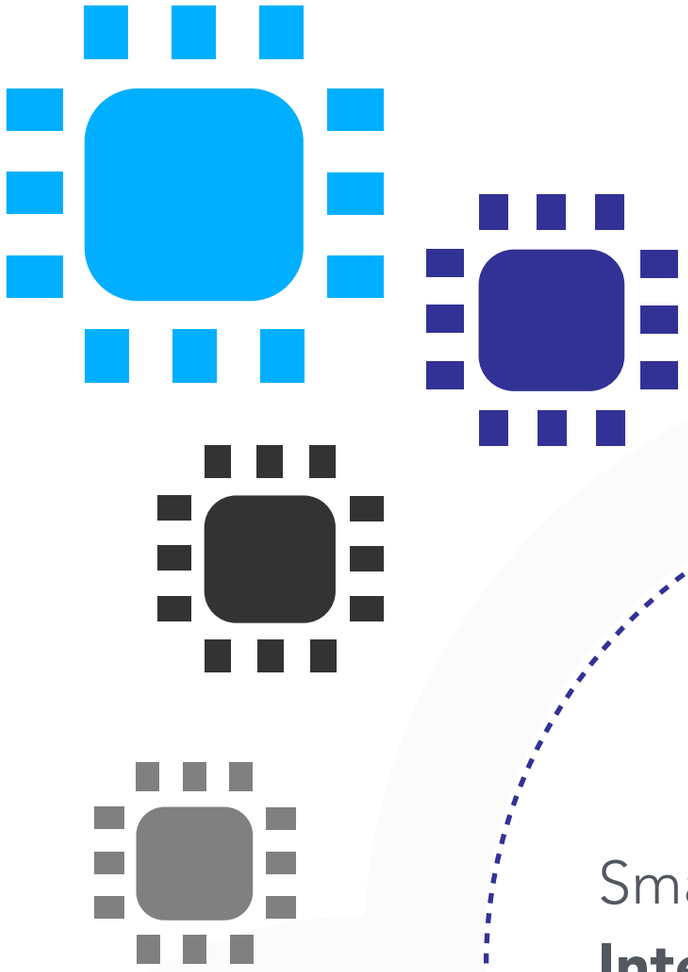

Smart, Secure and Scalable

**Internet of Things**

**Cloud**

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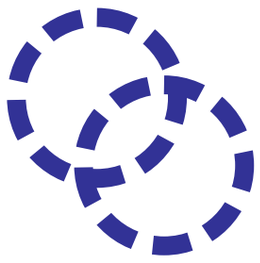
WolkAbout Smart* IoT Cloud** enables rapid development of customised IoT applications. It is designed to be easily deployed and maintained, packed with the latest in IoT technology, and completely independent from the third-party cloud services.

* It's Smart because it collects, analyses and stores the data from every device in the ecosystem.

** It's called Cloud but it is not just a server infrastructure service.



WolkAbout Smart IoT Cloud follows the concept of modules - logical and operational parts with their own functional roles. This is proved to be very important during the implementation of the IoT application. Already developed hardware and software elements can be combined and customised to make a perfect match that will fit customer needs.

Starting to develop a complex IoT application from scratch usually needs a couple of years to reach final stage, with most of the time spent on finding a proper technology stack. With WolkAbout Smart IoT Cloud - solution can be up and running in a much shorter period - required time is reduced to 4 - 6 months.

WolkAbout Smart IoT Cloud uses secure communication and provides full control over application and data to the user. No relying on third-party cloud services means it is also independent and private. Customer decides where and how it is being stored and managed - in public or private cloud or on server in secured company premises.

This software platform offers full independency to the customers. WolkAbout Smart IoT Cloud is third-party developers friendly. It can be customised by integrator's or customer's development team using implemented API functions. At the end, its complete code is open sourced.

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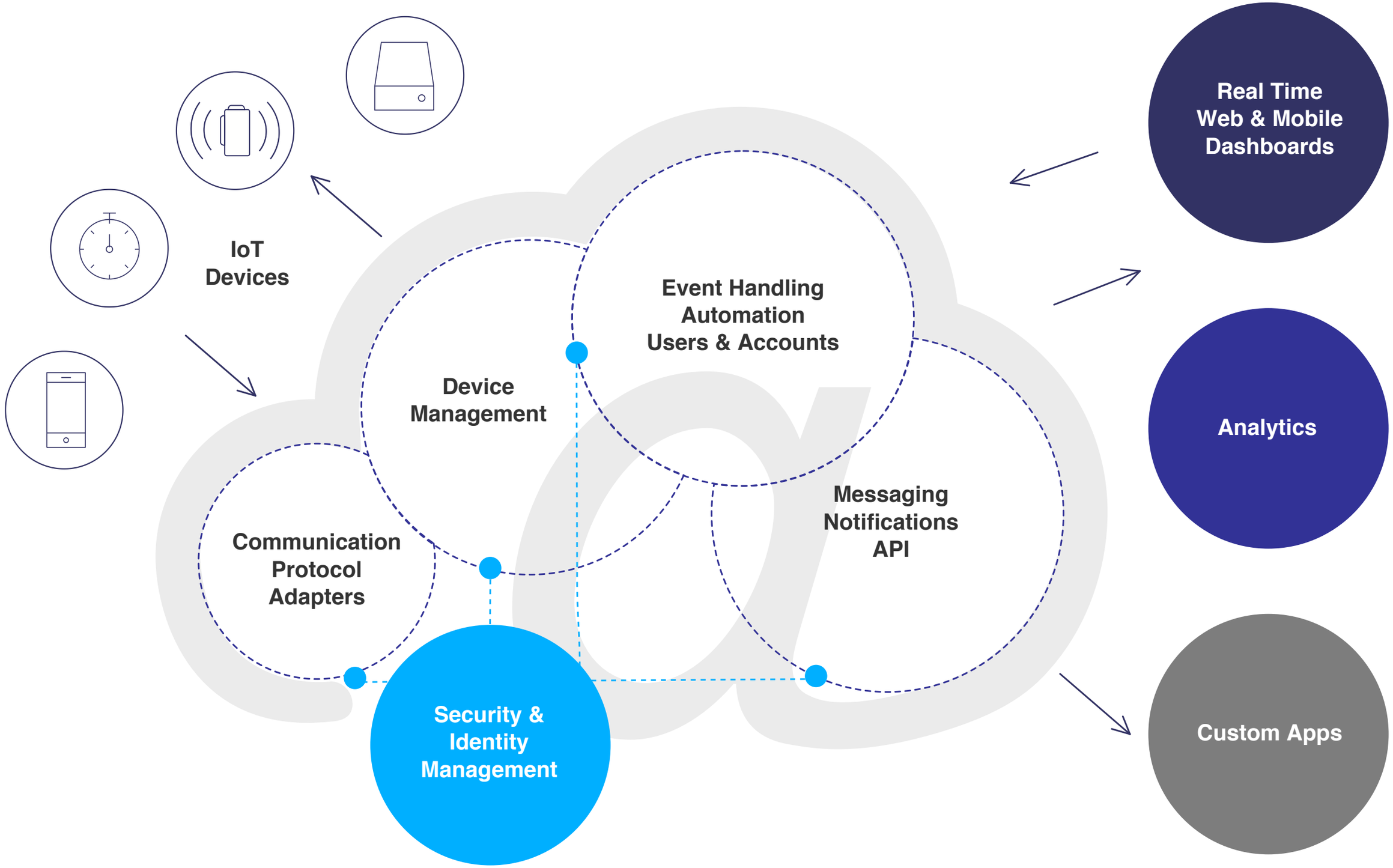
IoT
Devices
Device
Management
Event Handling
Automation
Users & Accounts
Communication
Protocol
Adapters
Messaging
Notifications
API
Security &
Identity
Management
Real Time
Web & Mobile
Dashboards
Analytics
Custom Apps

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# Communicate with Hardware Devices

Data transfer via MQTT (fully supported) with hardware devices and RESTful APIs for software components

Security is achieved with secure sockets layer (SSL) and/or Advanced Encryption Standard (AES) technology.

Designed to support buffered device communication in an effort to increase reliability

Support of all standard Link/Transport/App layers

Supports all major data protocols

Native m2m - machine to machine

Multi level data aggregation enabled

Energy efficient, heartbeat based

Data loss detection

Connection loss detection

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# Manage IoT Devices

Integration of any, hardware independent, communication enabled IoT devices like sensors, wearables or actuators

Covers hardware devices configuration, administration, monitoring, and troubleshooting. All done in secured way

High availability/scalability - tested with >10.000 devices simultaneously

Connectivity parameters configuration interface

Firmware update support

Power consumption management

Data loss prevention

Connection loss detection

Full diagnostics

Error handling

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# Collect, Analyse Process, Store Rule, Automate Real Time Data

Central part of WolkAbout Smart IoT Cloud. It runs as a high volume raw data processing server that collects, processes and stores large amount of data.

Integrates Logic unit called Rule Engine - providing event and time based automation. Customer specific processes and features can be easily implemented here

It manages user accounts, roles, access rights and device identities

High volume data acquisition

Leveraging Apache Cassandra cluster

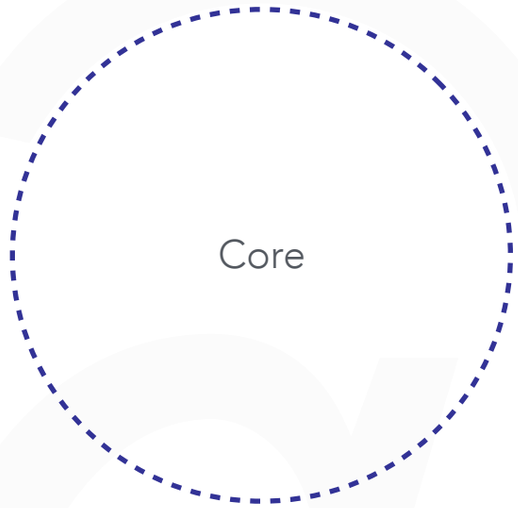
Multi site support and data sync

Math unit for data processing

Units conversion "on the fly"

Text based user friendly Rule definition

User and device data Privacy management



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# Visualise, Report
# Alert, Notify
# Interact
# Customize

This module is designed to help in developing all custom web and mobile applications for cloud data management

Allows internal messaging, setting up of alarm states, generating reports, and sending notifications to users

Developers can use typical form of server side SDK - calling API methods from web or mobile apps

Fully functional examples of complete API

Angular.js implementation of web app

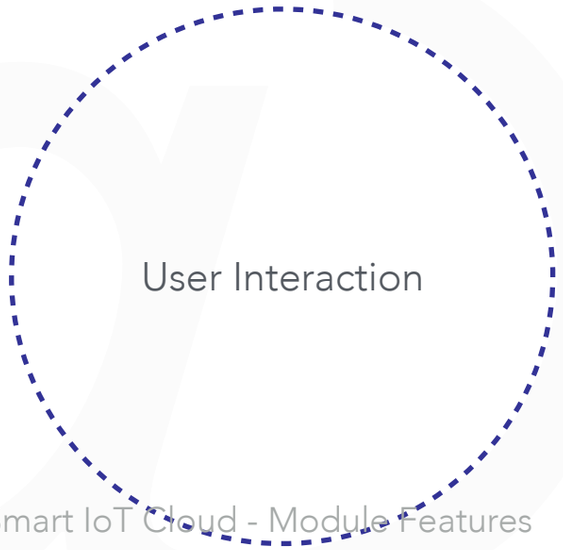
Web sockets support

Google material design for visual reporting

Native implementations on iOS and Android

Google Cloud Messaging for Android support

Apple Push Notification Service support



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