

Data Insights

Smart Data Platform

Service Definition

1. About Us

Valcon is a full-service provider that works at the intersection between consultancy, technology, data, advanced analytics and strategy. Situated in The Netherlands, The United Kingdom, Denmark, Sweden, Germany and Croatia, Valcon forms a European community helping clients across national borders. We focus on end-to-end transformations in which we create long-lasting and sustainable value together with a human approach.

We know that every link matters in improving an organisation value chain. We support our clients in pursuing the right change in people, system, and process. Our involvement is based on deep knowledge and experience, working shoulder to shoulder with many different organisations. We do not blindly follow a methodology; we follow through on getting things done. Who have deep expertise in operationalising strategy, process design, data and analytics, technology, and change.

2. Service offering

Valcon has a highly experienced Data Platforms team and has helped clients across different industries implement and operationalise Data Platform solutions that create business value out of data. We have a pragmatic, no-nonsense approach to creating results and a focus on real impact on operational issues and helping clients from strategy to operations by leveraging their data. We have a technology agnostic approach and can support building Data Platforms utilising our **Smart Data Platform** accelerators across the major cloud vendors (AWS, Azure and GCP). We have built up specialised expertise in building and maintaining data platform environments in the cloud, with a heavy emphasis on knowledge transfer and helping our clients becoming more self-sufficient in maintaining their data platform solution.

Description of functionalities in the Data Platform

1. Ingest



This functionality will "ingest" all the data that is offered to the data platform. It's able to ingest data from different volumes, velocities and varieties. Data can be ingested by streaming data or batch oriented.

This functionality is typically meant for **Data Engineers**

2. Store



This functionality is used to store the data in the data platform. The data is stored in its raw form and is transformed into a business form when asked for. Also, the raw data can be accessed here.

Data Engineers and **Data Scientists** typically have access to this functionality

3. Transform



The data transformation and data processing activities. The transformation of data is as a separate concern which can be placed in multiple areas.

This functionality is typically meant for **Data Engineers**

4. Consume



This functionality is used to analyze and consume the. Visualization tools can be used like Power BI but also analysis tooling for performing data science tasks like ML notebooks or cognitive services can be used

Business Users, **Data Analyst** and **Data Scientists** typically have access to this functionality.

5. Distribute



This functionality is used to further distribute the data to third parties. This is typically done through API's, to prevent customizations on the data output.

6. Manage



This functionality is concerned with the management of data. It assures Security policies are followed and authentication and authorization is arranged. It also provides clarity on data structures and definitions through for example a data catalog.

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Features

- Valcon's Smart Data Platform cloud accelerators that build data pipelines customised to your data
- Proven standardised methodology that can be tailored to specific business needs
- Result-oriented, focus on quantifiable impact delivering the right data to the right users
- Incremental visibility and insight (flexible approach following agile or waterfall methodology)
- Interdisciplinary approach embedded with aligned Valcon functions (Business Analysis, Cloud OPS Engineering and Data Engineering)
- Technology agnostic across AWS, Azure and GCP cloud vendors
- Flexible pricing models
- Data Platform environment in the cloud operationalised as a Managed Service:
 - "Follow the sun" Service Desk

- Incident and Problem Management
- 3rd Party Product/Supplier Management
- Change and Release Management
- Service Management reporting and planning

Benefits

- Fast results through our industry standard “medallion architecture” Smart Data Platform
- Delivery of appropriate and secure raw, enriched, standardised and aggregated data to data consumers
- Provides timely, actionable data to boost operational performance and facilitate fact-based decision-making
- End to end delivery, from business analysis to technical implementation
- Measurable impact by focusing on tangible and quantified results
- Frontrunner in cloud-based Data Platforms, enabling the use of Big Data to tackle any business challenge
- Pool of highly talented Data Engineers
- Focus on knowledge transfer and Data Platform training (if desired)
- Integration with upstream and downstream operational and analytical systems and BI tools (for example we can work with any major BI vendor, including MS Power BI, Tableau, Looker, AWS QuickSight, Qlik, etc.)
- Continuous implementation support (Managed Service):
 - DevOps / ITIL Hybrid delivery model
 - Tailored incident portal with knowledge base integration
 - Best of breed tools for monitoring and alerts
 - Designated Service Lead
 - Rapid access to the wider Valcon services

Valcon's Data Engineering Offerings



Design

- Data architecture design**
- Planning the overall structure and components of the data infrastructure.
- Data modelling**
- Defining the structure, relationships, and constraints of data within storage systems.
- Data integration strategy**
- Designing methods for consolidating and connecting data from various sources.
- Data security and compliance planning**
- Establishing guidelines and best practices to ensure data protection and adherence to regulations.



Implement

- Data pipeline development**
- Creating ETL and ELT processes for data extraction, transformation, and loading.
- Data storage implementation**
- Setting up databases, data warehouses, or data lakes to store processed data.
- Data processing and analytics tools**
- Integrating tools and platforms for data analysis, reporting, and machine learning.
- Data validation and cleansing**
- Implementing processes to identify, correct, and prevent data quality issues.



Test

- Data pipeline testing**
- Verifying the functionality, accuracy, and performance of data processing workflows.
- Data storage testing**
- Ensuring data is correctly stored, retrieved, and accessible with required performance.
- Data security testing**
- Assessing the effectiveness of security measures, such as encryption and access controls.
- Data quality testing**
- Validating the consistency, completeness, and accuracy of the processed data.



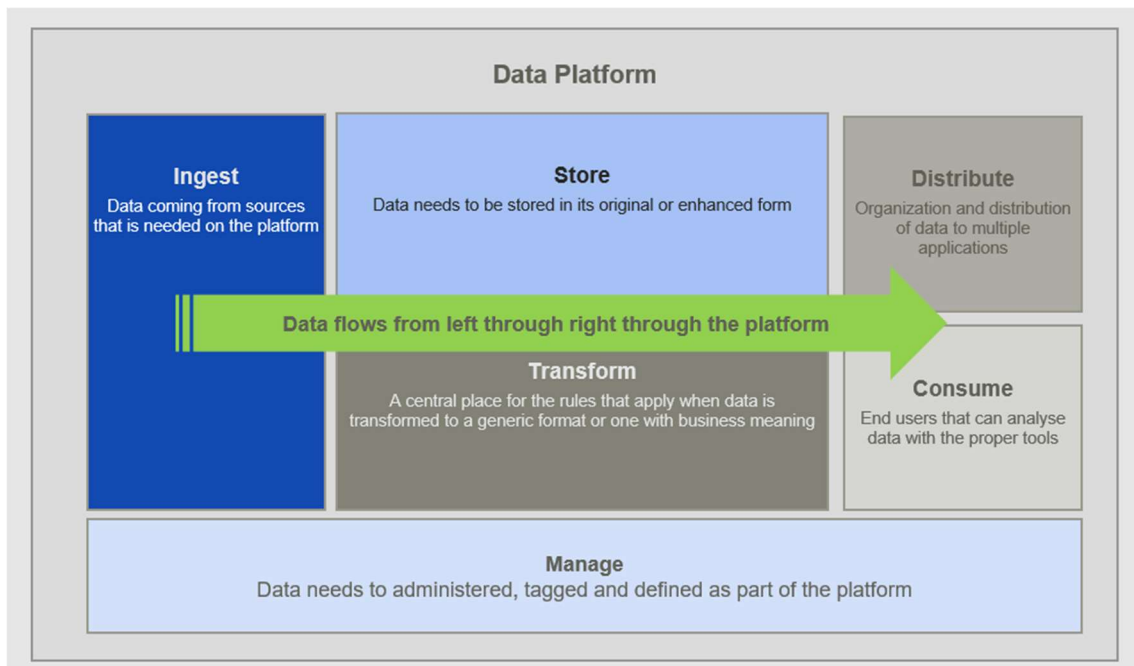
Run / DataOps

- Data pipeline monitoring**
- Continuously observing data workflows for performance, errors, and data quality issues.
- Data storage maintenance**
- Regularly updating, optimizing, and backing up data storage systems.
- Data security and compliance management**
- Monitoring and enforcing data protection policies and regulations.
- Performance optimization**
- Identifying and addressing bottlenecks or inefficiencies in data infrastructure.

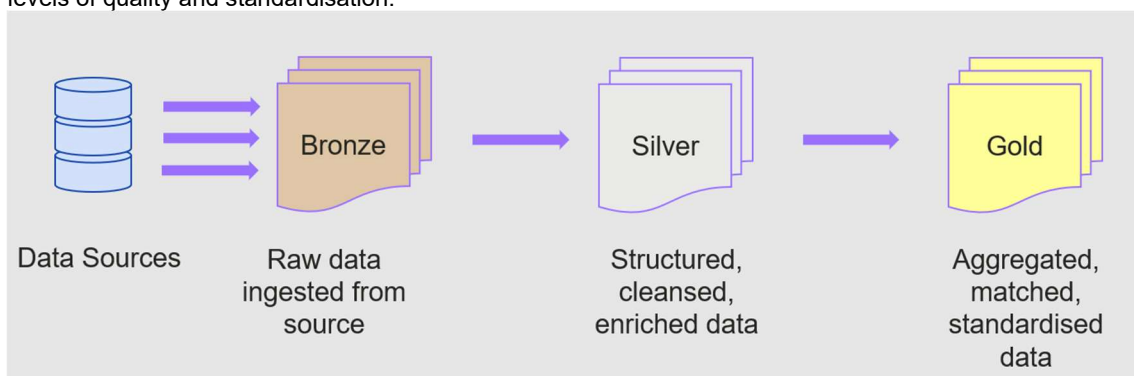
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3. Approach

Valcon's Smart Data Platforms approach is based on the evaluation of where our clients are in their data maturity journey. We have identified several stages of data maturity, and our Data Platforms solutions help our clients move from data as a consequence/reference to data as a an enabler/strategic asset. We have specific expertise in uncovering value in operational data sources that are often not considered by the business.



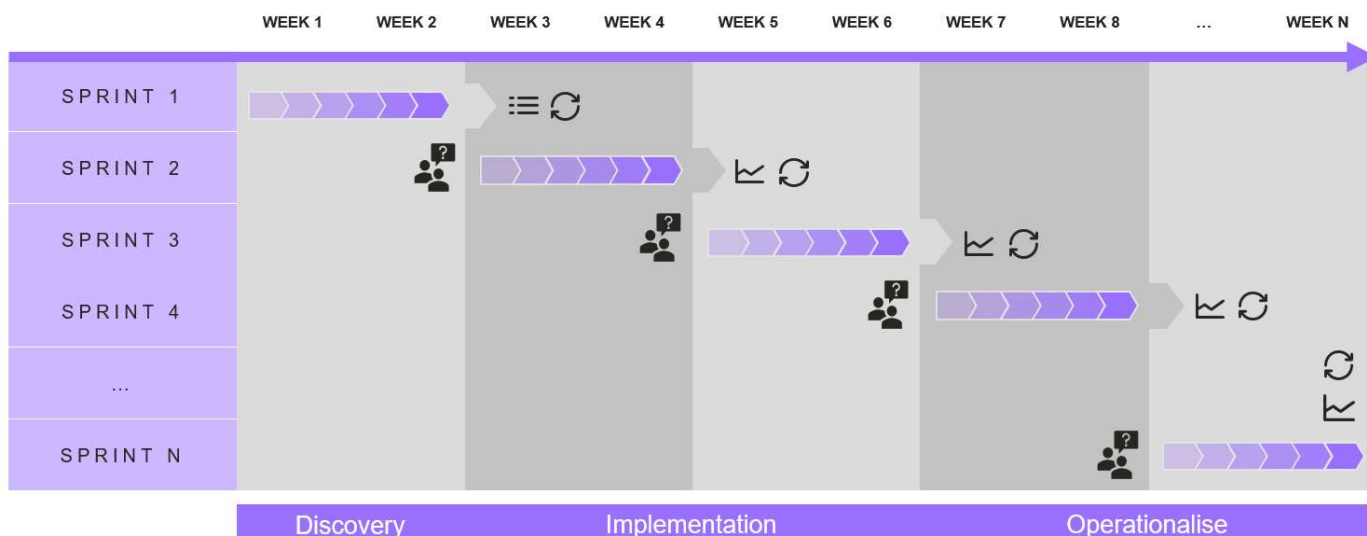
Within the data platform we define a set of data stores known as Bronze, Silver and Gold, known as a “medallion architecture”. This is an industry standard set of data stores, and represents data at differing levels of quality and standardisation.



Data analysts enjoy access to the high-quality aggregated gold data, allowing delivery of reports and insights across multiple source systems, while data scientists are able to take the standardised, cleansed and enriched silver data to create machine learning features and train models that deliver valuable predictions to your teams.

Throughout the Data Platform implementation, we aim to take your team along the journey, with documentation, knowledge transfer and training, enabling you to become self-sufficient should you wish, although we are also able to manage your data pipeline as an ongoing service after implementation. We deliver the implementation of data pipelines by using our proprietary Smart Data Platform accelerators, which speed up the creation of data pipelines customised to your specific data models. In addition, our Smart Data Platform accelerators integrate with a wide range of data and platform management tools, addressing issues such as data quality, data testing, pipeline observability and security, all leading to getting the right data to your users quicker.

Our solutions can be developed through different delivery models. Our own preference is an agile and flexible approach where we deliver incremental visibility and results through iterative sprints.



4. Activities and Deliverables

This engagement can feature any combination of the deliverables described in the table below:

Deliverables	Description
Data Platform Discovery	The discovery steps of the process cover 'Business Understanding' and 'Data Understanding'. Both steps involve the Valcon Data Platform experts analysing the business question to be answered and analysing the data available to determine the best approach and assess the quality of the data itself. The outcome of this phase is a detailed understanding of the business problem and available data, a refined approach, and recommendations and actions to deliver a cloud-based data platform in the context of your organisation's requirements.
Data Platform Architecture and Design	The design phase bridges the conceptual to the physical design and architecture of the solution. Valcon's Smart Data Platform accelerators are architected using industry standard patterns that enable us to quickly translate your data requirements into a suitable architecture. The high-level design will be refined based on the detailed understanding gained during the discovery phase. A detailed physical architecture will be produced that drills down from the high-level design to a level of detail that informs the implementation.
Data Platform Implementation	The implementation steps of the process include 'Infrastructure Provisioning', 'Landing Raw Data' and 'Data Pipeline Development', 'Integration', 'Testing', 'Deployment', 'Documentation' and 'Playback'. This is an iterative process and involves UAT testing at different stages platform implementation, typically as data is landed in the Bronze, Silver and Gold layers. Integration is an optional step and may include integrating your data with other data management tooling, such as Master Data Management, Reference Data Management and Data Governance tooling. Deployment involves productionising and operationalising the platform with appropriate security, monitoring & metrics in a controlled environment for consumption through a designated cloud-based BI environment.

5. Effort and Cost

Effort will be scoped between Valcon and the client based on the skills mix required. See the Pricing Document for the current rates.

Rate card prices are exclusive of VAT. Expenses are re-charged at cost. Expenses will be evidenced by receipts and will include reasonable travel, accommodation and subsistence costs. The payment schedule will follow milestone completions as agreed in the Statement of Work.

6. Assumptions

The successful delivery of and engagement is dependent on the key assumptions identified through collaboration between the client and Valcon. These will be documented and agreed as a part of the Statement of Work.