

What can we do for you?

## Project

From individual employees in your team to a turnkey solution, we can map everything.

## Outsourcing and maintenance of legacy systems

Since we have been active in the market for a very long time, we are able to understand, maintain and migrate legacy systems in various languages.

## Consultation

Thanks to our many years of experience, we can carry out feasibility studies, third-party bid reviews or technology evaluations for you.

## Architecture, scaling and performance

We are specialists in performance and memory problems, so we can look deeper into an application than others can. Our expert knowledge of databases solves performance and scaling problems.

## Testing

Both manual and automated testing at different stages of the development process can be planned and carried out by us. Analogously, the development and construction of a test infrastructure that ensures the quality of each increment in future updates via regression tests.

## Deployment, hosting, and monitoring

From OnPrem to Docker, we are proficient in Linux and Windows platforms. We deploy via Ansible, provide Docker for Kubernetes and VMs in the cloud and are familiar with various cloud technologies and environments.

## Authentication and Security

We have carried out various connections with MFA and have certified employees to carry out security checks of web applications.

## Who are we?

We are a long-standing team of about 10 software experts with different focuses, both professional and technical. Our office is in Nuremberg, but we are active nationwide and Europe-wide.

## What can we do?

We master the entire process, from the idea to the installed product on almost any target system. We specialize in web services and web applications and rely primarily on a combination between .net for server development and Angular for the interface. In addition, we are experts in the creation of WPF and Winforms applications and have developed several apps.

## In which professional areas do we work?

Our main areas of focus are:

- Publishers, here we are also represented with a product that is actively maintained and developed
- Agencies, museums, exhibition stands: many years of experience in combining visual and haptic exhibits with software
- Logistics: here, too, we have many years of experience in implementing logistics-specific solutions, both as a web and as an on-prem
- Industry:
  - o Machine control OPC-UA
  - o MQTT – Control and management of devices
- Trade: Through a large number of projects, both in the POS and in the vending machine environment, we can carry out projects in the POS and in the extended POS area.
- Medicine: Use of AI-based image recognition for diagnostics and testing. Experience in setting up an automated test infrastructure for medical applications is also available.

## Hot Skills

### AI Integration

Currently heavily focused on ChatGPT, and transferring the experience to Bard and LLaMA 2. In addition, hosting of open source models (hugging face) and comparison of performance. Deep experience with prompting and verification of AI-generated results as well as knowledge of the limitations of current AI models.

#### Text-based

Mainly the integration of ChatGPT as well as prompting and prompt chains for the different use cases. AI integrations mainly in the publishing environment:

- Summary of articles and bullet points
- Translation of articles and comparison with common translation engines
- Metaextraction: structured data is determined from plain text
- Text2Speech and Speech2Text use cases

#### Image-based

Experience in the field of "AI-based image recognition" is available in a variety of ways from past projects. ML.NET and YOLO were used as technologies to enable training even with less powerful hardware. The experience gained was used to:

- Complement test automation with image recognition, both 2D and 3D graphics
- Detection of forest fires followed by a chain of alarms
- Detecting objects on conveyor belts

- Analysis of X-ray and CT images to detect anomalies

## Deploy, Docker and SAAS

We are currently running a CI/CD pipeline for our product based on the Gitlab Runner (DevOps Gitlab) as well as Jenkins or Team City.

Deploys are performed via Ansible, both for RHEL and Debian-based systems. Deploys for Docker run analogously via the build pipeline and can be retrieved by the customer or deployed via Ansible.

We support SAAS in the first steps through our product development.

## Authentication systems

In-depth knowledge of the integration of various authentication mechanisms such as LDAP, OKTA, AD/ADFS/SAML2 etc. in client architectures.

## Testing / Automation

From unit tests to integration tests, we can prove the quality of a software iteration

## Hard Skills

Levels are given in three levels:

- 1: Professional, also for greenfield
- 2: profound knowledge, CI/CD
- 3: structural knowledge, sufficient for migration

### Process

#### *Requirements*

#### *Architecture and design*

| Skill  | Level | Resources |
|--|-------|-----------|
| Relational DB Design                           | 1     | 1         |
| OO DB Design                                   | 1     | 1         |
| Rest level 2.3 Design and Generation (Swagger) | 1     | 1         |
| UI /UIX (UI Design)                            | 1     | 1         |

#### *Coding*

| Skill     | Level | Resources |
|-----------|-------|-----------|
| C# / .NET | 1     | 10        |
| WPF       | 1     | 7         |
| WinForms  | 1     | 7         |
| Blazor    | 1     | 3         |

|                  |   |    |
|------------------|---|----|
| MVC              | 1 | 8  |
| Java             | 1 | 3  |
| Angular          | 1 | 2  |
| React            | 2 | 1  |
| Python           | 2 | 4  |
| .PHP             | 2 | 2  |
| Java Script      | 1 | 10 |
| Entity Framework | 1 | 8  |
| C                | 2 | 4  |

## Databases

| Skill      | Level | Resources |
|------------|-------|-----------|
| MS SQL     | 1     | 8         |
| PostgreSQL | 1     | 3         |
| MySQL      | 2     | 3         |
| Oracle     | 2     | 2         |

## Test

We are proficient in different technologies that are used for various test scenarios and, based on our experience, are also able to create test plans.

| Skill   | Level | Resources |
|---|-------|-----------|
| Interactive Testing   | 1     | 2         |
| Unit Tests / .net (NUnit)   | 1     | 6         |
| Unit Tests / .net (xUnit)   | 1     | 2         |
| Unit Tests / java (JUnit)   | 1     | 1         |
| Load Tests / JMeter   | 1     | 1         |
| Integration tests automated against REST APIs (PostMan and coded) | 1     | 2         |
| Selenium  | 1     | 5         |
| Ranorex   | 1     | 6         |
|   |       |           |

## CI / CD

| Skill         | Level | Resources |
|---------------|-------|-----------|
| Jenkins       | 1     | 3         |
| Gitlab Runner | 1     | 2         |
| TeamCity      | 1     | 1         |

## Project Management

We know various methodologies and follow the prevailing methodology of our customers. We prefer to work in an agile environment and are familiar with XP/Scrum/Kanban models. Due to our many years of experience, we understand how to carry out management-oriented reporting and budget controls and know about the value of transparency.

## Deploy

We focus on Linux and the cloud. We understand the deployment of Dockers and install conventional VMs under Linux, preferably with Ansible.

## Monitoring

| Skill  | Level | Resources |
|--|-------|-----------|
| Instrumentation of an application for Prometheus | 1     | 3         |
| Installation and configuration of Prometheus     | 1     | 1         |
| Installation and configuration of Grafana        | 1     | 1         |

## Technologies and products

| Technology                                | Level | Resources |
|---|-------|-----------|
| Wordpress / Api                           | 1     | 3         |
| Woodwing Studio                           | 1     | 4         |
| Woodwing Assets                           | 1     | 3         |
| MS SQL                                    | 1     | 2         |
| PostgreSQL                                | 1     | 2         |
| Social Media Plugins (Meta, Telegram, VK) | 1     | 3         |
| Okta                                      | 1     | 1         |
| LDAP                                      | 1     | 1         |
| Adobe Stack (ID, IC, PS etc)              | 1     | 2         |