

AVENUES Alliance

Supervision and Surveillance Capability

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AVENUES is an alliance of industry-leading experts and niche companies providing independent advisory services to clients in financial markets. Real in-depth expertise, consulting experience and executive roles in trading venues, and thought-leadership in the sector is held in the client organisations themselves or by a select number of independent advisors. **AVENUES** is an umbrella for such advisors. See www.avenues-alliance.com.

What is the ratio of successfully convicted market abuse cases to trades?

The answer is no-one knows. This type of information is not in the public domain, but everyone knows it is infinitesimally small. While trade volumes in each of Europe, North America and Asia soar into their millions on a daily basis, the annual volume of successfully convicted market abuse cases remains below 5,000 globally.

Does this mean that market abuse is not happening and all the regulations, systems, procedures and controls are operating effectively? It is tragic to think of the scale of global investment in this infrastructure has a very low return. Yet it has such a high cost of leakage – in the UK alone, we estimated in 2008 that the cost of failure to implement best execution requirements accurately was between £400 and £600mn per annum, an outcome that is a direct result of some of the unplanned consequences of MiFID.

If for one minute it is possible that there is market abuse and it is remaining undetected, the outcome from the current scenario is that every individual pension fund or investment is under-performing. Sadly, no individual service provider or investment firm is in a position to take a leadership position in this area, for fear of breaking the mould. Furthermore, those investment firms or venues that are driven by shareholder profits are neither willing nor required by regulators to invest further and improve the quality of surveillance, mainly because they cannot resolve the problem individually, due to the high level of fragmentation. Regulators also cannot afford to divert scarce taxpayer resources to such activities, especially following the recent crises as their focus is on systemic risk management. Market abuse is not yet in the public eye.

At AVENUES, we offer a fresh approach to this whole topic and have found a route through all the conflicting objectives to achieve solutions for the greater good at lower cost. Our approach covers regulatory, business, strategic, operational and technical solutions. We also own the intellectual property in the design of the leading surveillance solution in the world.

What is AVENUES?

AVENUES is a unique source of world-leading independent expert advice and assistance to stock exchanges and other trading venues worldwide. We have extensive experience in ensuring successful and cost-effective supervision and surveillance in demanding regulatory and operational situations. Our involvement has ranged from executive management, through strategic development, to day-day-day operations and independent consulting services. We have assisted in the regulatory, business and IT domains, and are as adept at troubleshooting and solving complex problems as at providing thought leadership to the industry, its practitioners and its suppliers. We also have a long track record for delivering to time and budget.

Some of our capability in the supervision and surveillance arena is outlined below¹.

Exchanges and Trading Venues

“Their people clearly have a lot of expertise and experience operating at the highest level. Their business model is not predicated on doing a piece of work that is subsequently filled with 70 or 80 IT people. That is very, very appealing ... We already have a world class IT capability at SWX, but they added value through considered thought-leadership, an inclusive style and their ability to apply their credentials demonstratively. We would happily use them again.”

Lee Hodgkinson, Chief Executive, SWX Swiss Exchange Europe

¹ By the nature of the topic we cannot be too specific in some cases to safeguard our clients' confidentiality.

Management

PLUS Markets Group Plc (2007 – 8)

Interim management for PLUS Markets plc as Chief Financial Officer and Chief Technology Officer to develop a competing equity market. The rôle included gaining regulatory approval for the new venue. This involved procurement and implementation of technology for surveillance, using the SMARTS product, and establishment, staffing and operation of the surveillance function.

SIX Swiss Exchange (2006 - 7)

Head of the Surveillance Technology Centre for SIX Swiss Exchange. Leadership of a twelve person unit responsible for day-to-day operation of the supervision and surveillance technology, based on the SMARTS product, liaison with business users and the IT department, enhancement of the technology as other systems were enhanced, and improvement of the solution's quality to allow its predecessor to be decommissioned.

SIX Swiss Exchange (2006 - 9)

Technical Architect for Supervision and Surveillance for SIX Swiss Exchange. Responsible for ensuring the surveillance solutions, including the SMARTS product, remained aligned with other exchange systems during a time of heavy technology investment leading to greatly increased transaction rates and reduced latency. Particular attention was paid to performance, robustness and accuracy, requiring several improvements to the basic product to be invented. These were implemented under the Architects' direction either by the supplier (SMARTS Pty) or the exchange's own IT staff.

SWX Europe (2007 - 9)

Acting Chief Operating Officer for virt-x (SWX Europe). Managed the exchange's operations through replacement of its in-house surveillance system with SMARTS. Ensured the exchange was able to comply with MiFID. Assisted in the creation of a block trading dark pool (Swiss Block), ensuring trades could be surveilled.

Strategic Direction

We have advised leading European trading venues and trading technology vendors on their business and technology strategies related to supervision and surveillance. Options included outsourcing, development of next generation technology, and creation of a shared utility. We have also invested a considerable amount of our own resource to define the structure, operation and value proposition of a shared utility, which is summarised below in our section on Thought Leadership on page 7.

Oslo Børs (2003)

Undertook a strategic review and created a business plan for the creation of a Pan European surveillance utility, including a knowledge centre.

Procurement

SWX/SIX Swiss Exchange (2004 – 9)

Managed the procurement of new high performance exchange system for the securitised derivatives market and a new supervision and surveillance solution for Swiss Exchange as part of its major Quotematch programme, alongside the introduction of a quote-driven market, initially, using the X-stream trading platform. This included vendor evaluation, tender management, contract generation, contract negotiation and management of the supplier during the programme.

Managed and implemented a full procurement process to acquire all the technology for a second securitised derivatives platform for the German Market based on the Bremen Licence. This covered all aspects for a new exchange including central exchange facilities, supervision and surveillance, market data, interfaces to the German clearing system etc. The process covered a full cycle from bidders' conference through to the evaluation of the bids from the 4 final bidders. The exercise resulted in a joint venture with the Deutsche Börse.

Following a major technology investment and the launch of SWXess, SIX Swiss Exchange required a SWOT analysis of its surveillance technology. We managed a future business requirements capture and analysis exercise, coupled with our assessment of likely developments in regulatory demands. AVENUES can reuse the structure of the resulting requirements document as a template to expedite business requirements capture and analysis for other clients.

Conducted a Request For Information exercise for a major European exchange in 2009. The RFI was addressed both to the then main qualified surveillance product vendors (Millennium IT, 3i InfoTech, SMARTS), and to the leading relevant component suppliers. A detailed analysis was undertaken as to the relative strengths and weaknesses of the candidates against the functional and non-functional requirements of the client. AVENUES can reuse the structure of the RFI document, and the evaluation methodology, as templates to assist other clients in a procurement process.

Definition of a reference surveillance requirements set in 2009. We have assessed the current generation of surveillance products and their functional and non-functional capabilities, together with the likely medium term development of regulatory and business demands on the surveillance function, to define the specification of an idealised solution. We can compare any given existing or proposed surveillance solution, and its future roadmap, against this reference definition to produce an independent assessment of its merits. AVENUES can reuse this reference specification to assist clients in systems planning or a procurement process.

Contributed to a requirements definition exercise for a major European regulator as part of their procurement of a replacement surveillance and regulatory reporting system, eventually implemented using a CEP approach.

"They have been crucial to our business in helping us establish appropriate surveillance strategies and then translating them into efficient and effective software implementations."

Christoph Limena, SWX SMARTS Knowledge Centre Manager

Doha Securities Market (2004)

Designed the surveillance IT strategy for the DSM.

Qatar Financial Markets Authority (2006 - 7)

Created the QFMA and together with Simmons and Simmons, reviewed the laws, wrote all the regulations and designed the complete structure of the QFMA with the intention of migrating the capital markets of Qatar to an international standard.

A Major European Exchange (2008 - 9)

Conducted a tender for an outsourced integrated trading and surveillance solution and evaluated proposals and undertook due diligence on three of the largest technology solution providers.

PLUS Markets Group Plc (2007 - 8)

Designed the contractual structures to manage a prime contracted outsourced service for the delivery of SMARTS, with robust requirements definition, delivery structures and programme management and on-going operations management and service level agreements.

Design and Implementation

Chi-Tech Europe Limited (2009)

Undertook the design of a leading solution for covering market abuse requirements, market surveillance, best execution and risk management. The solution is aimed at regulators, exchanges and venues and where adopted will create a paradigm shift in surveillance.

Leading European Exchanges (2006 - 9)

For a leading European exchange we supplied staff to several key rôles for a major IT development programme, including introduction of a third party supervision and surveillance solution. These rôles included programme office, procurement and supplier management, specification and documentation, user training, testing and user acceptance.

For Swiss Exchange we undertook a review of the procurement and implementation of the SMARTS surveillance product, the SMARTS Pty company and its services, and the exchange's organisation and operational plans for their surveillance technology suite. The "lessons learned" we identified assisted the exchange with subsequent programmes.

Worked with stakeholders to establish a shared vision allowing the implementation to be used and developed effectively. Defined new disciplines for supplier management and the delivery of the vision.

"It was not just about whether the software was OK, but how we could optimise our working practices to best maintain a long-term relationship,"

Chris Landis, Head of the Information Technology Division of SWX.

Undertook a performance review of the SMARTS installation for a leading exchange. Identified several bottlenecks and architectural weaknesses. Designed and in several cases implemented improvements, for instance in partitioning alerts processing and introducing ancillary optimised data stores.

Undertook a connectivity review of the surveillance system and its interfaces with NASDAQ OMX X-stream. Identified several implementation and architectural weaknesses, in particular the need to upgrade from a polling interface to a streaming one.

Bahamas International Securities Exchange (1999 – 2000)

As Executive Insource Directors successfully Implemented an integrated trading and surveillance system using EFA's Horizon system SEMS.

Operations

SIX Swiss Exchange (2006 - 9)

Defined a Service Level Agreement for the SWX SMARTS Knowledge Centre, responsible for the successful operation and development of the surveillance systems including SMARTS, and effective liaison with stakeholders in the supervision and surveillance functions, IT development and operations, executive management and the suppliers.

Operated the SWX SMARTS Knowledge Centre on a co-sourced basis, including providing line management, head of SKC, functional and technical design authorities, technical and business analysts, release manager and testers, and supplier management.

Acted as trouble-shooter for SWX, bridging the surveillance system and other exchange systems, such as the trading platforms, reference and static data warehouses, member interfaces and market data feeds. Addressed both business as well as technical issues.

Established and took line management responsibility for the surveillance function at PLUS Markets plc.

Development

SIX Swiss Exchange (2006 - 9)

Design and implementation of around 60 alert and report algorithms (using the SMARTS ALICE language) for monitoring market operations (e.g. market maker obligations), MiFID compliance (e.g. best execution and late trade reporting) and market manipulation (e.g. front running and painting-the-tape).

Detection of anomalous options trades involving selection and implementation of appropriate option pricing models or heuristic approaches.

Overall architectural design and management of implementation, for instance the gateway between a NASDAQ OMX X-Stream trading environment and SMARTS at SWX.

Business analysis of new regulatory requirements, and design and implementation of solutions. Invention of new algorithmic and statistical approaches to detection of anomalous trading under high transaction loads with slicing of orders across multiple venues.

Knowledge Transfer seminars to key SWX personnel to pass on surveillance knowledge.

"Steve Leegood of Bryok provided advice and assistance to SIX Swiss Exchange from 2006 to 2009. He acted as design authority for the technical department supporting the supervision and surveillance functions of the Exchange. During this period, the Exchange underwent significant business change, which imposed great demands on this department. Steve's dedicated problem solving approach and ability to cope with deep technical and business issues helped ensure that these demands were met effectively. We consider Steve as a key resource for the Exchange now having a comprehensive Supervision and Surveillance System in place. We wouldn't hesitate to engage Steve for further programmes as they would come up in the future. Thanks again for the effort provided!"

Christoph Limena, Vice President, SIX Swiss Exchange

Suppliers

SMARTS/FSA (2006)

Acted as bid manager for a leading surveillance product vendor for a major procurement to the UK regulator, the FSA. This involved coordinating and managing the submissions to a EU regulated tender under the Official Journal of the European Union (OJEU) rules and managed by the UK Office of Government Commerce (OGC). This involved coordinating the proposals and responses from subcontractors as well as pre contract negotiations with the OGC's advisors and legal team.

Worked with a leading CEP vendor to prototype its use in a surveillance context.

Reviewed the surveillance offering of a leading trading products vendor and advised on the requirements and future roadmap.

Assisted a major IT and services provider in defining a surveillance proposition based on its leading-edge event stream processing technology.

Undertook bid winning assistance with SIA S.p.A in 2004 to propose a surveillance solution to Borsa Italiana.

Suppliers we have worked with in the surveillance area include SMARTS, NASDAQ OMX, Chi-Tech, IBM, SIA Eagle and Deutsche Börse.

Thought Leadership

AVENUES members frequently speak at conferences and seminars on developments in trading and the issues facing exchanges and other trading venues. For instance, we spoke on surveillance technology at the World Federation of Exchanges (WFE) Exchange Technology Workshop, hosted by MIT.

Our blogs (at www.avenues-alliance.com) capture our thinking and opinions on topical issues. For instance, the post "Joined Up Thinking On Fragmented Markets" comments on proposals from the Chairman and CEO of FINRA, the US securities regulator.

Supervision and Surveillance Under Pressure

Markets are increasingly fragmented, trading activity is increasingly complex and different venues use different trading methodologies. Data volumes soar while latency shrinks. Automated trading systems are being continually upgraded to provide enhanced performance and functionality.

By contrast, investment in market surveillance systems that give market supervisors the ability to see the full intentions of trader behaviour has been less easy to justify. Current surveillance tools may be able to cope with today's tasks but are coming under increasing pressure as design limits are exceeded. Established surveillance techniques need to be augmented to stay ahead of new methods of market abuse and new behavioural developments. However, as long as surveillance is not seen as directly revenue or liquidity generating for the venues, rather than invest in its enhancement there may be pressure to reduce its cost. For regulators, systemic issues remain at the forefront of policy, challenging the investment available to combat market abuse.

Meanwhile, the landscape for surveillance technology has been changing. New product entrants are challenging the incumbents, new infrastructural components are available to support solutions and new methods are being developed to keep up with investor and trader behaviour.

Regulators are demanding more stringent market surveillance, better risk management and greater cross-market visibility, while buy-side investors want assurance that they are obtaining best execution on markets that are not being abused. Investor confidence will lead to greater liquidity for venues that can meet these demands. Venues can offer new revenue generating services such as transaction cost analysis and best execution validation for participants. Surveillance need no longer be seen simply as a cost to be minimised, but as a competitive asset.

The Value Proposition for one or more Surveillance Utilities

What problem is the idea of a shared surveillance utility seeking to resolve? Market surveillance is essential for investor protection and market quality. Today market surveillance is unable to function effectively for several reasons:

1. Lack of investment - due to high levels of competition at a market / venue level, shareholder pressure for such markets / venues and a lack of regulatory standards controlling the quality of surveillance, markets and regulators are unable and unwilling to invest sufficient capital / budgets into surveillance services to enable it to effectively perform to the standards that protect investors and optimise market quality. The total cost of ownership of existing solutions is prohibitive with little if any result as the solutions and methodologies are not designed with the objective of identifying market abuse beyond all reasonable doubt;
2. Investor confidence - there is no kitemark or quality symbol that denotes whether markets are operating their surveillance to an adequate standard. In Europe in particular, there are no KPIs or ambitions to convict market abuse, sometimes due to complacency and in other cases due to lack of sufficient focus. There is no honesty club of venues that are co-operating together to maximise the standard of surveillance in order to protect investors;
3. Provide a reliable solution that meets the needs of current and future market place. Existing solutions - including the market leading solution, SMARTS - do not fully meet the needs of the market and in fact are part of the problem. The technologies are inferior and the delivery models are expensive and unreliable meaning that markets have to compromise on their ability to monitor markets effectively and they are able to do this because there are no surveillance standards and regulators are too busy to monitor whether markets are operating effectively.
4. Level the playing field upwards - current service behaviour does not drive surveillance to a new level, that seeks to root out market abuse with higher quality, lower cost, real time high performance technology solutions.

If the focus on market surveillance does not change sufficiently, then the outcome will be that investor portfolios will under perform, eroded by loss arising by market abuse. The cost today is unquantified but is believed to be huge. This impacts every individual who holds an investment or a pension fund.

The AVENUES Surveillance Utility is intended to create a quantum leap in progress through the creation of a technology solution, a service and the active lobbying of regulators where a higher level of standards becomes the norm.

About the AVENUES Alliance

The AVENUES Alliance provides independent world class expertise and thought-leadership to advise and assist clients in financial markets. Together the alliance has served well over 100 clients in the financial services sector around the world and enjoys a superb track record of success. For trading venues we have taken on executive and line management roles and led the development of advanced technology. We are well used to helping our clients assess their strategic direction, and our experience of high level IT and operational management contributes to practical implementation of strategic plans.



AVENUES consultants have specific experience in establishing and supporting supervision and surveillance functions and in leading thinking about the future of these functions. We are abreast of the latest and emerging developments in products and IT components relevant to surveillance systems and their relationship to other key trading systems. At the same time we are independent of the vendors of this technology.

Additionally, AVENUES has people who have extensive international experience in running IT businesses, including software-as-a-service, outsourcing and shared utility operations.

If you are thinking about the future of your market supervision and surveillance functions, the AVENUES Alliance offers the best people to provide you expert, impartial assistance in asking the right questions, producing the best answers, and then implementing them.

The founders of the AVENUES Alliance are

- BTA Consulting www.btaconsulting.co.uk
- Bryok www.bryok.com
- Golden Advisors www.golden-advisors.com
- Ivan Andrews

The AVENUES website is at www.avenues-alliance.com.

Professional Experience of Key Individuals

Mr Steve Leegood. MA (Cantab) – Profile

Steve Leegood is a senior strategic business executive, technical architect and problem solver. He has many years experience in successfully making technology work for the benefit of business. He has market vision, creativity and client empathy, backed with strong leadership and communication skills. He initiates and leads change, identifies opportunities and innovatively solves problems.

Steve's 30 year career has seen him involved with some of the most challenging developments at the leading edge of IT. Since 1993 he has focused on the finance sector, first managing Logica's strategic relationship with Reuters, then running Logica's business in trading and exchanges, and eventually directing Logica's global business in the finance sector, involving several thousand staff in 26 countries, and covering retail finance, insurance, asset management, funds transfer, central bank systems and infrastructure, as well as all aspects of the securities industry. As MD of ECsoft UK, he led ground breaking work in e.commerce and CRM.

Through Steve's top level experience he recognised the crucial need for IT to be business led, but that few business executives truly understand IT, and vice versa. That insight led to the foundation of Bryok to bridge that gap. Over the last three years Steve has been doing just that, primarily as an advisor to SIX Swiss Exchange. Through this engagement Steve has gained world class expertise in advancing the techniques of market supervision and surveillance covering all asset classes, and tools such as the SMARTS product.

Steve recently led a Request for Information for SIX to identify the best approach to support market supervision and surveillance in the future. He has subsequently defined the requirements of a next generation surveillance system for a leading exchange technology provider.

Steve has built and run several successful international businesses and has an excellent grasp of commercial disciplines. He has a reputation for consistently delivering the bottom line.

Career Summary

- 2004 to Date Bryok Systems Ltd, Director
- 2001 to 2009 The PRISM, Founder
- 2001 – 2002 Eurolink Group, Interim Managing Director
- 2000 – 2001 ECsoft UK Ltd, Managing Director
- 1998 – 1999 Logica UK, Divisional Director, Finance Business
- 1996 – 1998 Logica UK, Divisional Director, International Finance Business
- 1995 – 1996 Logica UK, Divisional Director, Trading Systems
- 1993 – 1996 Logica plc, Reuters Global Account Management
- 1988 – 1993 Logica UK, Energy and Utilities Sector
- 1979 – 1988 Logica UK, Project and Technical consultancy work

Key Surveillance Experience

Avenues Alliance Initiative (2009 – on going)

Design of a leading surveillance solution and a market utility service.

2009: With BTA Consulting, for a leading exchange technology provider

Defined the requirements of a next generation surveillance system. Reviewed the state of the art among incumbent and emerging products and technologies; assessed current and probable future regulatory and

competitive demands; analysed the impact of increasing transaction rates and developments such as algorithmic and high-frequency trading; applied knowledge of supervision and surveillance functions and the current techniques and tools they use.

2006 – 2009: SIX Swiss Exchange: SMARTS Stabilisation, Enhancement & Management

Working as a trusted advisor, Bryok was called in by SIX to review the status of its OMX X Stream and SMARTS implementation. OMX X-Stream is a leading mixed-asset exchange platform and SMARTS is a leading Supervision & Surveillance application.

Steve conducted a thorough review of the SMARTS application, the vendor and its SIX customisations. He then became the business and technical lead in a major project to stabilise, enhance and roll-out the application to all SIX markets and asset classes. Steve's work involved diagnosing issues and overseeing vendor remedial work. He instigated and led a thorough overhaul of mission critical 'Alerts' and 'Reports'.

Steve acted as advisor to SIX on the technical and business implications on major new initiatives (including MiFID), particularly as they relate to the surveillance function. Steve also acted as application architect across the OMX X-Stream and SMARTS gateway.

He led a Request for Information for SIX to identify the best alternative products or component technologies currently available to support market supervision and surveillance as both transaction volumes and the sophistication of these functions increase.

Peter Golden BSc, FBCS, CEng, CITP, MIOd

Peter is an executive level information technology practitioner and advisor. He is technically current, a visionary, a lateral thinker and problem solver with strong business awareness. Peter has been a strong advocate of Service-Oriented Architectures and Software as a Service (SaaS). As an accomplished public speaker, he has spoken at many external conferences, most recently at Finexpo and to the British Computer Society, on Business-led Service-Oriented Architecture and the convergence of Business and IT in Financial Services. Recently, Peter has specialised in the aspects of governance, compliance, surveillance and organisation particularly within the securities trading sector.

He was an IT Director at a major UK Investment Bank, a regional vice president for trading systems for a major US investment bank, a CIO/CTO for three independent software vendors and latterly the COO of one.

Peter's experience spans most of the financial services sector including: Investment Banking, Retail and Commercial Banking, Securities Trading and Exchanges, Building Societies, Banking Security and anti-fraud. He has had strategic responsibility both for IT applications and for IT infrastructure. Peter was also responsible for third party supplier relationships while at BZW. Outside of the financial services sector, he has advised a major building supplies group and the UK Met Office on IT Strategy and IT principles.

In Peter's early career he was a detailed hands-on technologist and computer systems developer in a wide range of applications from retail accounting through real-time systems for airline departure control to complex networked systems in bank payments processing and latterly a pioneer in the deployment of networked client-server applications for real-time foreign exchange and money market trading.

In the last 10 years he has advised clients through number of consulting and advisory practices. Peter advised and assisted a wide range of clients including: SIX/SWX Swiss Exchange, Voca, Deutsche bank, Clearstream Bank SA (the central securities depository of the Deutsche Börse), ValidSoft (as CIO then COO), LIFFE, SMARTS, Cheltenham and Gloucester Building Society, Jewson Builders Merchants (IT Strategy), Reuters, the Financial Services Authority and the Met Office.

Peter has acted as an expert witness in two major commercial litigations, for a failed Internet-based retail banking application and for a failed card application and account management system. He is a vetted registered expert on the UK Register of Expert Witnesses. In addition, Peter has also performed technical due

diligence and system review for several parties; fund managers financing technology companies, the merger of two European stock exchanges and in the merger of Voca and Link.

Career Summary

2003-	Noel Group, JMG Partners. Golden Advisors, Avenues Alliance LLP membership and company directorships/shareholder
2002-2003	e-portals, Director and CTO
1999-2002	Charteris, Principal Consultant
1997-1999	Citibank Programme Director
1990-1997	Barclays Bank/BZW, Senior Executive, IT Director
1987-1990	Ceres Trading Systems, Technical Director
1981-1987	Citibank/Citicorp VP EMEA Treasury
1981	Bankers Trust, Systems officer
1980-1981	Scicon, Senior Consultant
1980	Informatics Limited, Senior Consultant
1977-1980	Citibank Project Manager
1974-1976	Scicon, Senior Programmer
1972-1974	Blake Computer Services Programmer
1971-1972	Harrods Ltd, Programmer

Key Surveillance Experience

Avenues Alliance Initiative (2009 – on going)

Design of a leading surveillance solution and a market utility service.

Major European Securities Exchange (December 2008 – March 2009)

Peter provided cost reduction and procurement advice to a major European securities exchange concerning the potential outsourcing of its main platform operations. The team identified savings of around €45 million p.a..

SMARTS Europe Limited

Peter acted as an advisor and bid manager for SMARTS Europe, the UK Subsidiary of SMARTS Pty Ltd, the leading supplier of market abuse detection and surveillance systems to Securities Exchanges and Regulators. SMARTS is headquartered in Sydney Australia.

Peter managed the bid to the Financial Services Authority for the replacement system for the FSA's Market Abuse Detection System and Database, SABRE II. Peter authored all the programme and quality management aspects of the bid along OGC Managing Successful Programmes (MSP) and PRINCE2 guidelines. The bid was conducted along formal EU and UK Government rules. SABRE II covered all aspects in market abuse detection and surveillance for one of the world's leading regulators.

SWX Swiss Exchange: Third Party Procurement Workstream Manager June 2004 to April 2006

Peter acted as advisor and supplier relationship manager on two major programmes to implement high performance quoting platforms for the trading of securitised derivatives for SWX and to implement a regional exchange in Germany. He advised SWX in the transition from an entirely in-house technology development organisation to one using third party technology applications.

He conducted all the procurement and due diligence including all contractual matters in the acquisition of SMARTS for Surveillance and market monitoring and Computershare (now OMX) X-stream as a high performance trading platform. He project managed the SMARTS implementation on an interim bases.

Peter was a management team member and steering committee advisor to the SWX Board on the Quotematch programme. He provided advice and guidance on setting up the programme, on aspects of governance and defined risk, issue and change management processes for the programme.

Brian Taylor, BA (Hons), ACA

Brian is Managing Director of BTA Consulting Limited - a niche and leading financial markets consultancy group, which Brian set up in 1991.

BTA Consulting has provided advice to some 100 clients across the globe on projects of national importance associated with the development of capital markets. This includes mature and emerging markets exchanges, MTFs, regulators, CSDs, investment banks, data centres and IT providers. The client experience has involved a significant number of projects where innovation drove change into markets and market structures. Current projects include strategy advice to a major technology provider, the demutualisation of the Ghana Stock Exchange, the design of a new leading surveillance system, a technology systems selection project, and bid winning assistance.

Brian also chairs/speaks at a range of industry leading conferences, writes for journals, commentates on TV and authors empirically based research reports.

As well as providing consulting advice, Brian has undertaken a number of insource interim executive management roles including:

- Chief Financial and Technology Officer for PLUS Markets plc in London where he successfully led a team to deliver an award winning MiFID compliant trading and surveillance solution in 9 months which has facility competition and fragmentation in trading;
- Interim Head of Finance for the investment and banking arm of the Department of Constitutional Affairs, part of Her Majesty's Government, managing £6bn of assets.
- Chief Executive Officer of the Bahamas International Securities Exchange.

Career Summary

1991 -	BTA Consulting Limited
1988 – 1991	Senior Manager, Price Waterhouse London in charge of the Exchanges Consulting Group
1985 – 1988	Vice President, Equity Syndication, Merrill Lynch Europe Limited
1980 – 1985	Arthur Andersen & Co.

Key Surveillance Experience

Avenues Alliance Initiative (2009 – on going)

Design of a leading surveillance solution and a market utility service.

2009: With Avenues Alliance, for a leading exchange technology provider

Defined the requirements of a next generation surveillance system. Reviewed the state of the art among incumbent and emerging products and technologies; assessed current and probable future regulatory and competitive demands; analysed the impact of increasing transaction rates and developments such as algorithmic and high-frequency trading; applied knowledge of supervision and surveillance functions and the current techniques and tools they use.

2007 – 8 PLUS Markets Group Plc

Interim management for PLUS Markets plc as Chief Financial Officer and Chief Technology Officer to develop a competing equity market. The rôle included gaining regulatory approval for the new venue. This involved procurement and implementation of technology for surveillance, using the SMARTS product, and establishment, staffing and operation of the surveillance function.

SIA S,p,A (2004)

Undertook bid winning assistance with SIA S.p.A in 2004 to propose a surveillance solution to Borsa Italiana.

Oslo Børs (2003)

Undertook a strategic review and created a business plan for the creation of a Pan European surveillance utility, including a knowledge centre.

Avenues has access to range of other consultants with direct experience of surveillance, including software developers.