Mark Townsend

Profile

Team Lead/ Senior Developer. More than 10 years experience on the Microsoft stack working alone and in small teams in credit derivatives, equity derivatives and structured funds front office. Advanced .NET skills, version 3.0 to 4.5, predominantly service side C#. Expert Excel and VBA skills, including teaching. Experience designing and building service oriented systems using WCF. Experience of Kanban, TDD, Continuous Integration, stakeholder management, mentoring and leadership.

Employment

Aug 2011 to May 2015, J.P. Morgan, London
Mansart Development Lead

This was a mixed role involving project, vendor and team management, guiding the business on technology issues, mentoring of colleagues, enterprise architecture and development on the Microsoft stack (.NET4, WCF, SQL Server 2008 R2, Entity Framework, Excel VBA, PowerShell, IIS7.5). Some of the projects included:

- Architecture and build for risk reporting application using C#, WCF, SQL Server 2008 and WPF interfacing to RiskMetrics. The system put in place a workflow around sourcing position data from the administrator, enriching that information with report metadata and pricing data, authoring the analysis instructions, transmission of data and recovery of results from the third party, persistence, distribution and presentation of the results. The system made extensive use of asynchronous messaging, almost exclusively one way, with a pub-sub mechanism and durable workflows.

- Plan, build and support of the Mansart regulatory reporting (transaction reporting, disclosure of interest) feeds. This involved agreeing and documenting requirements with Front Office and Compliance, logical data mapping between source and target system, managing the associated process changes for Middle Office, extensive T-SQL development for data extraction, ETL with Pentaho, data validation and quality assurance using T-SQL and PowerShell, automating the process with Control-M and monitoring/ alerting with Geneos

- Design and build for application exposing business data in spreadsheets using: C#, WCF, ExcelDNA, LINQ, EntityFramework, Active Directory security and IIS. The system replaced several brittle and insecure ETL steps with a mostly asynchronous spreadsheet function library for data access and reporting.

- Developed a confirmation tracker for middle office using C#, ExcelDNA, LINQ to SQL and T-SQL. The application wrapped workflow tracking around transaction affirmation and confirmation allowing Mansart to demonstrate and record its EMIR post trade compliance

- Developed an invoice management application for middle office using C#, ExcelDNA, LINQ to SQL and T-SQL. The application wrapped workflow tracking around fund and management company invoice processing, monitoring SLAs and escalating/ notifying automatically as thresholds were approached

- Developed a spreadsheet application using Excel VBA and SQL Server for custom index valuation and reconciliation. This involved translating the payoff from the term sheet in to an algorithm and implementing it in VBA. The tool enabled Mansart to perform independent price verification, fulfilling a regulatory requirement.

- Introduced the Kanban process to manage the technology workload. Limited the number of concurrent tasks tackled, exposed 'work time' vs 'wait time' metrics to the business, appointed business product owners for key applications, captured ownership, agreement and acceptance for every change.

- Implemented a continuous build process using TeamCity and continuous deployment to development servers for IIS applications (using PowerShell and MSBuild).

- Managed a team of up to 3 staff. Responsibilities included resource management and performance monitoring, objective setting and bi-annual appraisal process, acting as a point of escalation and authority, contributing to and resolving technical, project and people issues, setting the culture for the team. I drove the adoption of quality practices in the areas of continuous integration, SDLC, test coverage and peer review.

Outside this role, in my own time, I co-founded a volunteer initiative to teach Excel across the firm. I designed the curriculum, authored the majority of the material, recruited the volunteers and managed both the day to day and strategic aspects of the program. In 2014 the program delivered over 300 days of online and classroom training in 16 worldwide locations to wide acclaim. I was given an award for 'innovation at scale' for my role in this program.

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Nov 2008 to Jul 2011, Royal Bank of Scotland, London
Equity Derivatives IT, Desk Aligned Technology

In this role the work was focussed on building RAD applications on the .NET stack for front office. The team was dispersed at the beginning of 2011 but for the final 6 months of its existence I was the de facto team leader.

- Developed a distributed correlation calculation system in .NET using WCF. The system used a desktop grid of agents to calculate correlations (Pearson) on demand. It was limited only by the universe of time series stored in Bloomberg and could compute basket and quanto correlations as well. The system was retro fitted in to the trading applications and used extensively by Structuring to back test new ideas.

- Wrote a system to optimize the business-wide liquidity profile. It used LINQ as the data access layer connecting to a SQL Server back end, a WPF application for managing the cash and Spotfire as the reporting layer. The system contributed significantly to the process of netting cash credits and debits across the desks resulting in a lower total funding cost for Equity Derivatives.

Nov 2005 to Nov 2008, ABN AMRO NV, London
Quantitative Analytics, Rapid Application Development, Equity Derivatives

In this role I worked in a team supporting Equity Derivatives Trading, Structuring and Sales teams in London, Hong Kong and New York through the development and support of trading, PnL, pricing and risk applications.

- Wrote a spreadsheet application which closed expiring positions. At its peaks (typically triple witching) the application closed thousands of positions at the click of a button sourcing market data from Bloomberg and booking the closing trades in the accounting system. The application saved the TA's several hours a week.

- In close collaboration with the trader in Hong Kong I wrote index and single stock arbitrage spreadsheets. This family of spreadsheets enabled trading KOSPI futures and options and worked with ticking data from Bloomberg and Reuters. The sheets identified successful arbitrages (index vs the basket) and ranked them by profitability using a visual schema. Without the spreadsheets this business would not have been possible.

Feb 2004 to Nov 2005, Global Markets Consultants, London
Credit Derivatives Front Office - Rapid Application Development

In this role I worked on site at Deutsche Bank in the credit trading business developing and supporting tactical risk and PnL applications.

- Designed and delivered a series of spreadsheet calculators comparing single name CDS with Assets Swaps and Cash Bonds, identifying when mispricing existed between them and notifying traders of these opportunities. The calculators made extensive use of Bloomberg, Reuters and proprietary analytics.

- As part of a small team I made a significant contribution to the development of a programmable credit gamma calculator for single name CDS. Using VBA, XML, XSLT, Perl and proprietary analytics I delivered the harness which set up the gamma scenarios, ran them and exported the results on a curve by curve basis. The calculator was a key risk management application for the Flow Credit Trading desk.

Education

Vocational

Jan 2014, JP Morgan Chase
Emerging Leader, New Manager Program

July 2013, JP Morgan Chase
Project Management Program - internal

April 2013, iDesign, Juval Lowy
Architect's Master Class

Academic

October 2004 to September 2006, Cass Business School
MSc Mathematical Trading and Finance – part time

September 2001 to September 2002, University College, University of London
MSc Information Technology

September 1993 to June 1997, King's College, University of London
BSc Pharmacology: 2i (Hons)

Volunteering
Jan 2015 to ongoing, WaterAid