

The logo for Cortex is centered on a dark grey, diamond-shaped background. The word "cortex" is written in a white, lowercase, sans-serif font. The letter "o" is replaced by a red circle with a white shape inside, resembling a stylized brain or a drop. A registered trademark symbol (®) is located at the top right of the word.

cortex®



TRENDS

CURRENT CHALLENGES TO THE IT

Representing relationships between the data

Complex configurations recursive structured data

In time processing of large amounts of data

Constantly changing processes in business department

Validity and transaction time data

Changes and enhancements to the data model on the fly

Flexible integration of many data sources

System configuration with basic programming skills



CortexDB

THE INNOVATIVE NOSQL DATABASE
INSPIRED BY FINDINGS IN BRAIN RESEARCH

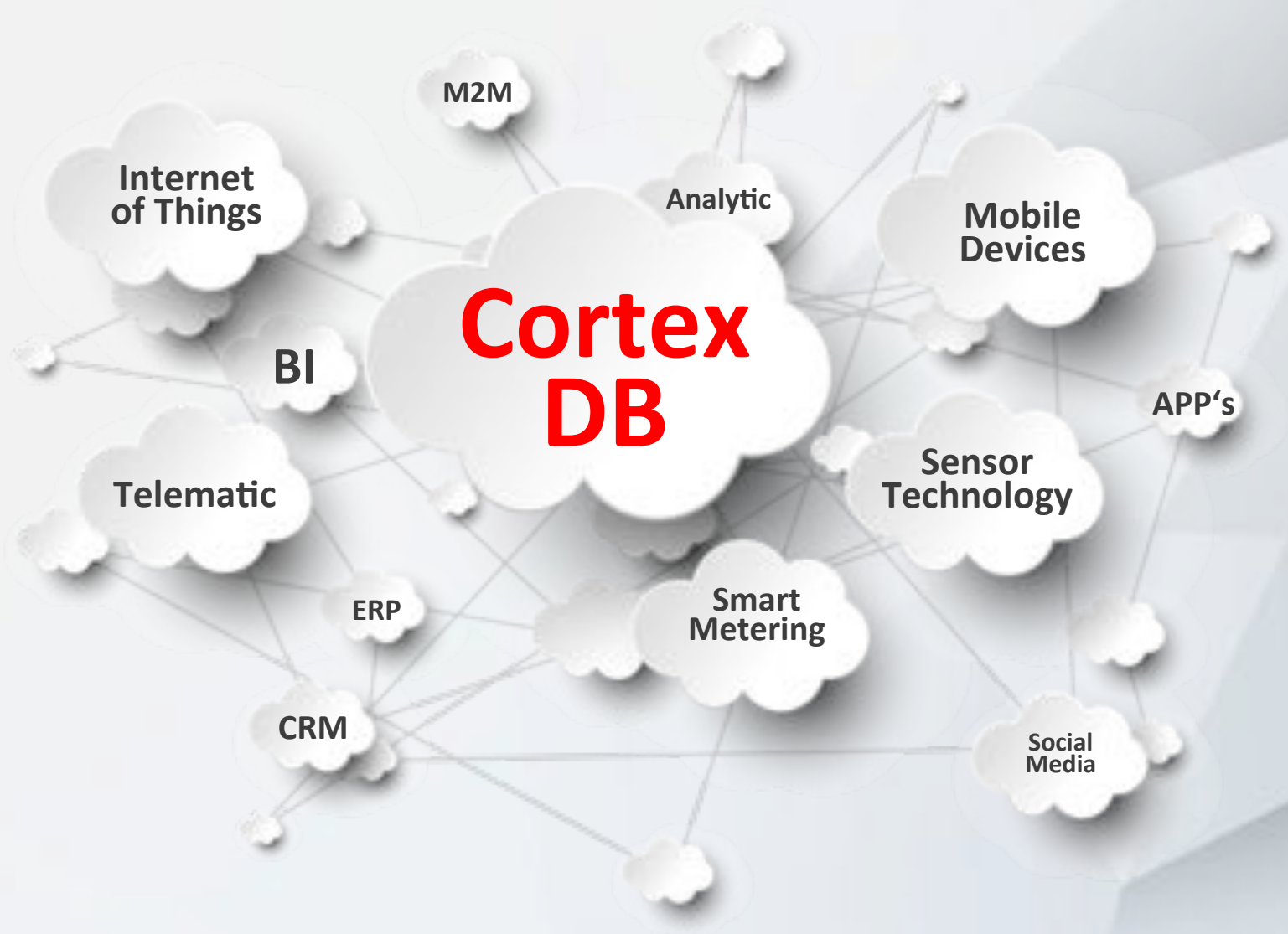
Schema-less storage of data of many data sources, without need to transform them

Guiding principle: associative search, as in the human brain

The number of search results can be reduced by using any combination of parameters and contexts

CortexDB

FEATURES & AREAS OF APPLICATION



AGILE DEVELOPMENT WITH UNIVERSAL WEB-TOOL

For all applications and solutions

Custom GUI'S possible

Configuration without programming

MULTIDIMENSIONAL USE

Linking different data sources

No need of transformation

BITEMPORAL

Storing the validity time & transaction time of data objects

COMPLEXE STRUCTURES EASILY MODELED

Perfect for solving configuration challenges

EVOLUTIONARY DEVELOPMENT

System can be adapted to processes

Fast implementation of Change Requests

REQUIREMENTS FOR DEVELOPERS

Very good knowledge of Excel

Experience to develop websites

CORTEX IS SUITABLE FOR COMPLEX APPLICATIONS

Performance Management

Predictive Analytics

Master Data Management

BOM (BILL OF MATERIAL) explosion (Rekursion)

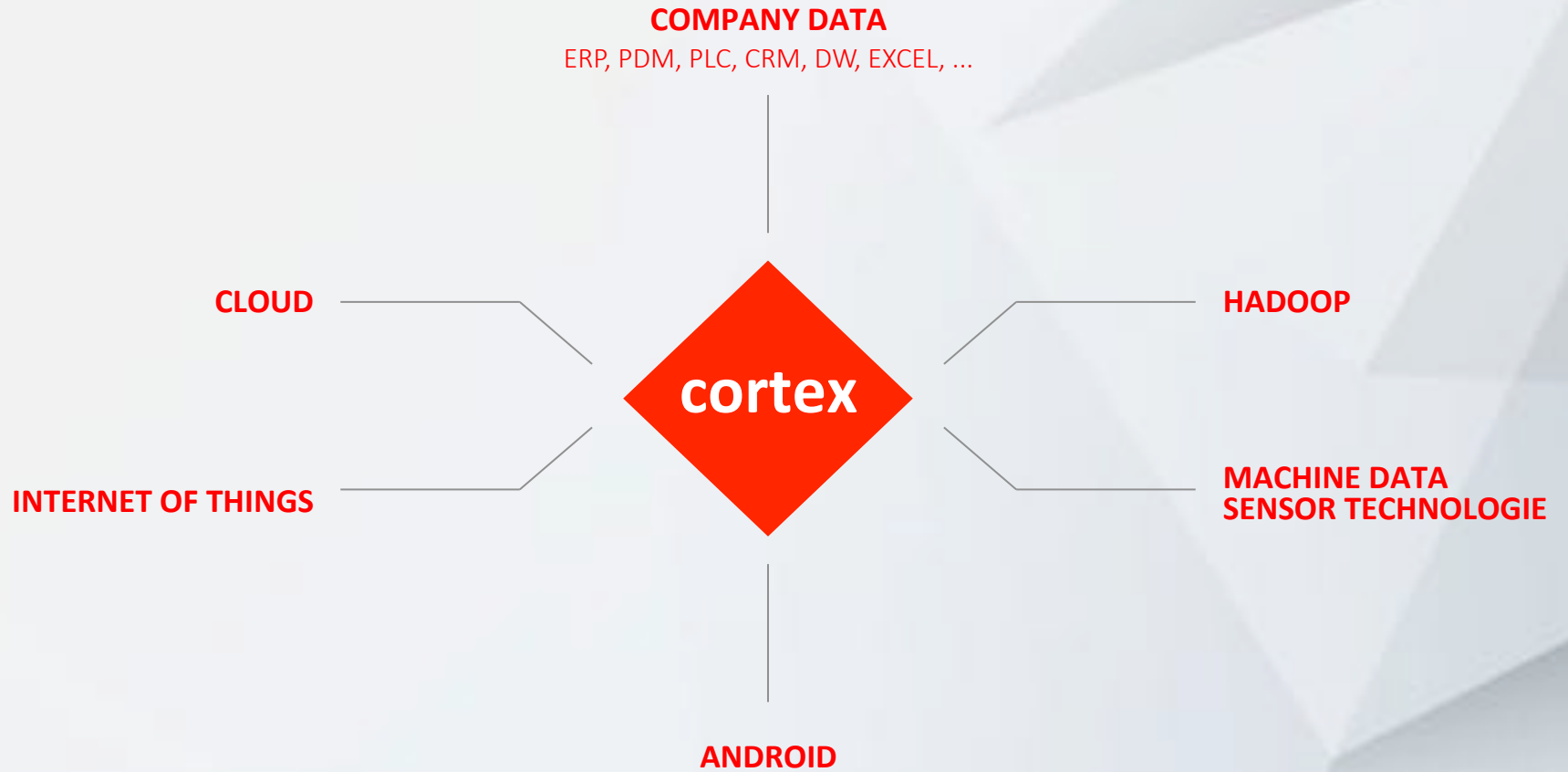
Dispositive Planing

Machine-to-Machine (M2M)

Product Lifecycle Management

u.v.m.

CORTEX. CLEARING CENTER.



CortexDB

BUSINESS BENEFITS



TAKE ADVANTAGE OF YOUR KNOWLEDGE.

LOWER COSTS

- › Suitable for Departments
- › Low cost of ownership
- › Short project time
- › A single system for all enterprise applications

HIGHER SALES

- › Shorter process time
- › New markets through new business segments

GROWTH

- › New lines of business
- › Standardisation

CortexDB

USE CASES

CORTEXDB USE CASE

PERFORMANCE MANAGEMENT



CHALLENGE

- › Data on which customers, products, services and processes contribute most success in business
- › Retail needed KPIs for division management
- › ERP and FI/CO unable to deliver analyses in the required form
- › No access to detailed data for operational and strategic analyses in previous systems

SOLUTION

- › CortexDB integrates all data sources in one DW
- › Management cockpit delivers graphical KPIs
- › All division managers receive personalised KPIs with drill-downs to raw data and historical information
- › Business analytics and campaign management for CRM
- › Process monitoring with Email Reporter

BENEFIT

- › **Customer retention with ABC analyses:** customers, products, services and processes
- › **Service efficiency:** optimised turnaround times and operational breakeven analysis
- › **Financial controlling:** target/actual comparisons show goal achievement and enable benchmarks in retail division

CORTEXDB USE CASE

SERVICE PRICE PACKAGES



CHALLENGE	SOLUTION	BENEFIT
<ul style="list-style-type: none">› Individually calculated price packages can be offered by Retail to which vehicles & models?	<ul style="list-style-type: none">› Cortex integrates all services Price Packages for each series in one DB	<p>Time advantage for the retail: With simple operation quickly create the desired offers</p>
<ul style="list-style-type: none">› Retail should be able to define quick and easy offers	<ul style="list-style-type: none">› Accessible GUI for the Retail for processing of offers	<p>Service efficiency: Acceptance and use of the system is increased in the retail and saves costs</p>
<ul style="list-style-type: none">› System should provide the OEM overview of the usage by the Retail	<ul style="list-style-type: none">› Process monitoring for use by the OEM	<p>Controlling: Processing status, offers and success can be monitored by Management & OEM</p>
<ul style="list-style-type: none">› Rapid Project Implementation	<ul style="list-style-type: none">› Little training for the retail	
	<ul style="list-style-type: none">› Reporting for OEM over the entire Retail & Statistical Districts	

CORTEXDB USE CASE

FLEET & FREE GARAGES BUSINESS



CHALLENGE	SOLUTION	BENEFIT
<ul style="list-style-type: none">› Which customers & products ensure business success in the fleets and free garages business?	<ul style="list-style-type: none">› CortexDB integrates all data sources in one DW	<p>Customer loyalty through transparency: Potential analysis through the entire value chain</p>
<ul style="list-style-type: none">› Retail needed KPIs for division management	<ul style="list-style-type: none">› Management cockpit delivers graphical KPIs	<p>Target & bonus agreements: Optimization of the arrangements for monopolistic & competition original parts</p>
<ul style="list-style-type: none">› ERP and FI/CO unable to deliver analyses in the required form	<ul style="list-style-type: none">› All division managers receive personalised KPIs with drill-downs to raw data and historical information	<p>Controlling: Target-actual comparisons show attainment of the targets and provide benchmarks in retail</p>
<ul style="list-style-type: none">› No access to detailed data for operational and strategic analyses in previous systems	<ul style="list-style-type: none">› Business analytics and campaign management for CRM› Process monitoring with Email Reporter, visit reports and follow up	

CORTEXDB USE CASE

AFTERSALES DIRECT MARKETING



CHALLENGE

- › Retail should increase customer loyalty in the after sales through needs-based approach
- › Retail and OEM shall perform operational success controlling
- › Process should provide OEM overview of all campaigns carried out by retail
- › Benchmark over the entire retail organization and central campaigns

SOLUTION

- › Cortex integrates all sources in a data warehouse
- › Linking the respective Service Events with vehicle and customer data
- › Construction of a score value system for each vehicle, customer, services, retail
- › Target group selections for any spare parts and customer groups possible
- › Business analytics und campaign management für CRM

BENEFIT

Customer Loyalty:

Customer needs are activated and loyalisiert

Service efficiency:

Optimization of service potentials and increase to sell spare parts

Controlling:

Target-actual comparisons show attainment of the targets and provide benchmarks in retail

CORTEXDB USE CASE

BOM (BILL OF MATERIALS) BALANCE



CHALLENGE

- › Different bills of material in construction, logistics and manufacturing
- › Some parts had different names and numbers
- › Construction assigns parts to 300 vehicle types, logistics orders parts, production selects parts
- › Data need to be transferred carefully – huge amount of work needed to harmonise data in Excel

SOLUTION

- › Data sets in all 3 systems transferred to CortexDB
- › Relations and roles of single articles and vehicles are represented
- › Fields with the same content are compared to check attributes
- › System detects anomalies automatically if a number exists in less or more than 3 systems

BENEFIT

Data quality:

Permanent increase in data quality (100% Control)

Cost savings: Due to faster processing in data administration

Cost savings: Due to less production downtime caused by wrongly-assigned parts

CORTEXDB USE CASE

DATA DEPENDENCIES FOR VEHICLE CONFIGURATION



CHALLENGE	SOLUTION	BENEFIT
<ul style="list-style-type: none">› Each vehicle configuration comprises +/- 5000 parts	<ul style="list-style-type: none">› Data dependencies mapped in CortexDB	<p>Data quality: Production is no longer hindered by BOM configuration</p>
<ul style="list-style-type: none">› Data dependencies describe possible combinations of parts for each configuration and country	<ul style="list-style-type: none">› BOM generation in milliseconds	<p>Reduced costs: Of IT systems and process times</p>
<ul style="list-style-type: none">› Huge volume of very complex data	<ul style="list-style-type: none">› Runs on an expandable dual core computer with 4GB RAM (previously ran on several extremely expensive in-memory HP servers, each with 3 terabytes of RAM)	<p>Flexibility: Shorter lead time for customers; Changes can be made up until the last minute; Increased customer satisfaction</p>
<ul style="list-style-type: none">› Approx. 4000 cars per day; 3-hour window for generating BOM (Bill Of Materials)		

CORTEXDB USE CASE

VALIDATION OF VARIETIES FOR SEED PRODUCTION



CHALLENGE

- › Licensing and sales of new seed varieties via joint ventures with several subsidiaries in the EU
- › Different countries have different licensing processes
- › Inconsistent definition of name, breeder, seed license number in systems
- › No way to analyse specific varieties Europe-wide

SOLUTION

- › The Variety Validator is based on CortexDB and integrates all systems in all countries
- › Variety can be identified by any search criteria: brand name, name of licensed variety, license number, breeding season, test site
- › User must make decision if result falls below lower tolerance limits

BENEFIT

- Revenue potential from:** Optimised consulting by farmers
- Detection:** Of abuse in licensing business
- Optimised variety selection:** Due to knowledge about suitability for climate and soil types across countries
- Optimisation:** Of EU funding for certain seed types

CORTEXDB USE CASE

DISPOSITION TOOL FOR MONITORING OBJECTS

CHALLENGE

- › Large database of companies, buildings, people and scanners was difficult to manage
- › Compliance with legal requirements on documentation and archiving could only be achieved for existing services
- › New business unit could not be included

SOLUTION

- › CortexDB documents all data
- › Scalable enough to cope with all additional data
- › Flexible changes and extensions while the database is running, even if they have a different structure
- › Search tool allows a set of keys to be assigned to a particular employee based on the combination of keys on it

BENEFIT

Compliance: With current and new regulations

Cost savings: From optimisation of security staff's monitoring routes

Risk of danger reduced: Due to overlapping shifts

New business opportunities:
Underpinned by system's scalability and flexibility

Staff identity protection: Due to unmarked keyrings