

G Cloud 14 Service Definition Document

Microsoft Azure Services





About Agile Solutions

Agile Solutions is a UK based Data & Technology consultancy, providing a range of Data Management, Analytics and Cloud Computing services, with offices in Milton Keynes, Manchester, and Glasgow.

We work with SMB, Mid-Market and Enterprise clients across a wide variety of industries, including the wider public sector including central and local government. some examples of our clients include the Department for Education, Department for Work & Pensions, the Gambling Commission and UK Export Finance.

Our key differentiator and our strength is in our people. As a business we specialise in data but it's the broad range of skills exemplified by our team that makes us a truly unique data partner. Our Technology skills sets, project management, consultancy and commercial awareness enable our team to deliver projects that go beyond our client's expectations.

Working with Technology partners such as Microsoft, AWS, Informatica, AWS and Snowflake, we help businesses to Modernize and get ahead of their competitors by harnessing emerging technology, people and process trends. We help Manage customers data by ensuring it is always reliable and ready to power their business and create a competitive advantage with new data driven solutions by Monetizing customers data.































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SQL Server (Azure)

As solutions partners for Data & AI, Agile Solutions can support all elements of the cloud Azure SQL server solution. Always up-to date and fully managed, it includes Azure SQL Database, Azure SQL managed instance and SQL Server for virtual machines.

Features

- Fully managed service
- Scalability options
- High availability
- Advanced security
- Compatibility with SQL Server
- Intelligent performance
- Built-in analytics
- Al capabilities
- Geo-replication
- Developer tools

- Cost efficiency
- Increased agility
- Reliability
- Security and compliance
- Performance optimization
- Global reach
- · Scalability on demand
- Integration with Azure services
- Simplified management
- Continuous innovation



Cosmetics and Skincare Company:

At the client, Agile Solutions built an online loyalty calculator, this allowed customers to be given points and offers based upon their spending habits.

This was achieved using a SQL-based engine sat on an Azure SQL server instance. The engine was used to calculate when customers loyalty thresholds had been met the engine then distributed points to the customer as a measure of the customers' loyalty this in turn allowed for vouchers and offers to be given to loyal customers, giving them more value and driving more sales.

Case study

Cosmetics and Skincare Company:

The goal was to take CRM data so that it could be received easily into business analysis teams and used for reporting.

We achieved this by using MS Azure SQL server instance as the primary repository for data from a Dynamic 365 CRM instance. We manipulated the CRM Data into several data marts so that the relevant information could be easily found and picked up seamlessly by business analysis teams, where the data would be loaded into Power BI where they could create reporting workflows.



Azure Data Factory – ADF Services

Data Engineering capability with Azure Data Factory sits at the core of Agile Solutions. We offer a broad range of services that include Data warehouse design and implementation, ETL / ELT integration pipelines, cloud migration, development & deployment of cloud native components, development and implementation of data governance processing.

Features

- Optimize bandwidth with data compression during copying in Data Copy.
- Extensive Connectivity Support: Broad connectivity support to diverse data sources
- Custom Triggers: Automate data processing with custom event triggers.
- Customized Pipelines & Data Flows: Add custom actions/functions for Data processing.
- Integrated Security: with Azure Active Directory integration and role-based access.
- Monitor: built-in support to monitor logs & stats of pipelines, dataflows.
- Linked Services: Represents a compute resource to host execution of any activity.
- Integration Runtime: Provides compute environment for all tasks.
- Compatibility: seamless integration with other native Azure services.

- Integration runtime handles data movement while Apache spark service seamlessly orchestrate, monitor.
- Data Ingestion: over 90 in-built connectors for diverse data acquisition needs.
- Code-free mapping data flows based on industry-standard Apache Spark platform.
- Security & Compliance: ADF ensures security of sensitive data with encryption
- Seamless migration of SSIS packages to cloud with compatible integration.
- Hybrid connectivity, integrating on-premises and cloud data seamlessly.
- CI/CD: Develop seamless ETL processes with Azure DevOps & GitHub.
- Consumption-based pricing
- Scalability: inbuilt parallelism and time-slicing features for large datasets.



IICS to ADF migration:

A large care home provider aimed to leverage cloud technologies to save on their licensing and operational costs.

Challenge:

- Diverse data sources like flat files, traditional RDBMS systems.
- Stringent data security
- Integration needs with XML files and databases.

Our Solution:

- Azure Data Factory was chosen for seamless data extraction through inbuilt connectors to multiple data sources and formats.
- Enhanced security through a managed VPN.
- Integration with Logic Apps for XML file generation.
- Efficient and faster data loads with CopyData activity and code reusability.
- Implemented CI/CD using Azure DevOps.
- Orchestration and Monitoring of workflow status in ADF Monitor, with stakeholders receiving email notifications.

Case study

Cloud Migration:

Leading cosmetic & skincare company aimed to leverage cloud technologies to improve customer experience.

Challenge:

- The client needed a scalable solution that could combine multiple sources
- They needed to unify data for advanced analytics and marketing purposes.

Solution:

- Agile Solutions leveraged Azure Data Factory for creation, orchestration, and management of data pipelines to move and transform data.
- We scheduled nightly batches for data loads, loyalty rewards & voucher emails, survey emails etc.
- Integrated with Azure logic apps for customised event triggers & API calls.
- Data loads to Azure SQL Managed Instance for reporting & marketing needs.



Azure Synapse

Agile Solutions are Microsoft Solutions Partners for Data & Al and offer specialized services for data warehousing in Azure Synapse Analytics. Synapse is cloud-based and is a three-component architecture, offering data storage, processing, and visualization all in one place, and hence seamlessly integrating enterprise data warehousing and Big Data analytics.

Features

- Data integration, management, monitoring, and security all in one place
- Data Flow that offers a code-free big data transformation experience
- SQL and Apache Spark support data warehousing and big data
- Serverless Pool for querying and analysing file-based data using SQL
- Custom dedicated SQL Pool for hosting relational data warehouses
- Azure Data Explorer for log and time series analytics.
- Spark Pools compatible with Azure Storage
- Full support for Scala, PySpark, Spark SQL, and C#
- Pipelines for data integration and ETL/ELT
- Deep integration with PowerBI, CosmosDB, and AzureML

- Service Delivery by certified consultants with deep experience
- Advanced security and privacy features
- Reduces project development time
- Rapid and robust insights delivery
- Synapse SQL offers both serverless and dedicated resource models
- Synapse notebooks to create files containing live code, visualizations, and notes
- Spark pools offering a fully managed Spark service
- Scalable data storage, serverless querying and seamless integration
- Built-in support for creating, managing, and running pipelines.
- Develop solutions for machine learning, data analytics, and data visualization.



Cosmetics and Skincare Company

Agile Solutions consultants have leveraged Azure Synapse Analytics service to deliver projects with the client to extract value from their data ingested into Azure Data Lake Gen2. Agile developers transformed ingested raw data into curated data which was stored in multiple files in parquet format. This curated data was later analysed via several tests created in Synapse notebooks using PySpark. This helped in producing customized summary of each data set contained in the files.

Once agreed quality assurance was achieved, this process was automated via pipeline integration using pipelines, dataflows, and serverless databases. Also pipeline lineage was linked with purview for governance perspective.

In future, the client was able to visualize summarized information for ingested curated data in PowerBI.



Microsoft Fabric

Microsoft Fabric is a Software as a Service data platform offering from Microsoft combining their data solutions into a single view. This includes OneLake data storage, leveraging of both lakehouse and warehouse concepts to simplify data landscapes, PowerBI and Power Query M enable self-service using familiar tooling to users.

Features

- Data Integration and orchestration from a range of sources
- Apache Spark and SQL engines to power varied workloads
- OneLake storage for all data
- Shortcuts to enable cross cloud virtualisation
- Mirroring of data sources to keep real time data
- Integrated PowerBI reporting
- Excel like Power Query M dataflows for end user development
- KQL databases for real-time analytics and reporting
- Spark and SQL notebooks for storied data exploration
- Microsoft Copilots for PowerBI, Data Engineering and Data Science

Benefits

- Simple deployment with SaaS nature
- Copilots accelerate development and analysis
- Clear pricing and consumption model
- Spark and T-SQL capabilities for modern data exploration
- Seamless integration with multi-cloud virtualisation
- Visualisation in PowerBI has close integration with data platform
- Data mesh capabilities with mirroring and shortcutting
- Built-in development, deployment and orchestration of data pipelines
- Simplified data storage with single OneLake improving data collaboration
- Fabric Experiences streamline user roles and system navigation

Case study

At a large utilities company, Agile Solutions are developing one of the most advanced Microsoft Fabric implementations to deliver an advanced analytics platform to allow business and analytics teams to interrogate previously siloed enterprise data. Based on a medallion architecture, and the single virtualised Datalake of Fabric, simplifying the enterprise data landscape. Data ingested using metadata driven pipelines increase speed and maintainability of integration. Transformations Using T-SQL and Spark workloads make the data ready for data exploration through tooling that is familiar to the business. The final unified view of the data allows for ease of reporting with the industry standard PowerBI.



Microsoft Purview

Microsoft's data governance platform enables our consultants to discover, understand, classify and map your data assets across on-prem, multi-cloud and SaaS environments. We use Purview to ensure consistent, repeatable governance processes remain at the heart of your data journey.

Features

- Set up and configuration of Purview Data Catalog
- Cloud data governance platform, technology sourcing and procurement
- Analysis of and alignment with data and technical strategies
- Delivery of cloud platform principles and data governance framework
- Design and enablement of robust governance processes, forums and systems
- Robust cloud data security strategy based on classifications or profiling
- Use case delivery for housing data governance
- Delivers your Cloud strategy, technology roadmap, benefits and risks
- Delivers your Cloud service model, SLA and Performance

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Problem Statement

A public sector body identified that disparate definitions and terminology across its data estate were causing inconsistencies and data quality issues in many business systems.

Solution

Agile worked with stakeholders across the business to implement, configure and rollout Microsoft Purview, onboarding data terms, ensuring that the agreed minimum standard for metadata was collected for each term, e.g. name, meaning, format, allowable values and source system of authority.

Outcome

By implementing Microsoft Purview, we were able to deliver a consistent data glossary and catalogue that formed the basis of the drive for data quality improvements.

Case study

Problem Statement

A large utility was struggling to manage ever increasing data quality issues affecting many business systems which was creating difficulties for its transformation programme.

Solution

Agile worked with stakeholders to identify that Microsoft Purview would meet their requirements, we developed the processes and implemented the governance framework to ensure that the critical data elements shared across business systems were properly catalogued.

Outcome

The Microsoft Purview is at the heart of the data transformation, removing silos, bringing clarity and understanding to many transformation tasks and ultimately driving significant quality improvements.



Azure AI Services

Agile Solutions helps clients leverage Azure AI services to transform business operations with advanced artificial intelligence solutions. Our consultancy provides guidance on integrating Azure's comprehensive AI tools, enabling enhanced automation, analytics and decision-making processes tailored to customers specific needs.

Features

- Cognitive Services Integration: Enhances apps with vision, speech, language capabilities.
- Machine Learning Workflow: Streamlines Azure ML pipelines.
- Knowledge Mining: Extracts actionable insights from content.
- Al Solution Templates: Provides ready-to-use models.
- Data Streaming and Analytics: Processes data in real-time.
- Custom AI Development: Tailors solutions to business needs.
- Security and Compliance: Maintains robust data protection.
- Scalability and Flexibility: Adapts and scales with demand.
- Azure Al Search: Powers advanced search with Al.

Benefits

- Streamlined Operations: Automates and enhances process efficiency.
- Enhanced Customer Engagement: Delivers personalised service via bots.
- Rapid Deployment: Deploys AI solutions quickly.
- Deeper Insights: Generates valuable, actionable insights.
- Cost Efficiency: Reduces operational costs.
- Scalable AI: Grows with your business.
- Data Security: Ensures high-level data protection.
- Customised Solutions: Builds AI to fit unique needs.
- Innovative Edge: Provides access to latest AI tech.
- Integrated Ecosystem: Uses cohesive Azure platform benefits.

Case study

Digitising Paper Forms POC - We helped a utilities client who had a huge volume of historic paper job cards scanned into PDF format to use Form Recogniser and Cognitive Search in a POC with the purpose to scrape and analyse the data. We used sentiment analysis and brought this together with alternate data sources such as customer, address and engineer data which gave a foundation for efficiency improvements in fault investigation and engineer next best actions. Helping the client use the technology resulted in the digitisation of the historic data asset and opened the potential for efficiency savings and improved customer experience.



Azure Machine Learning

Agile Solutions helps customers elevate business outcomes with our Azure Machine Learning consultancy services. We expertly guide you through deploying Al-driven solutions, ensuring your data transforms into actionable insights. Our approach is tailored to harness the full potential of advanced analytics gearing your operations towards intelligent automation and predictive accuracy.

Features

- Al Strategy Development: Tailored Al roadmap built for business needs.
- Data Preparation: Cleansing and organising data for optimal ML use.
- Model Building: Design and training of custom machine learning models.
- Algorithm Selection: Selection of optimum algorithms for specific tasks.
- Performance Tuning: Optimised models for maximum accuracy and efficiency.
- Integration Services: ML models embedded into existing business systems.
- Real-Time Analytics: Implementation of models that provide valuable insights.
- Scalability Planning: Ensuring solutions grow with your business needs.
- Compliance Adherence: Aligning ML practices with industry regulations.
- Ongoing Support: Offers continuous monitoring and model improvement.

- Enhanced Accuracy: Achievement of higher precision in operational predictions.
- Increased Efficiency: Automation of routine tasks saving time and costs.
- Data-Driven Decisions: Empowerment to make informed evidence-based decisions.
- Competitive Edge: Utilisation of advanced analytics to outpace competitors.
- Cost Reduction: Lowering of operational expenses through automation.
- Scalable Solutions: Adaptation easily to changing business scales.
- Improved Customer Experiences: Delivery of personalised services and products.
- Risk Mitigation: Identification and addressing of potential risks early.
- Innovative Capabilities: Fostering a culture of continuous innovation.
- ROI Improvement: Enhancement of return on investment with smarter operations.



Utilities Distribution Model Upgrade – We supported a utilities client with an existing neural network model trained on historical data which forecasted readings across the network. They had encountered challenges with scaling and run time/compute cost as well as transparency of the neural network method. We supported the client by designing parallel models based on regression methods giving weight to transparency in being mathematically describable and based on external factors such as weather, rather than historical date time. We introduced model monitoring and ML-Ops best practice, and this has resulted in an efficient transparent model which is being leveraged by the client for faster more accurate predictions.

Case study

Decommission Identification Model – We supported a client with a regulatory requirement to identify and address suitability for replacement of legacy infrastructure in remote locations. We supported the client to source, clean and pre-process the right data ready for use and applied methods such as classification, clustering and anomaly detection to identify key targets for decommissioning. The result is that the regulatory target was surpassed earlier than expected and the client can target decommissioning efforts to make a difference to customers experience.



Azure Event Grid

Event Grid enables you to build event-driven solutions where an event kicks off a workflow or process. Event grids can be set up to start another application (push delivery) or it can be connected to another application to read events (pull delivery).

Features

- Event-driven architecture
- Multi-cloud support
- Integration flexibility
- Custom events creation
- Dynamic event routing
- Scalability
- Dead-lettering
- Security and compliance
- Monitoring and diagnostics
- Serverless execution

- Increased productivity
- Scalability and reliability
- Cost-effectiveness
- Flexibility and extensibility
- Real-time responsiveness
- Streamlined integration
- Improved visibility
- Enhanced security
- Reduced complexity
- Future proofing



Executive non-departmental public body of the Government:

For the client we utilized event grids to create a digital drop off point, to allow 3rd party clients to securely drop off and deliver data to our primary client in an effective manner. Event grid was utilized to start the relevant process once the data had been received. The workflow then began loading the received data into an Azure SQL database and clearing the data trail after loading.

It then took the first received file and stored it in a data lake for a set period until it was due for deletion in line with GDPR.



Data Visualisation with Power BI

Agile Solutions helps clients leverage the full potential of their data with our Power BI consultancy. We offer expert guidance in dashboard design, data modelling and report creation. Unlock actionable insights, streamline decision-making and drive business growth with our tailored solutions powered by Microsoft's leading analytics platform Power BI.

Features

- Customised dashboard design tailored to your unique data requirements.
- Utilisation of Power BI's DAX language for advanced data modelling.
- Interactive reports with Power BI's drill-through and drill-down functionalities.
- Seamless integration with various data sources using Power BI connectors.
- Real-time data updates leveraging Power BI's streaming datasets feature.
- Mobile-friendly dashboards optimised for Power BI Mobile app access.
- Collaboration through Power BI's sharing and commenting functionalities.
- Data security ensured through Power BI's row-level security and encryption.
- Automated report generation and distribution using Power BI's subscriptions.
- Scalable solutions facilitated by Power BI Premium's capacity-based licensing.

- Enhanced data visibility for informed decision-making across your organisation.
- Improved operational efficiency through streamlined data analysis and reporting.
- Increased productivity with self-service analytics capabilities for users.
- Deeper insights into business performance and trends for strategic planning.
- Faster time-to-insight with real-time data updates and interactive visualisations.
- Cost savings by centralising reporting and reducing reliance on manual processes.
- Greater collaboration among teams through shared dashboards and reports.
- Enhanced data governance and compliance with built-in security features.
- Improved user adoption with intuitive and user-friendly dashboards.
- Competitive advantage through data-driven decision-making and agile responsiveness.



Finance Reporting Solution - We worked with one of the world's largest renewable energy companies who needed help unifying its financial reports and resolve inconsistencies to guide investment.

Agile Solutions worked with the customer to identify their goals, delivering a new financial reporting solution that was custom built to meet their needs through Power BI. This delivers so they can easily analyse and report on the deployment of their turbines, solar and battery storage around the world., as well as see the entire financial picture in one view and forecast financial impacts years into the future. As a result, they can invest in their business with confidence that they're making the right decisions.

Case study

Commercial Reporting Solution - A major retail chain that grew dramatically through acquisition and needed to rationalise its supply chain, required a reporting solution to integrate and consolidate data from both legacy supply chain applications and the new to-be supply chain solution for the integrated business.

The metrics from the reporting solution were critical for the business to achieve its strategic goals. Agile Solutions implemented a Power BI dashboard to visualise complex supply chain data, taking data from both old and new applications and blending into a single dashboard with seamless data merging. This was delivered into a Business Development team, sat within the Commercial Department, supporting them to train and embed the dashboard into the business teams.



Azure Logic Apps

Azure Logic Apps, a cloud platform, enables automated workflows creation without extensive coding. Its visual designer and prebuilt operations facilitate quick integration and management of apps, data, services, and systems. It simplifies connectivity between legacy, modern, and cutting-edge systems across cloud, on-premises, and hybrid environments.

Features

- Connectors: Connectors execute actions, designed to interact with user data.
- Workflows: automating business processes visually
- Triggers: Azure Logic App triggers automatically initiate workflows
- Security: Ensures security of workflows with Azure Active Directory integration.
- Log Analytics: Allows monitoring and diagnostics logging for Logic Apps.
- Integration Service Environment: Facilitates secure interaction & run of workflows
- Integration Account: To store all the artefacts and build workflows.

- Serverless Apps & Solutions: Fully managed by Microsoft Azure making it a cost & operational effective solution.
- Easy to define the workflow: Define workflows intuitively with GUI for triggers and actions in designer or visual studio code.
- GUI Support for Enterprise applications: Supports integration with e.g. Office 365, Twitter, Dropbox and more.
- Easy debugging: User can easily debug the Logic App using Trigger and Run history.
- Automation & customisation of workflow: Define workflow triggers to automatically activate Logic App upon success. Custom triggers via connectors are also feasible.
- Hybrid Integration: Easy and seamless connection to disparate systems across cloud, onpremises, and hybrid environments.
- Pre-defined Connectors: Choose from 10,000+ connectors including Azure Blob, SQL Databases, SAP, FTP, SFTP, etc.
- Custom Connectors: Utilize pre-defined or custom connectors, even defining via ARM templates.
- Create and deploy to different environments: Create single tenant-based workflows using Azure Arc enabled Logic Apps and run them in containers.



IICS to ADF migration:

A large care home provider aimed to leverage cloud technologies to save on their licensing and operational costs.

Challenge:

- Diverse data sources like flat files, traditional RDBMS systems.
- Stringent data security
- Integration needs with XML files and databases.

Solution:

Leveraged Logic Apps

- To extract data from Azure blob files, parse xsd and generate XML files.
- To capture stored batch numbers and feed to ADF for incremental load in batch runs.
- To SFTP of files to external servers.
- To send email notifications to stake holders.

Case study

Cloud Migration:

Leading cosmetic & skin-care company aimed to leverage cloud technologies.

Challenge:

- Combine 6 different sources and solution to scale to additional source when needed.
- Effort to unify data for advanced analytics and marketing purposes.

Solution:

Leveraged Logic Apps extensively in conjunction to multiple Azure services to

- Move data between repositories.
- Receive, Process all the user requests from the Web application/UI.
- Connect to SQL database in network layer followed by data processing.
- Data passed as JSON messages from the logic app to API and in turn, execute the corresponding procedure.
- Success or failure notification of the processing is returned to the API calls.
- Load temporary table during the data transformation/processing.
- Schedule workflows for daily stats, customer orders, customer search, rewards etc.



Azure DevOps

Agile Solutions are Microsoft Solutions Partners for Data & Al and offer customized solutions for Azure DevOps adoption and usage. DevOps services can be used in the cloud, or onpremises and have software development, collaboration, and reporting capabilities. It integrates well with Agile project management methodologies, such as Scrum and Kanban.

Features

- Dashboards track progress, use widgets, navigate through different project areas
- Wiki clear hierarchy storage of project information
- Boards track work status, tasks, issues, visualize workflow, backlog management
- Sprints plan sprints, chart hours to effort
- Repos main code repository, source/version control via Git or TFVC
- Pipelines supports build, test, and release automation, implement CI/CD
- Test Plans create and manage tests; raise bugs directly on Board
- Calendar helps in capacity planning for sprints, manage team holidays
- Tags tag work items to filter product backlog
- Retrospective lessons learned during sprint, issues in last sprint

- Use of Agile methodologies
- Convenient sprint planning
- Transparent development work
- Effective backlog management
- Retrospective function for teams' continuous improvement
- Visualization of the workflow
- Continuous Integration and Continuous Delivery implementation
- Create and manage manual, exploratory, and continuous tests
- Deploy code from repository into different environments
- Plan workforce capacity via Calendar during sprint planning



Large Utilities Company:

Agile Solutions consultants have leveraged Azure DevOps tool to deliver projects with this client by increasing visibility and transparency of development work using sprints, product backlog, different work item types and boards. Stakeholders' expectation has been managed using a customised dashboard with widgets for Sprint Goal, Sprint Burn Down, Velocity Chart, Assigned to Me, Chart for Work Items, Cumulative Flow Diagram (CFD), Deployment Status, Query Tile, Chart for Test Plans and Sprint Capacity to report team progress. We have used the Retrospective function for team continuous improvement and increased team collaboration by working on task and assigned work items.

Case study

Property Investment Firm

We are using a best practice approach to use the Azure DevOps YAML pipelines to deliver Infrastructure as Code (IAC) and CI/CD (Continuous Integration and Continuous Delivery). Our IAC tool of choice is Terraform. We are currently supporting Function Apps, .Net, Web Apps, APIM, ADF, SQL Server, Logic Apps, Key Vault, Storage Accounts, and Log Analytics. All code is stored in the DevOps Git Repos, and we use the repo wikis to describe the contents of our repos and how the pipelines are configured. We also use DevOps Boards for the management of all our work and operate 2-weekly sprints/retros.



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