Introducing Polygon to Germany's leading news-site DER SPIEGEL

Whitepaper — June 2020

SPIEGEL
_techlab

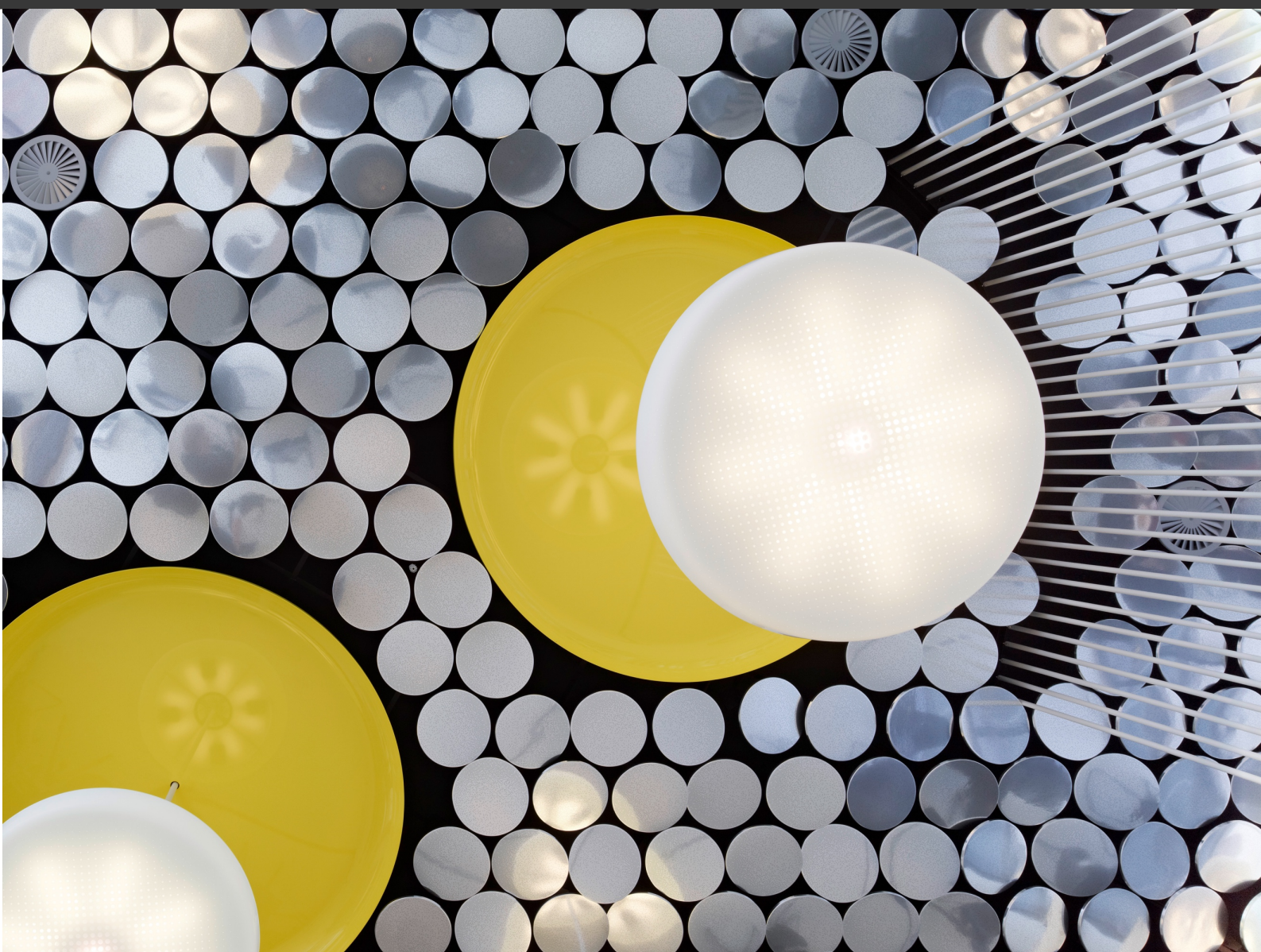## Contents

01 — The relaunch

DER SPIEGEL is Germany's leading news-site with 21 million unique monthly users and over one billion page impressions per month, serving over a million articles.
170 editorial staff operate in a 24/7 environment to cover all relevant news from politics to sport, from economics to health.

DER SPIEGEL

After 25 years of operation SPIEGEL Online decided it is the right time to review the brand and market strategy.

In a comprehensive relaunch in 2020 the brand name will be changed from SPIEGEL ONLINE to DER SPIEGEL, in the sense of a common brand and a common editorial office. But behind the new design there are hidden further motives. The relaunch is not a value in itself but follows larger journalistic and business goals. To achieve this goal from a technology perspective, SPIEGEL Tech Lab has been asked to provide DER SPIEGEL with a modern Content Management System that supports online and print publishing from a single system. The system should be fully cloud based, secure and scalable.
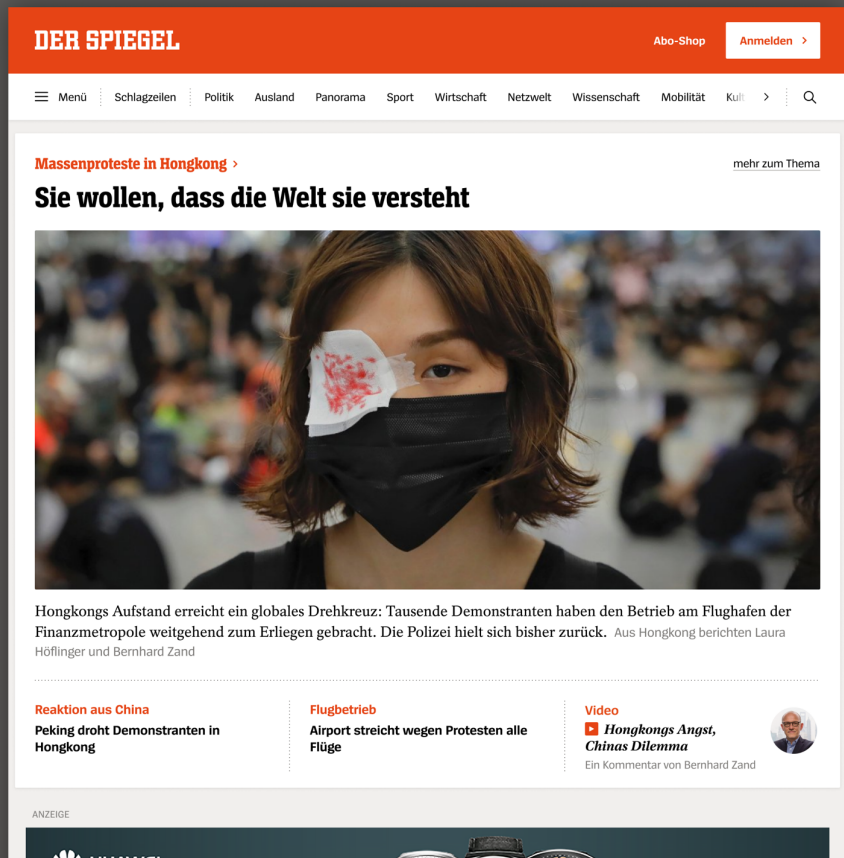
02 — Polygon

Highly flexible and future oriented digital publishing solution

Polygon

A modular system

In 2018, SPIEGEL Tech Lab started to explore the market for existing Content Management Solutions and technologies. It turned out pretty quickly that the classical vendor in the market could not provide a solution that would fit the strategy and/or would come with license and installation costs that would make it very difficult to provide a ROI in the given time frame. To start an inhouse development was also something that has been declined from the beginning due to the limitation of resources and future supportability of the system.

This led to an initiative to look for existing products and open-source solutions that can be combined in smart and modular ways to build a single system. This system is called Polygon and combines elements and components to provide a powerful solution.

The approach behind its modular architecture is to be able to add and change elements as technology improves and/or business goals require an adaption of the system.

ELEMENTS   COMPONENTS   SYSTEM   **POLYGON**
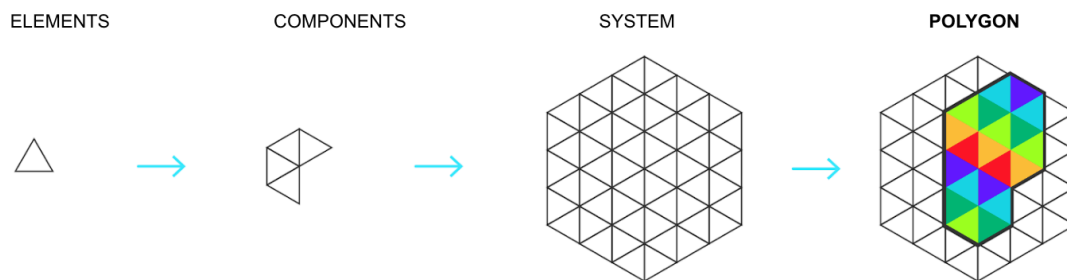
The magic of **Polygon** is the combination of standard elements within a modular system.

The flexibility to extend the system with external elements also played a huge role in our decision, which means DER SPIEGEL can maintain ownership of the material without compromising the choice of products and services.

Architecture

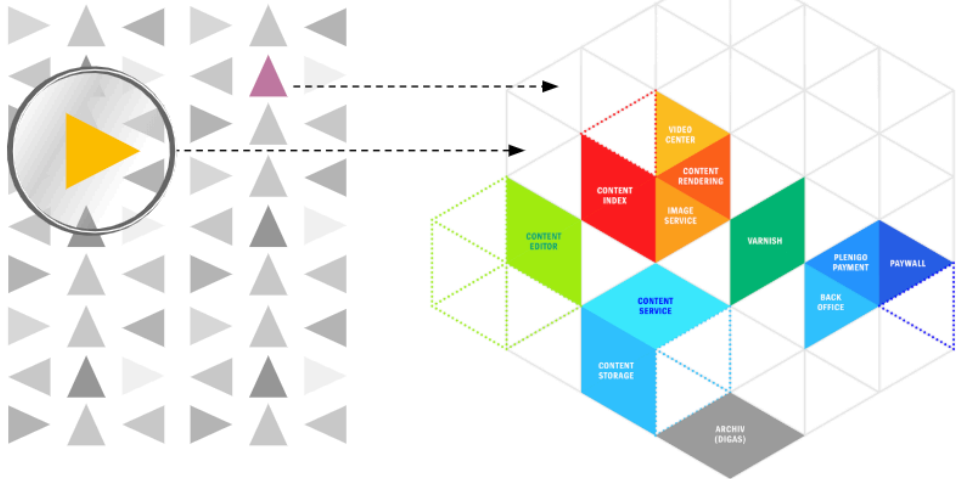**Modulare** System - - - - - →

Cloud Infrastructure - - - - - →

Headless Design - - - - - →

User Benefits

Service & future oriented

Agile product development

Device neutral content delivery

Polygon

By constantly screening emerging technologies we will identify the most valuable software innovations to integrate them straight into our system.

Software application market:

Managing millions of articles and assets

One of the first requirements of the project was to identify how we can maintain the existing URLs of millions of "public" articles while changing the way content is produced and delivered in the future.

The decision was made to follow a headless CMS approach and to clearly separate the editorial front end from the content storage and the delivery of content.
This allowed us to look at these three components individually and to choose the best technology and product for this area.

For the editorial front end it was decided to buy a standard CMS software that provides a flexible and rich user interface to support the advanced editorial workflows of the SPIEGEL. The choice was Statamic, a flat-file CMS solution that could be integrated with API based backends.

To provide a robust and scalable content store it was agreed to use a cloud based object store in combination with a JSON based full text search engine, both accessible through an API.

As technology and methodologies in the front-end development are changing quickly, the headless approach to access content from the content store allows various ways of server and client side rendering. This is crucial to be able to support technology changes and UX/products requirements in a timely manner.
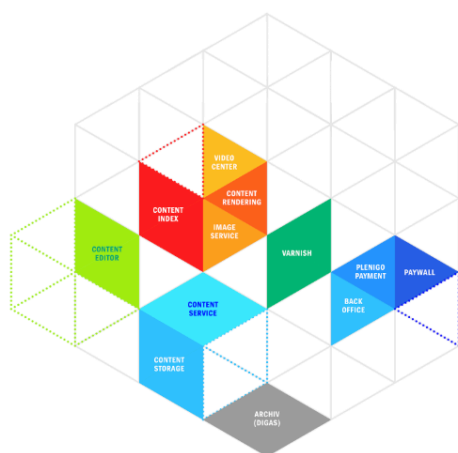
Using both, standard products and in-house developed elements helped to build a powerful system.

Services communicate through clearly defined APIs.

Rich content creation

Over the last years, SPIEGEL's editorial team had struggled with the limited functionalities and cumbersome workflows in their legacy CMS.

The introduction of Statamic changed all this. Now they were able to work in a modern CMS that runs in any browser on any device. Multiuser editing allows them to work with multiple users in the same article to fast-forward the processing and delivery of content. The version history provides insight to all changes of the content and allows the users to restore previous versions when necessary. This makes the editing process more secure and reduces errors.

The Statamic text editor is designed for rich article layouts. It's a content editor that provides popup formatting controls, stores structured data and adds the ability to insert blocks of any arrangement of custom elements amidst the text.

Statamic 3.0 Rich content editing in any modern web browser
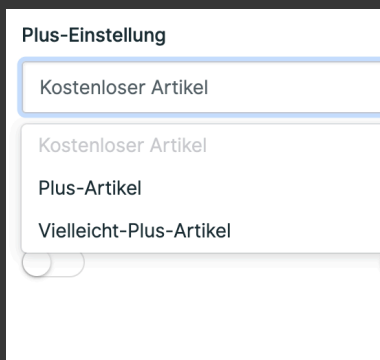
Editor highlights

*Multiuser editing
including WYSIWYG live
preview*
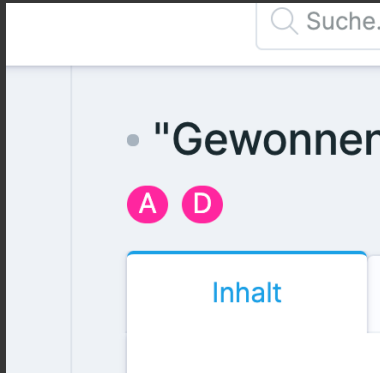
Push to mobile from within the editor
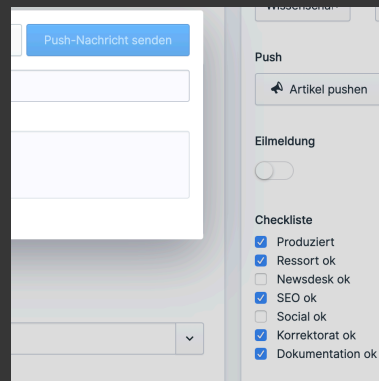
*Integrated management of free, paid and
dynamically paid content*

Flexible content types and structures

Advanced text services, like named entity extraction for the automatic creation of topic pages


Integration of the JW Backend API that provides full access to all video files for easy placement
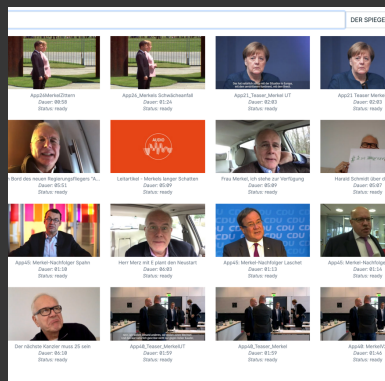
Cloud first architecture

Cloud computing is providing a valuable new option for businesses to get IT done. By using the cloud, Polygon can save costs, deliver more value quickly, access a broad range of services and technologies and scale capacity up and down as needed to meet the demand.

By design, Poylgon is cloud diagnostic and ensures maximum safety, scalability and speed.
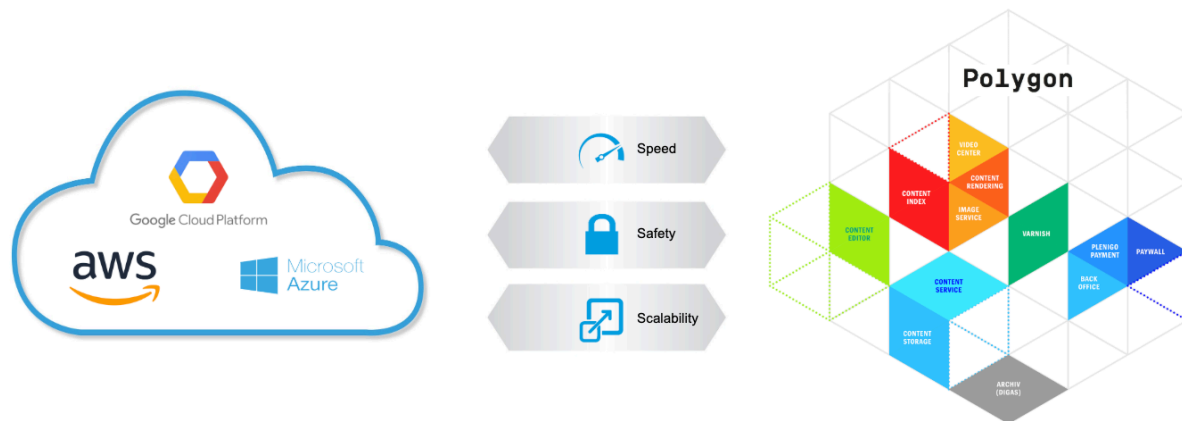
Polygon supports Google Cloud Platform, Amazon Web Services (AWS) and Microsoft Azure. Within the Cloud, Kubernetes is used for the orchestration of containers, automatic application deployment, scaling and management. The system can run in a single or multicloud environment.

03 — About SPIEGEL Tech Lab

"We create powerful and innovative tech solutions for publishers."

SPIEGEL Tech Lab - the tech company within the SPIEGEL GROUP

SPIEGEL Tech Lab was founded in 2015 as a central but independent unit within the SPIEGEL group. With a team of 20 developers, quality engineers and project managers the team provides technology solutions for a wide range of products.
The objective is to explore possibilities, identify concepts and develop relevant solutions.

Our offerings:

- We offer our Polygon System as a full service solution to other publishers and enterprises. We bring our team of project managers, front-end developers, cloud architects and quality assurance engineers to manage your system in the cloud.

- You have your own team and you are interested in the Polygon tech stack only? – We also offer a partner agreement that gives you full access to the source code and our partner support channels.

- If you are interested to build your own system but don't know where to start: Our project and technology consultants can also be hired on a day-to-day basis to help you to get up and running quickly.

Contact details:

SPIEGEL Tech Lab GmbH
Ericusspitze 1
20457 Hamburg/Germany

Telefon: +49 40 38080 - 488
Email: techlab@spiegel.de