

data@business

dbRules

Solutions for Business Rules Management



What are Business Rules?



Business rules are essential guidelines and principles that an organization establishes to govern its operations, processes and decision-making. These rules serve as a framework to ensure consistency, compliance and business strategy.

In data management business rules translate into how data are collected, stored, processed and shared. Rules can apply in almost all functions of an organization and across industry verticals. Business functions like finance, controlling, regulatory reporting are often most intensive areas for business rule.

Here are examples of rules that you may find in your daily business.

Finance & Banking

- Balance sheet and financial statement
- Customer classification for loans
- Product category determination
- Calculation of risk weights
- Account determination
- Cost allocation keys

Production

- Conditional event raising and notification
- Maintenance cycle determination
- Input material batch choices
- Quality control check rating

IT Services

- Device allocation by function/pay grade
- Choice of public cloud as hyperscaler
- Cost distribution to business areas
- Automatic allocation of storage

Human Resources operations

- Equal opportunity compliance rule
- Employee competency mapping
- Compensation and benefits
- Performance appraisal
- Remote work policy
- Leave and time-off

Analytics

- Business consolidation rules
- Information augmentation
- Validation of input data
- Reporting rules

Trading

- Trading halts and circuit breaker rules
- Order type and execution rule
- Best execution rule
- Settlement rules

dbRules for SAP S4/HANA® & SAP BW4/HANA®

dbRules simplifies business rule management in your enterprise by acting as the central point for establishing, distributing and governing business rules.

Rule Definition

A user-friendly Excel® add-in helps users maintain and govern their business rules. The rules are structured in a WYSIWYG principle in mind. Users can on the very first glance understand what the rule attempts to define. Users can run simulations on the rules as defined by them, allowing them to prototype, build and test iteratively.

A powerful rule definition language enables setup of complex rules, whilst still keeping the overview on the broad requirement.

Master data help is available at their fingertips in case they do not remember the exact code or ranges.

Rules are maintained and released for use on production system or put on a CTS transport for deployment.

Rule Generation

The dbRules engine and repository embed in to your existing SAP® S4/HANA® or BW4/HANA® application and generate runtime artifacts implementing the business rules.

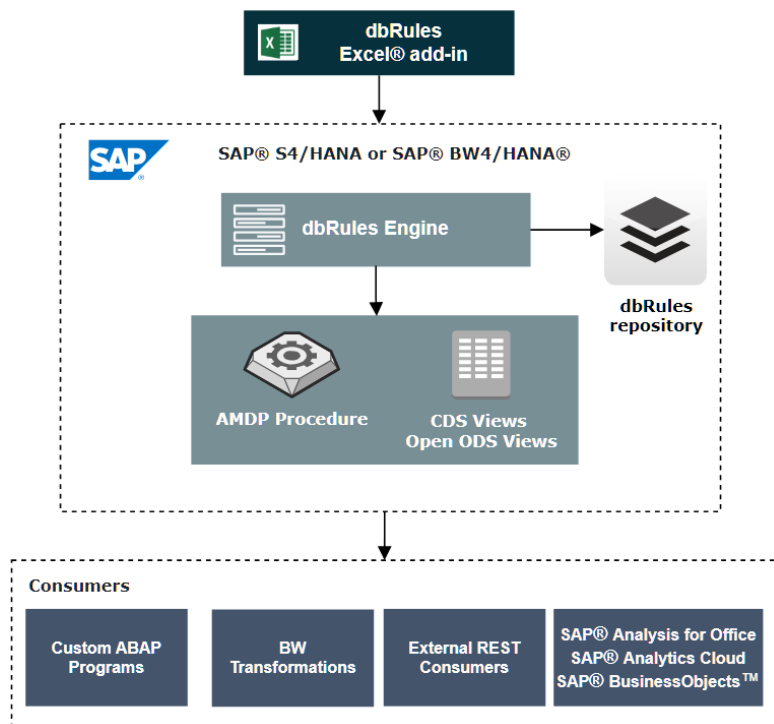
Business rules are translated into runtime artifacts like database procedures and views ready for integration by a developer.

Rule Governance

The dbRules repository manager deliver role-based access control (RBAC) and change audit trails. These are integral components that can significantly enhance the value of rule management software. RBAC ensures that users have appropriate access permissions based on their roles, improving security and streamlining workflows.

On the other hand, the change audit trail offers transparency and accountability by recording all rule changes, facilitating compliance, error resolution, and historical analysis.

Together, these features empower organizations to efficiently manage rules, collaborate effectively, adapt to evolving needs, and maintain the integrity of their rule-based processes, ultimately bolstering security, compliance, and operational efficiency.



Rule Integration

The runtime artifact, a native AMDP database procedure, can then be called in ABAP programs, BW transformations, BI-IP planning functions or customer exits. Generated CDS Views and BW4/HANA® Open ODS views can be directly consumed in real-time dashboards in SAP® Analytics Cloud, SAP® Datasphere, SAP® BusinessObjects™ or SAP® Analysis for Office avoiding data replication.

dbRules value proposition

Save on implementation, maintenance and energy costs. Across your enterprise landscape, our software can significantly reduce the costs and energy consumption associated with deploying new projects. By leveraging our efficient and optimized implementation, you avoid resource-intensive processes. This reduction in implementation time and effort translates directly into cost savings for your organization. Additionally, our solution is designed to operate with minimal computing power needs.

Bug Fixes/Enhancements

Standardised approach to business rule implementation eliminates bugs arising in core logic. Future enhancements require less effort as well.



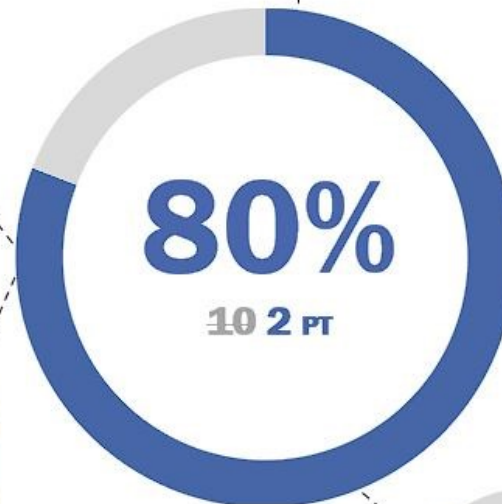
Requirement Gathering

Business users formulating and testing rules independently and iteratively without IT interaction can result in almost 60% of time/costs savings



Development

Developers now act as integrators of generated modules without having to design, implement and unit test core business logic.



CPU Usage

Reduced CPU Usage leading to Cost savings on public cloud environments and energy savings on on-premise



By embedding the dbRules generated artifacts into SAP HANA®'s parallel processing engine, we have experienced ETL workloads are reduced from 24-hour ABAP job to a 5-hour process. This cuts a 700W server's energy use from ~16.8 kWh to ~3.5 kWh, resulting in up to **80% reduction in energy consumption.**

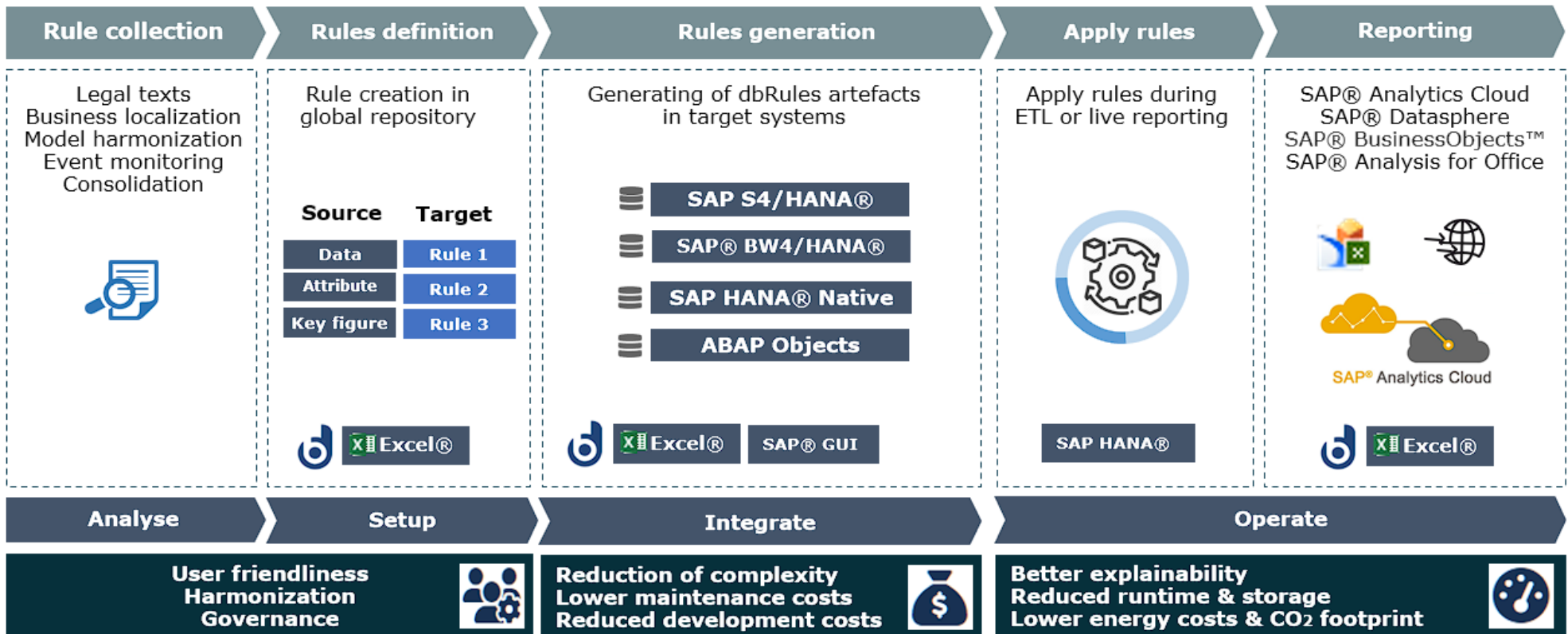
We are strongly committed to **reducing CO2 footprint** of such compute jobs in large enterprises!



dbRules architecture overview

Our architecture integrates into SAP S/4HANA®, SAP BW/4HANA® and SAP BWonHANA® customer landscapes.

We support 3 tier system landscape scenarios with integrated transport management and versioning.



We generate SAP HANA® native and business warehouse artefacts to ensure long-term compatibility.

We also offer down-port services for clients with older SAP BWonHANA releases.

dbRules features



Cost and Efficiency Gains

- Significant performance improvements through push down of rules to HANA database
- Centralized oversight of all business rules operating in the system
- Reduced development costs through low-code / no-code approach
- Low entry barrier for new team members
- Ease of knowledge Transfer
- Time and energy savings



Rule Language

- Intuitive tabular rule structure
- Powerful language functions for complex scenarios
- Match First and Match All Options



Repository

- Deep folder-based structure for organising rules
- Personal user space for testing and learning
- Fast search for objects in the directory
- Detail audit trail of all released versions



Governance

- Access to objects can be differentiated across read, write, release and delete
- Aligned to standard SAP practices for authorisation management
- Role Based access control to object in repository
- Full transparency into change audit trail
- Recovery of prior states of rules



Deployment

- Released rules are written to a transport request and imported into subsequent systems
- Required post deployment actions in target systems are implemented for corrections or activations
- Support for maintenance on production systems



Frontend

- Excel® based frontend for low entry barrier to rules creation, maintenance and testing
- No developer assistance needed for rule creation and prototyping
- Internationalisation for German and English formats
- Record of changes into transports on Release



Integration

- dbRules runs on SAP BW/4HANA®, SAP BWonHANA® and SAP S/4HANA®
- External applications can apply rules onto their data using a REST API
- dbRules integrates well into your in-House development practices
- dbRules is designed for use with SAP® Analytics Cloud
- dbRules is compatible with SAP® BusinessObjects™
- dbRules works well with SAP® Datasphere

Our Company



Data Business GmbH was founded in 2016 to serve global market with data engineering related services and products. Our focus is on solutions in the areas of data lakehouse architectures, data engineering, analytics and enterprise resource planning using SAP® products like SAP® S4/HANA, SAP® BW4/HANA and Open-Source technologies. As a project partner or interim service provider, we offer you customized and coordinated IT services and solutions with expertise and passion. Together we find the right solutions for your individual challenges. We deliver solutions for business rules and decision management with Low-Code & No-Code approach.

We believe that data is the key to unlocking hidden insights and transforming businesses. Our mission is to provide innovative software services and products that help businesses harness the power of data engineering, analytics, and AI. We are committed to delivering customized solutions that meet the unique needs of our clients. Data Business excels in four key areas of data-related services:

- **Data Engineering:** Data Business stands out as an industry leader in data engineering. Their commitment to developing state-of-the-art information systems is evident in their tailored solutions for clients. These solutions enable clients to make informed decisions and drive business growth, reflecting their dedication to delivering exceptional outcomes.
- **Data Analytics:** With over decades of experience, Data Business offers cutting-edge analytics services. Their team of skilled analysts and scientists collaborates with clients to craft data-driven strategies aligned with business objectives. Utilizing the latest tools and techniques, they extract actionable insights from data, empowering clients with real-time visibility into business performance through concise reports.
- **Data Science and AI:** Data Business is a frontrunner in data science, leveraging advanced technology and techniques to provide clients with actionable insights. Their scientific approach transforms vast datasets into meaningful information, supporting better decision-making. Whether it's data mining, machine learning, or big data analytics, their experts have the skills to help clients achieve their goals.
- **Data Platform Solutions (Cloud/OnPrem):** Data Business specializes in delivering cutting-edge data platforms, offering both on-premise and cloud options to cater to businesses of all sizes and industries. Their experienced team designs and implements data platforms tailored to clients' specific needs, ensuring data security, efficiency, and effectiveness.

Core Team



Johannes Iwanow
Chief Executive Officer

SAP S4/HANA® Integration and BI
25+ years cross industry experience
Touristic, Banking, Logistics, Consumer
M.Sc. in Business Administration

Mark Klein

Chief Operating Officer

SAP HANA® Integration and BI
25+ years cross industry experience
Banking, Logistic, Consumer
M.Sc. in Mathematics



Pralay Ahluwalia

Partner | Data Management & Analytics

Senior Business Architect
25+ years cross industry experience
Banking, Pharma, IT
M.Sc. in Finance & Risk / B.Sc. in Engineering



Roman Doubrava

Co-Founder | AI & HPC Research

Hybrid Cloud & Data Warehousing
SAP® HANA & Infrastructure
Full Stack Architect
IT, Banking, Energy



Microsoft, Excel® are trademarks of the Microsoft group of companies. SAP S/4HANA®, SAP BW/4HANA®, SAP® BWonHANA are the trademarks or registered trademark of SAP SE or its affiliates in Germany and in several other countries.