**Ashutosh Tripathi (**[**https://www.linkedin.com/in/tripathiashu**](https://www.linkedin.com/in/tripathiashu)**)**

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Nationality: British, Security Clearance: Disclosure Scotland & BPSS Cleared

## Summary

Accomplished Senior Architect with more than 20 years of commercial experience in delivering enterprise, solution, data and integration architecture in multiple market sectors including Healthcare, Public Sector, Finance, Communications, Analytical Data, Technology, eCommerce, and Energy. Commercially strong with a record of accomplishment of delivering benefits by using innovative technology and pragmatism. Strong record of delivering high quality short-to-medium term data and application architecture solutions whilst ensuring adherence to long-term architecture strategy. Led both large and small architecture transformation programmes focussed on top line growth and cost reductions. Strong experience of stakeholder management ranging from C-Level to development and infrastructure teams in traditional, entrepreneurial, matrix and function-based organisation structures. Have extensive experience of line managing teams of architects and developers as well as leading large and small multi-disciplinary technology teams.

## Education

* Master’s in computer applications (First Class), Jawaharlal Nehru University, New Delhi
* BSc. (Hons.) Mathematics (First Class), Delhi University

## Information Architecture Experience

Applications & Data Integration – 17 years, API Definition – 11 years, Complex Event Processing – 2 years,

Content Management – 8 years, Data Integration – 14 Years, Information Aggregation – 5 years, Data Quality – 9 years, Master Data Management – 11 years, Reference Data management – 6 years, Meta Data management – 8 years,

Data taxonomy, modelling and dictionaries – 16 years, Business Intelligence, Analytics & Mining – 6 years,

Management Information & Reporting – 6 years, Data Governance – 6 years, Big Data – 6 years, Public Cloud – 6 years,

CRM – 10 years, Order Management Systems – 8 years, Financial Trading Systems – 10 years, Supply Chain Systems – 4 years

## Professional Experience

**March 2019 – September 2019: Senior Solution Architect: Shop Direct Limited, Liverpool UK for Kashavi Limited**

As a senior solution architect he is delivering a micro services based architecture by defining canonical models and APIs for a legacy transformation programme at Shop Direct to replace home-grown Retail Merchandising, Order Management, Supply Chain and Fulfillment systems with industry standard hybrid cloud SaaS solutions encompassing Oracle RMS (Retail Merchandise, Supply Chain and Finance), IBM Sterling Order Management and Knapp WMS (Warehouse Management) for in-house fulfilment as well as a B2B API based integration with Direct Delivery Suppliers and aggregators for “drop-ship” fulfilment.

This includes

* Definition of a Product Master and Supplier Master Canonical model for cross domain integration.
* Definition of Canonical models for Order Management, Stock Movements and Stock Availability to enable end to end integration of Customer Order Fulfilment and Stock Forecasting.
* Definition and delivery of a new B2B API for Direct Delivery fulfilment for stockless (i.e. ‘Drop Ship’ or those directly delivered by 3rd parties) products, implemented by microservices.
* Design of an event hub using Kafka for life cycle management of the relevant entities across domains.
* Design and delivery of event streams for end to end Order Management processes delivered by microservices.
* A new metadata capability to catalogue and curate data mappings between canonical and physical models of individual systems (both legacy and strategic).
* Design of a data lake using the new data standards and metadata catalogue to enable near real time analytics on a variety of topics supporting both self-serve as well as pre-defined analytical models, based on AWS RDS, Hadoop, Apache Hive Waterline and various other open source/industry standard components.
* Evaluation of a new CRM SaaS solution for Marketing and Customer Support for requirements fit as well as data and integration alignment of the prospective solutions with the other new platforms for Order Management, Merchandising and Finance; with Salesforce being selected; aligning implementation roadmap of Salesforce with other roadmaps.

A number of these have already delivered initial(alpha/beta) releases using Agile methods and others are on their way where his responsibilities included architecture directions for various squads and working closely with all the scrum masters in scrum of scrums.

**Technologies:** AWS (S3, EMR, EC2, Aurora Serverless (PostgreSQL), EKR, Lambda), Spark, Docker, Kubernetes, Hadoop, Hive, Waterline, Kafka, Erwin, Sparx EA, Jenkins, Selenium, Confluence, Git, JIRA, IBM Bluemix, Oracle Cloud, SD Private Cloud, CI, CD

**Standards:** UML, BPMN

**Methodologies:** Waterfall, Agile

**July 2018 – January 2019: Solution Architect: Reed Business Information, Surrey UK for Kashavi Limited**

As the interim lead architect for a Lead to Cash transformation at Reed Business Information (RBI) he rolled out standardised global capabilities for more than 30 product lines across 10 subsidiaries of the group company.

This included

* A new meta-model for the global product catalogue in order to rationalise and simplify product information across all product lines.
* Definition of new standardised Lead to Invoice global processes for all these businesses by leveraging out of the box capabilities of underlying SaaS and public (and some on-premises) cloud-based components of the end to end platform.
* A new predictive analytics architecture for sales pipeline management, including a new capability to ensure renewal sales are acted upon and closed ahead of next term and thereby increase revenue protection.
* An end-to-end Canonical Data Model and a Domain Driven integration architecture based on standardised API based information flows and delivered by microservices.
* A new metadata-based Data Governance architecture for enforcing and monitoring data quality of customer and sales information.
* Product selection, PoC and an integration roadmap for implementing Contract Lifecycle Management (CLM) capability.
* An integration roadmap and architecture for a generic electronic signature capability.
* Refreshing the architecture development methodology by adapting TOGAF to RBI context.
* Assisting senior management in the design and implementation of a pure agile delivery methodology including increased automation of SFDC development in the CI pipeline and adoption of microservices based integration to replace the incumbent Dell Boomi ESB.

**Technologies:** RBI Private Cloud, AWS(S3, EMR, EC2, EKR), Hadoop, Docker, Kubernetes, SaaS solutions e.g. Eloqua for marketing, SalesForce for CRM, Apttus for CPQ, billing and CLM, DocuSign for eSignatures, Oracle Finance for G/L, AR and AP, REST APIs, Git, Jenkins, Selenium, Sparx Enterprise Architect, CI, CD

**Standards:** BPMN, UML

**Methodologies:** Waterfall, Agile

**May 2017 – April 2018: Technical Architect: NHS Digital, Leeds UK for Kashavi Limited**

As a senior architect for the NHS Digital Data Services programme, led solutions architecture and delivery of key functionality for the new hybrid cloud-based data management solution to transform the way NHS Digital collects national and local data about patient care in hospitals, social care and mental health settings and makes it available to parliament, NHS England, academics and other parties for macro analysis, care planning and research for new treatments etc. .

This included

* A new solution for matching sparsely provided patient details in clinical events to a true patient in the National Patient Register using deterministic and probabilistic methods made available on multiple technical interfaces e.g. SFTP, FHIR based REST APIs etc. The national registry contains more than 90 million records and the new solution supports matching > 10 million clinical events per day to the right patient.
* A new open-source and open-standards based metadata and rules registry to automate data processing at large scale to ensure data quality, pseudonymization of patient confidential data and secure access to patient care data; Led the technical aspects of the entire G-Cloud based public sector procurement process (RFI, RFP, RFQ and award) of the product set for the solution. The repository contains details of >200 national data collection specifications based on standards like HL7 and SnowMed CT including syntactic and semantic business rules as well as reference data sources like ODS etc.; it also contains mappings to up to 6 different providers submission formats (e.g. CSVs, REST, SOAP, SQL etc.) to these specifications and is being curated to capture such details of about 2000 local data flows to enable a comprehensive picture of all patient data sources at local and national levels.
* Using GDS Best Practices defined Integration architecture for seamless coordination of the existing LAMP based solution components with the new public cloud-based components for processing vast amounts of clinical data (i.e. many Petabytes per year) about patients to enable cross linking and predictive analysis whilst ensuring patient anonymity.
* Responsibility for all aspects of technical architecture including VPN connectivity between internal and public cloud infrastructures, design of AWS VPCs, EC2s, ELBs, S3s, EMRs, custom AMIs etc.

**Technologies:** NHS Private Cloud, AWS, Hadoop, Cloudera, Drools, Streamsets, Avro, Snappy, Impala, Java, Python, RIAK, Sparx Enterprise Architect, REST APIs, CI, CD

**Standards:** DMN 1.1 (Decision Model & Notation)

**Methodologies:** Waterfall, Agile

**March 2016 – March 2017: Solutions Architect, Scottish Government, Edinburgh, UK for Kashavi Limited**

As a senior architect for the Scottish Government AFRC Futures programme, led solutions architecture and delivery of key functionality for the public internet based European CAP aids and grants schemes for Scottish farmers.

* This included remediation of existing rules-based architecture for payments and designing new rules, BPMN processes and web services for payment entitlements (a form of digital currency) using the open source Business Rules Engine Drools, SOA and jBPM. Improved the business rules to ensure data quality and integrity was consistently maintained with ever-changing land ownership and classification information provided by the in-house geo spatial system and enhanced by field inspections.
* Also led the task force for migrating the aging platform stack (JBOSS EAP, jBPM, Fuse and Drools 5.3) to the most recent version 6.4 on a LAMP stack to ensure that all the improvements are fully utilised and a proper DevOps environment for Continuous Integration is built to increase delivery productivity. This new solution will ensure that Scottish Government can continue to comply with the ever-changing EU and UK regulations on farming aid by just configuring the business rules, without having to undertake any further significant development. Also led a proof of concept using DMN as the architecture documentation language for business rules and integrating it with JBoss Developer Studio to automate business rules development.

**Technologies:** Sparx Enterprise Architect, Java, JEE, SOAP, jBPM, Drools, Oracle database, MySQL, Private Cloud, Git, Maven, Jenkins, Selenium, CI

**Methodologies:** Waterfall, Agile, Scrum, TDD

**March 2015 – August 2015: Solutions Architect, HSBC, London, UK for Icon Solutions**

* Provided presales support at Icon by being responsible for defining the technical solution of the RFP response to phase 1 of the HSBC CDD (customer due diligence) programme
* Upon being selected as the prime vendor, led the architecture for delivery of HSBC CDD phase 1 and delivered a digital dynamic rules-based architecture for a new global solution using REST and SOA. This new solution will ensure that HSBC complies with new global regulations for anti-money laundering (AML) regulations to vet all new customers in more than 40 countries.
* Defined the new global customer data model to standardise the terms used in various local customer data systems and cater to more stringent rules like the new FATCA regulations. Assisted in defining the customer data governance strategy including setting up local and global business and technology data stewards, capturing data lineage as well as tools for ensuring data concurrency and quality between local and global customer data repositories.
* Responsible for addressing all stakeholder concerns about the new global customer data model and the associated rulebase. The stakeholders ranged from senior business and IT leaders as well as 20+ internal and outsourced development and infrastructure personnel in a matrixed team.
* The new global application will be used in all branch networks and call centres and was as built as a Javascript HTML5 web front end that used Dojo as the JS framework and used a RESTful architecture with API to integrate with a Drools and Spring based middle tier. The middle tier used SOAP based microservices with dozens of bank’s country level core banking and customer data management systems to provide a seamless end-to-end solution.

**Technologies:** Java, JEE, SOAP, REST, Drools, Oracle database, IBM WebSphere, Private Cloud, Microservices, Maven, Jenkins, Selenium, Rational Software Architect, CI, CD

**Methodologies:** Agile, Scrum, TDD

**September 2013 – January 2015: Solutions Architect, Barclays, London, UK for TCS**

* As the programme architect for the strategic transparency initiative of Barclays Retail bank, defined a digital multi-channel event driven architecture using SOA. This provides a ‘DHL’ style status tracking functionality for retail and business customer applications for mortgages, loans, insurance and other products/services (http://www.barclays.co.uk/BarclaysTrackIt/). The solution provides simple and seamless customer information transparency and improved process automation to customer and partners in all touch points i.e. a ‘responsive’ internet UI on all devices (desktop, mobile and tables), branch network, call centres and IVR.
* Acted as the Chief Design Authority involving wide ranging stakeholder management of a matrix organisation including the programme steering board, the global architecture review board, senior business and IT leaders and 40+ internal and outsourced development, infrastructure and service management personnel.
* Defined and delivered a new canonical event data model to integrate data from dozens of bank’s core and complex bespoke and packaged systems on multiple environment including mainframes, JEE, Dot Net etc. The integrations used a variety of tools including a message broker and ETL tools to gather this data in a new middle tier consisting of an event repository and a Java Spring based application server that delivered an HTML 5 ‘responsive’ front end. This tier also used SAML to provide single sign across all of Barclays’ online and mobile customer applications.
* Defined a new data model and the reference architecture for data integration through a set of data flow diagrams for customer operational data. Refined the customer operational data storage strategy by expanding the use of SQL and Teradata with NOSQL storage tools like MongoDB and Hadoop.
* Assisted in selection of a COTS based solution for real time complex event processing. After the selection defined a solution for customer data event processing using AbInitio.
* Defined the solution architecture to deliver the paperless strategy for faster process turnaround times using digital document exchange and digital signatures.

**Technologies:** Java, JEE, SOAP, REST, SAML, IBM MQ Broker, Oracle Fatwire, IBM WebSphere, IBM BPM, IBM BRMS, SiteCatalyst, SiteMonitor, Private Cloud, Informatica, Qlikview, AbInitio, CI

**Methodologies:** Agile, TDD

**March 2010 – April 2013: Senior Solutions Architect & Capability Development Manager, Nokia, London, UK**

* As the program architect for customer case used TOGAF 9, to define the target enterprise architecture for B2C & B2B marketing and customer support transformation to achieve greater customer satisfaction with a seamless multi-touch point experience, major improvements in product marketing information, self & assisted help and better efficiencies in the product repair operations. Acted as the chief design authority for the ensuing program of work spanning three years with a peak total spend of many millions of Euros. Line managed 2 other solutions architects and 5 other technical and infrastructure architects for the entirety of the multi-year program.
* Defined the global customer and partner data models and a federated governance structure for their evolution by global and regional/in-country operations.
* Led the architecture and development to overhaul the content & knowledge management solutions including a new cloud based content syndication REST API on MS Azure to integrate with external partners like Microsoft and consolidation of multiple internal content management systems to improve the usability on nokia.com (now www.microsoft.com/mobile/) on the web as well as all mobile devices using a ‘responsive’ HTML 5 UI.
* Led the technical aspects of the entire procurement process (RFI, RFP, RFQ and award) of a new B2C solution based on online chat and virtual assistant technology (an early form of Alexa from Amazon or Siri from Apple etc.). Compiled a long list of 35 vendors and through each iteration of technical due diligence helped arrived at two vendors, one for each aspect.
* Led the architecture and development of the digital B2C chat solution for marketing and customer service using cloud-based products such as RightNow (http://www.oracle.com/rightnow) that improved customer satisfaction and achieved significant cost savings in contact centre operations.
* Defined a RESTful architecture to integrate internal COTS based solutions to the new SaaS based solutions.
* Managed the outsourced development of an online repair avoidance solution providing advanced troubleshooting capabilities (http://www.nokiatechsupport.co.uk).
* Managed multiple IT development projects for European business units managing a team of 30+ internal and outsourced staff and stakeholder management from CIO level down to infrastructure engineering teams.
* Led the development of a Salesforce based wholesale customer data management solution using VisualForce, Apex and the SFDC SOAP APIs for Account, Partner etc. The solution was for European retail sales to deliver better retail execution by improving retail partner and consumer CRM.
* Managed the outsourced development of a B2B and B2C Social Media monitoring and response solution to improve marketing, sales and customer service engagement of Nokia staff within online communities to increase consumer advocacy using Radian6 (http://www.salesforcemarketingcloud.com) and Datasift (www.datasift.com). Migrated the solution from internal data centres to Amazon cloud (AWS) using the Nokia AMI (CentOS based) and Cassandra database.

**Technologies:** Java, J2EE, SOAP, REST, SAML, WebMethods, WebLogic, AWS, Azure, JBoss, jBPM, Drools, Akamai, SiteCatalyst, SDL Tridion, Inquira, Tamino, CoreMedia, Documentum, RightNow, Siebel, SalesForce, SAP, Qlikview, Terdata, Hybrid Cloud

**Methodologies:** Agile, Scrum, TDD

**March 2009 – March 2010: Solutions Architect, Vodafone, London, UK for BBConnect**

**Created B2B digital application architecture for new Fixed Mobile Convergence products in multiple Op-Cos within the Vodafone Global group, using Vodafone mobile platforms and partner online and fixed line platforms. This included CRM, Billing and B2B integration and creating a new global shared platform for partner provisioning and billing integration to enable global platform rationalisation strategy.**

**January 2006 – December 2009: Principal Architect, Infosys, London, UK**

* Provided presales support by being responsible for leading multiple RFP/RFQ responses for both consulting as well as managed service offerings of Infosys across multiple sectors including Finance, Utilities, Telecoms and Technology.
* Defined the enterprise architecture of a multi-year, multi-million transformation programme for Reach Telecom a Hong Kong based wholesale telecommunications provider. This covered all their business processes for CRM, Provisioning, Billing, and Fault Tracking & Repair combined with a wholesale Billing BPO solution.
* Created the target architecture blueprint for a multi-year SOA based technology renewal programme for the power and emissions trading arm of British Energy. Led the interim architecture team and helped BE build its own team. Defined the new architecture governance model and principles to for the implementation phase.
* Created the architecture blueprint for an overhaul of editorial systems at Reed Elsevier to make it more automated and allow reuse of scientific research content in multiple B2B digital and print publications.
* Led the solution architecture and development of a large programme at Colt Telecom to reduce B2B Order to Cash cycle from 90 days to 30. This consisted of a SOA based renewal of Product Catalogue, Order Management, Billing systems and Equipment/Site Provisioning. Managed stakeholders including CEO, COO as well as a development team of 50+ in a mixed onsite-offshore model.
* Defined a SaaS and SOA based IT strategy for consolidation and renewal of the various HR offerings of Fidelity Strategic Investments which was adopted and resulted in Fidelity creating a modern B2B digital HR SaaS service and growing their customer base.
* Led the solution architecture and successful delivery of reengineering the Tibco Rendezvous based Integration Bus at BP trading to massively improve scalability, performance and reliability.

**Technologies: Java, J2EE, SOAP, WebLogic, WebSphere, JBoss, Tibco Rendezvous, Tibco BusinessWorks**

**March 2004 – December 2005: Solutions Architect, T-Mobile, London, UK**

* Member of the pan European Strategic Architecture board to address strategic challenges as well as alignment of IT to corporate and business vision.
* Led the architecture of Service Delivery Platform, the backbone of the T-Mobile B2B and B2C digital marketplace in Europe (t-zones). The SDP is a suite of highly scalable, highly available Web Services for external partners as well as corporate clients to seamless provision their products and services to T-Mobile customers in 10+ European countries. These services include Micro Billing, Mobile Location, Presence, Text and SMS/MMS Messaging as well as seamless corporate intranets access over different T-Mobile networks on GPRS, UMTS and WLAN.
* Delivered a Single Sign-On service for seamless handover between the myriad of services provided by the group. This included a state-of-the-art XML security infrastructure using internet security standards, WS-Security, SAML and SPML.
* Formulated the next generation convergent subscriber provisioning vision and architecture enabling the company to move into multi-play markets.

**Technologies: Java, J2EE, SOAP, WebLogic, Tibco Rendezvous, Tibco BusinessWorks**

**April 2001 – February 2004: Principal Consultant, SwiftMedia Limited, London, UK**

* Defined the integration strategy and architecture for a global risk management system at the energy-trading arm of British Petroleum.
* Led the development of BrokerML, an XML financial products vocabulary for Tullett & Tokyo, one of the leading global inter dealer brokerage firm.
* Responsible for performance management of four senior architects.

**Technologies :** Java, J2EE, XML, Tibco Rendez-vous

**March 1999 – March 2001: Solutions Architect, JP Morgan, London, UK**

* Led the architecture, design and development of an XML based Bond Syndication application for JP Morgan delivered on multiple channels including web and mobile. This resulted in syndication desks to turn from losing business to competitive advantage and increased profits. It also allowed the bank to launch the world’s first m-bond on WAP and Palm Pilot.
* Co-authored FpML 1.0 architecture specification (www.fpml.org), an XML standard to enable straight through processing of financial derivatives between counterparts for increasing efficiency and transparency.
* Led a team of architects at Chase Manhattan Bank to develop and implement an XML based Enterprise Integration system and message repository to connect front office, back office and enterprise systems for straight through processing.

**Technologies :** Java, J2EE, XML, IBM Websphere, Tibco Rendez-vous

**February 1995 – February 1999: Solutions Architect, Reuters, London, UK**

Led the architecture, design and development of Reuters’ first products for exchange-based equities and equity options trading for their financial clients. With an initial outlay of over £10 million and on-going costs of about £2 million a year, I led multiple teams of up to 15 designers & developers with 5 direct reports as well additional 3rd party vendor teams of up to 20. These products generated direct and indirect revenue worth over £100 million in the first two years.

**Technologie**s : C++, RPC, Reuters Marketfeed, Tibco Rendez-vous

**April 1993 – January 1995: CTO, Visual Reality Limited, Cambridge, UK**

Co-founded the start-up and led the architecture, design and development of a time management product for corporations and individuals.

**October 1991 – July 1993: Designer and Developer, KPMG Peat Marwick, London, UK**

Designed a set of reusable C++ class libraries for a Europe’s first and biggest of its kind object-oriented development of a Pan European car dealership automation system for Ford Motors.

## Professional Training

Facilitation Skills for Managers

TOGAF 9 Practitioners Certification

Managing Safely (H&S for managers)

Influencing & Persuading with Integrity for Managers

Cultural awareness (Managing performance in multi-cultural teams)

## Other Business Experience

* National Institute of Information Technology (NIIT, www.niit.com), Delhi, India, Sep 1990 to Sept 1991, Designer
* TERI (www.teriin.org) Delhi, India, Jan 1990 to Jul 1990, Developer
* C-DoT (www.cdot.in), Delhi, India, July 1989 to Oct 1989, Developer