Global Manufacturing Group

Optimizing HR function through Data-Driven Workforce Analytics

Client Overview

The client is a global manufacturing group specializing in surface engineering, polymer processing & additive manufacturing. They have a presence in 38 countries and a workforce exceeding 13,400+ employees, the company caters to diverse industries such as automotive, aerospace, energy, tooling, and textiles. Its innovative solutions and services improve customers' products and manufacturing process performance, functionality, and sustainability.

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Problem Statement

While managing the HR function across diverse geographical regions they faced the challenge of maintaining accurate employee records, tracking key performance indicators, and ensuring compliance with labor laws and regulations of different regions. Hence, they required a comprehensive solution that could automate the integration of large amounts of data originating from their dispersed workforce, transform, store and generate actionable insights for the HR team to utilize.

Key Challenges

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Inaccurate or inconsistent HR data

Resulting in difficulty in making informed decisions about staffing levels, skills gaps, and future workforce needs.

Inefficient recruitment processes

Delays in hiring for critical positions negatively impacted the operational effectiveness.

Unbalanced workforce distribution

Unevenly distributed workforce across job levels and divisions resulting in bottlenecks, inefficiencies, and skill gaps.

Lack of predictive churn analysis

This led to reactive hiring or layoffs and potential talent shortages or surpluses.
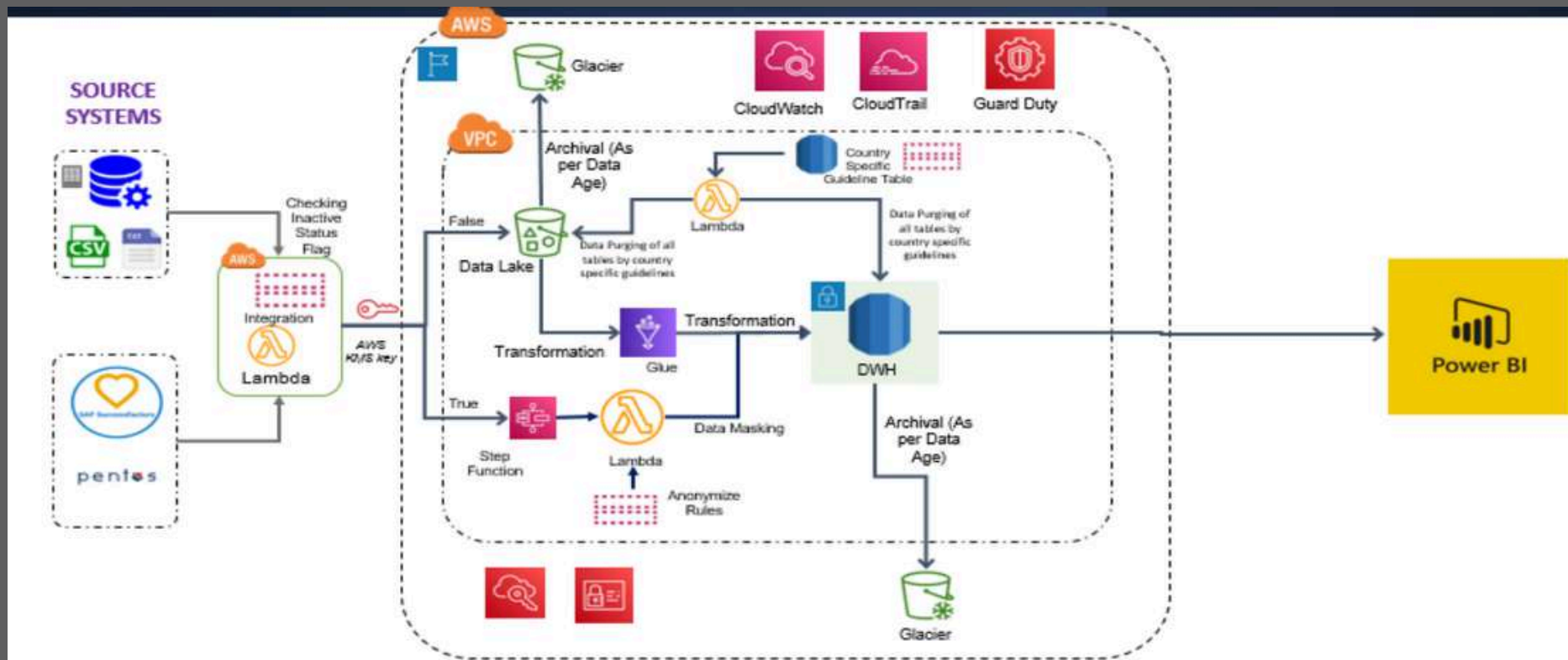
Inappropriate span of control

Leading to unbalanced managerial workloads, employee dissatisfaction, and communication breakdowns.
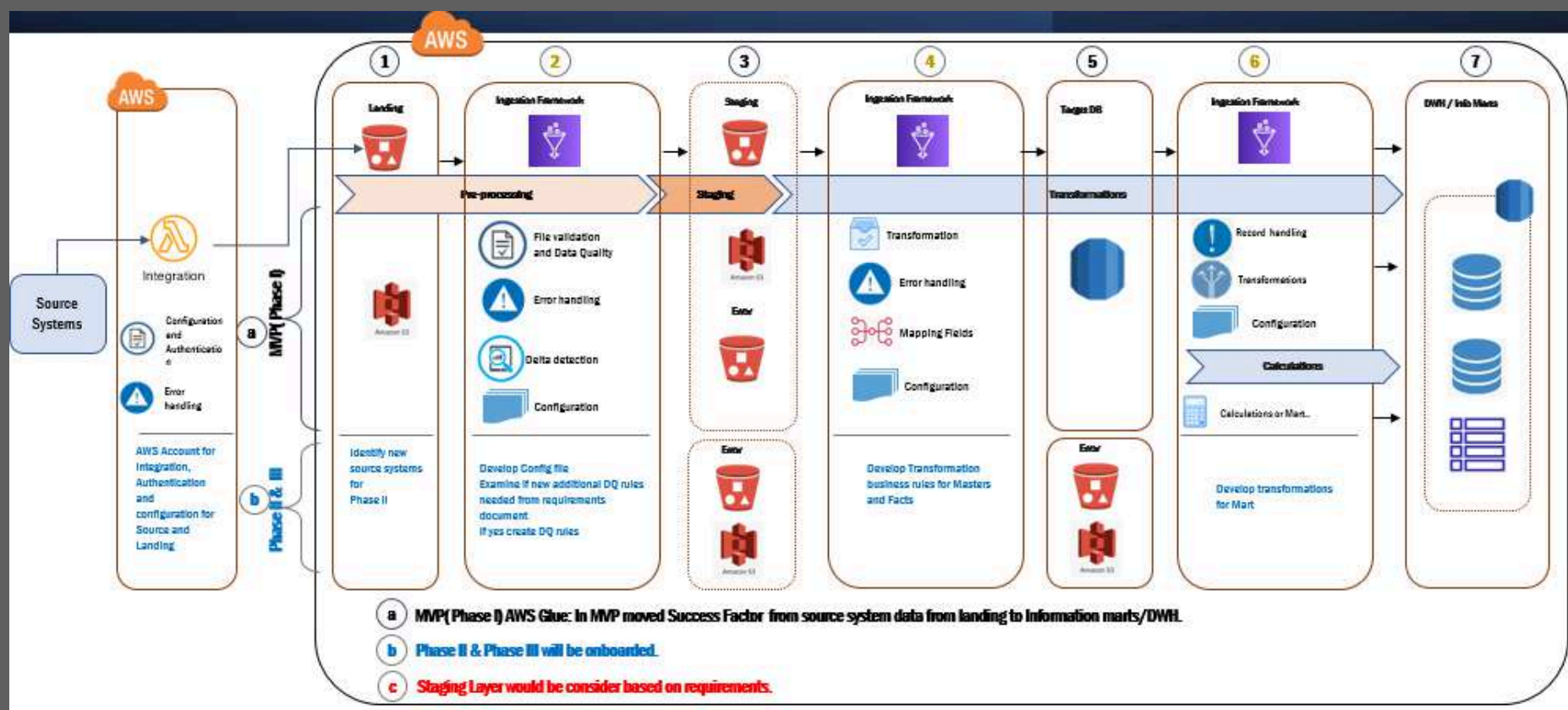
Solution Implementation

The organization was operating with data that was siloed and required manual transfer leading to inefficiencies-

✓ Automated data transfer from SuccessFactors to a centralized data warehouse using AWS.

✓ Implemented AWS Glue for data validation and transformation before storing it in the AWS Redshift data warehouse. Enabled AWS Glue to orchestrate the entire process, ensuring data accuracy and integrity

✓ Additional data warehouse to further refine data for specific reporting needs.

✓ Improved employee data protection by adhering to GDPR guidelines with data archiving, purging, and role-based access controls.

✓ Leveraged insights from 50+ key HR metrics to deliver 14 comprehensive workforce analyses, with 4-5 more currently in progress enabling data-driven decision making.

Architecture overview

Data Flow Overview

Analytics Implemented

Workforce Optimization	
Head Count & Full Time Employee Analytics	**Helped reveal overstaffing and understaffing ensuring optimized workforce distribution. Created dashboards to guide resource reallocation, hiring, and internal mobility.**
Turnover Analytics	**Identifies attrition drivers by tracking leavers, turnover, and compa-ratios. Enabling benchmarking against industry and regional averages.**
Data Quality Analytics	**HR-manager data discrepancies, backdated terminations/hires, or mismatched organizational data.**
Recruitment Analytics	**Identifies recruitment bottlenecks by analyzing approved open requisitions by year, division, function, country, and hiring type. Tracking blue and white-collar KPIs helps improve sourcing, screening, and onboarding to speed up recruitment and reduce time-to-fill.**
Span of Control analytics	**Counts direct and indirect reportees to adjust the reporting structure for optimal team sizes and communication.**

Analytics Implemented

Workforce Financial Impact Analytics	
Personal Expense cost Analytics	Analyses actual costs, run rates, budgets, and remaining run rates to find cost overruns. Enable cost optimization by analyzing legal entities, functions, and business lines.
Strategic Workforce Planning	Requisition plan analysis(approved FTE budgets, targets, forecasts, actuals) enables proactive hiring for future needs. Requisition movements monitoring and net hiring requirements help to anticipate and address potential workforce shortages or surpluses.

Technology Stack

aws · amazon S3 · Power BI · amazon REDSHIFT · Amazon Cloudwatch · aws Glue · SAP SuccessFactors / SAP

Business Impact

50%
Boost in Recruiting Efficiency

Streamlined recruitment processes resulting in improvement in efficiency, enabling faster filling of critical positions.

15% **improvement in Business Productivity**

Equipped employees with real-time data, leading to an improvement in business productivity.

13400+
Employees' accurate reporting

Ensured accurate reporting for employees which helped reduce discrepancies and improve data reliability.

Empowered key decision makers

Delivered workforce optimization enabled employees with actionable insights leading to an improvement in financial optimization and helped in strategic decision-making.