LOW-CODE-PLATFORM
GRAPH-TECHNOLOGY

based on

Software Development re-thought

structr.com
Software solutions built on graph technology are extremely powerful and efficient. No wonder that they have become a key factor in the digital transformation of many organizations and companies.

Since 2010, we have been supporting companies around the globe in their digital transformation by implementing projects based on our unique Structr software platform. What makes Structr special is that not only the data itself but also the entire definition of the software application built with the Structr platform is stored in a graph database.
NOT ONLY A TREND
BUT ALREADY A MOVEMENT

Obviously and clearly recognizable from the figures: the popularity of graph databases has grown considerably over the last 5 years. This is not surprising as they combine the advantages of other database models with unique features such as flexibility and speed.

POPULARITY CHANGES PER CATEGORY

The following charts show the historical trend of the categories’ popularity. In the ranking of each month the best three systems per category are chosen and the average of their ranking scores is calculated. In order to allow comparisons, the initial value is normalized to 100.

Source: https://db-engines.com/en/ranking_categories
Gartner and other analysts agree: Knowledge graphs as the ultimate use case for graph technology are becoming increasingly popular. This is not only because it is a trend, but because they understand the positive impact that knowledge graphs have on their organizations. Gartner Hype Cycle for Emerging Technologies 2019
PERFECT ABSTRACTION

Since 1736, when Leonard Euler found a solution to the problem of the Seven Bridges of Königsberg by mapping the topology of the city as nodes and edges, abstraction of the real world as graphs has been a common way of describing complex problems and contexts.

Especially in computer science data models, computer programs, processes, sequences or semantic relations, to name only a few examples, are represented as graphs.

1736
GRAPH-THEORY

1970s
ERM (ENTITY RELATIONSHIP-MODELL)

1990s
UML (UNIFIED MODELING LANGUAGE)

2000s
SEMANTIC WEB

THE WORLD IS A GRAPH
GRAPH USE CASES

These typical use cases particularly benefit from graph technology and are best implemented as knowledge graph solutions:

1. **PRODUCT DATA MANAGEMENT**
   - Semantically enriched product information for all relevant applications and processes

2. **RECOMMENDATION ENGINES**
   - Improve conversions and grow revenue by recommending the right things to the right people

3. **COMPLIANCE & RISK MANAGEMENT**
   - Asses risks in business relations through graph analysis

4. **SOCIAL MEDIA NETWORKS**
   - Let your users create and interact in friend-of-a-friend networks

5. **PROJECT & RESOURCE MANAGEMENT**
   - Enhance project planning and staffing by connecting PM and HR data in a graph

6. **BUILDING INFORMATION MODELLING**
   - All information relevant for construction projects in a single source of truth

7. **DOCUMENTATION SYSTEMS**
   - Store product and process documentation in a searchable, semantically rich knowledge graph

8. **GRAPH ANALYSIS & VISUALIZATION**
   - Gain insight from graph data by pattern analysis and graph visualization
For Schleich, a well-known German manufacturer of realistically painted toy figurines, we developed a semantic product data management system. It was designed to provide answers to questions concerning a large amount of individual information previously stored in different systems. By building an integrated graph database with semantically labelled product information, Schleich was able to integrate product design, manufacturing and documentation processes into a single software application.

In order to support their rapidly growing number of customers in the sports betting and real estate business who are facing growing compliance management requirements, we developed a graph-based solution for the Cologne startup Kerberos. This solution stores all relevant information that is necessary, for example, to identify possible risks in business relationships or to control processes for reporting suspicious online transactions.
WORKING WITH US

1. INITIAL CONVERSATIONS
   Whether on a phone call, online or face-to-face: We always answer first professional or technical questions free of charge and without obligation.

2. A FIRST DEMO APP
   We build a personalized, custom demo app to demonstrate the power of our approach and the technology to stimulate your imagination – still free of charge.

3. RAPID PROTOTYPING
   Based on your requirements we develop a prototype application. Depending on the budget you want to spend in this phase (typically 3-5 person days), we perform two or more iterations until you are satisfied with the results.

4. FIRST VERSION (MVP)
   Using the prototype as a basis (no rebuilding of the overall system required), we create a version 1.0 (the so-called Minimum Viable Product) that meets the most important requirements. This usually takes 15-20 person days.

5. ITERATIVE DEVELOPMENT
   Along your next requirements we will add features, improve usability, add a nice user interface in collaboration with our UX and UI designers, import real data, create APIs for data exchange. A typical milestone is going live.

6. MAINTENANCE AND EDUCATION
   Experience shows that the time until going live is about 3-6 months. After that we will gladly train your employees to further develop and maintain the system together with us or alone.

REQUEST A DEMO!
DEMO@STRUCTR.COM

THESE COMPANIES TRUST IN STRUCTR
We have created a tool that developers love to work with.

It makes designing and building software applications efficient, predictable, and hassle-free, so you can focus on the essentials: Let your creativity run wild so that it’s fun – as it should be.

**BUILT ON GRAPH TECHNOLOGY**
The best data persistence technology available for fastest queries on complex, connected and semantically enriched data.

**ONE SINGLE, INTEGRATED TOOL**
Download a single file, install and start Structr on your machine or a server, then use a web browser to create and run your web application.

**HASSLE-FREE DEVELOPMENT WITH INSTANT FEEDBACK**
No compilation or deployment required, get test feedback immediately while building sophisticated web and mobile applications.

**MODULAR ARCHITECTURE**
Use Structr as a REST / GraphQL backend to create micro services or use the full power of the platform to create server-based frontends.

**OPEN SOURCE WITH DUAL LICENSE**
Find the right edition with the set of features that fit your needs. For all editions we provide free, bronze, silver and gold support options directly from the core developers of Structr.
The open secret of the Structr platform is that the traditional file-based representation of a software application is replaced by a graph-based representation of all its defining components: UI elements, workflows, programs, processes, and the domain data model are all stored and managed directly in a graph database, enabling real-time development and runtime processing.
**MODULES AND FEATURES**

The Structr platform is a product of practice and the result of many customer projects in which it has proven itself and been continuously developed further. This agile approach has produced many useful functions that are suitable for a wide range of applications. An extensive automatic test suite ensures high stability and enables uncomplicated, test-driven development.

**PAGE BUILDER**
Create and manage pages and build applications
Create sophisticated web pages in a visual environment by combining HTML elements, widgets, CSS and JavaScript.
- Directly manage the DOM graph
- Reusable elements (shared components)
- Inner and outer templates
- HTML and other markup rendered in real-time off the graph

**FLOW ENGINE AND EDITOR**
Create program flows in a visual way
Choose from a rich library of Flow elements like data sources, filters, loops etc. and combine them to program routines and packages.
- Visual programming with graphs
- Real-time flow evaluation
- Separate data and control flow
- Exception handling

**SCHEMA EDITOR**
Graph-based definition of the data model
Design your own data model with new classes or inherit from existing ones. Add relations and attributes, customize views and write class methods.
- Customizable views with property groups
- Dynamically evaluated function attributes
- Class inheritance
- Type safety and cardinality enforcement

**DATA EDITOR**
Manage data through an integrated tool
Allows you to create, update, delete and connect data objects.
- Customizable columns
- Paging, even for nested/related types
- Type Filter and Search
- Simple CSV import/export

**USERS AND GROUPS**
Integrated, three-level security concept to protect your data from unauthorized access
Implement sophisticated authorization concepts for groups, roles and individual users.
- Create and manage users and groups
- Definition and maintenance of role-specific groups
- Drag’n drop admin UI
- Manage security-related metadata

**FILE AND ASSET MANAGEMENT**
Manage files and digital assets in a virtual file system
Store, access and efficiently manage files, images and video with custom metadata and direct streaming.
- Custom metadata (extend folder and file type)
- Server filesystem watch service
- Fulltext search with Tesseract OCR integration
- File access through FTP and SCP
“Cooperation as it should be.”

HEINZ WITTEL
Managing Director – Transformationspiloten

“We were able to significantly reduce the development time by using Structr.”

KARSTEN HECKER
Technical Director – nicos AG

“Using Structr significantly reduced the time to the first proof of concept and saved us a lot of development work.”

CHRISTIAN TSAMBIKAKIS
Managing Director – KERBEROS CMS GmbH

“The planning and implementation by Structr was extremely professional and the result very satisfactory.”

ALEXANDRA BRANDAU
Head of Media Management
German National Tourist Board