markets and technology, who has worked with major organizations such as IBM, the Deutsche Börse, Merrill Lynch and SIA S.p.A. Paul's focus has been on finding liquidity solutions and on new competitive initiatives and trends such as internal markets. He has developed liquidity solutions for block trading, OTC markets, small cap markets, and Liquidity Factories for enhancing liquidity across asset classes. Paul was the global head of sales and marketing for EFA, including the business development and strategy portfolios. Prior to joining EFA, Paul worked for a division of Sungard in Toronto, New York, and Chicago, delivering exception management applications for banking.

**Jim Bird, PMP:** Jim is a senior consultant, program manager and project manager specializing in technology solutions for financial markets. Jim has led research and analysis into the areas of exchange competition, industry trends affecting the global financial markets, Alternative Trading Systems and ECNs, exchange regulatory and surveillance models, reference architectures, and the design of cross-asset class order management and trading engines. Jim has worked with exchanges, CSDs and investment banks in more than 30 countries. Jim was EFA's Chief Technology Officer, and built and managed EFA's product development and delivery organizations.

**Jim Lee:** Jim is a senior analyst and application architect who has worked with

exchanges, investment banks, and CSDs around the world. He has designed trading and order matching systems for securities exchanges; auction and negotiation systems for primary and secondary debt markets; systems for central registries and securities depositories; regional market integration and order routing; order management and trading of convertible bonds; trading and clearing of electrical power transmission capacity; and the trading and clearing of derivatives products. Jim was the head of software development at EFA.

**Geoff Kratz:** Geoff is an expert in OLTP systems architecture and infrastructure design for financial markets systems. Geoff has architected exchange trading systems; smart order routing; institutional order management; and market data consolidation systems for exchanges and broker dealers in the US, UK, Canada, Japan, Korea and the Middle East. Geoff also led advanced R&D into high-speed, high-volume trading for one of the world's largest technology firms. Geoff was EFA's Chief Technical Architect for 7 years. Prior to joining EFA, Geoff designed and managed enterprise telecommunications networks for Bell Northern Research, and developed networking and communications software for Microsoft. Geoff's skills include enterprise network design and management, fault tolerant and high availability system design, software performance engineering and performance modeling, and enterprise application integration.

**Sik Ngai:** Sik is a senior application architect with 10 years of experience in creating highly scalable, adaptive solutions for financial markets. Sik has designed and led the development of trading engines supporting different market structures and trading styles in more than 20 different exchanges; systems for spread trading and quoting of exchange-traded and OTC derivatives; negotiation systems for pre-trade interest discovery and trade reporting; margining and risk management systems, and central order book and internalization solutions. Sik was EFA's Chief Application Architect, where he led the design and development of EFA's solutions for order management, trading and order matching, and clearing and risk management.