

CANCOM

bdr.



Federal Foreign Office



Alpin Insight AI

Facilitate risk management **through generative AI on Edge environment at scale**

**PLAIN**  
PLATFORM ANALYSIS AND  
INFORMATION SYSTEM





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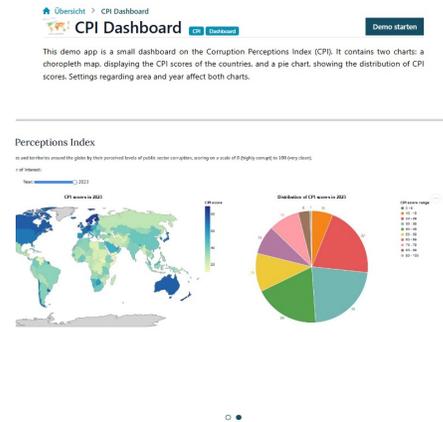


# Meeting the Vision and the Expectations

PLAIN is part of the overall IT strategy of the German Government and started as an initiative within the German Foreign Office. Initially named PREVIEW (the crisis prevention system), it quickly became apparent that the infrastructure and platform concept needed to be distinct from the PREVIEW use cases. This led to the creation of PLAIN, a data and application platform available to all 16 ministries in Germany.

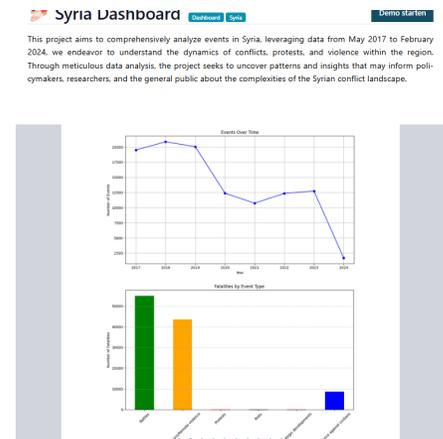


# Defining the Core Aspects of the Platform



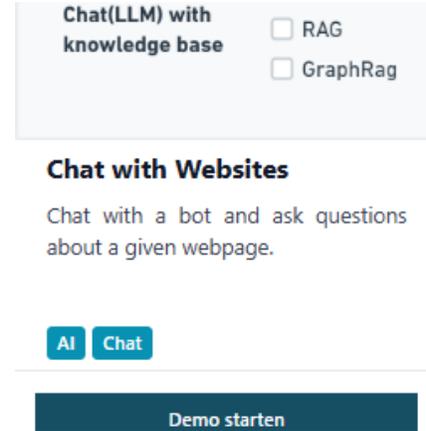
## Data Integrity and Compliance

Ensures that data is kept secure and complies with relevant standards.



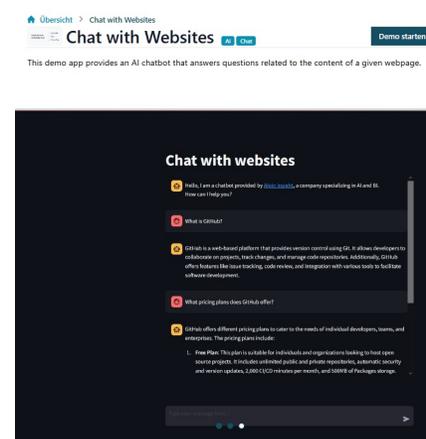
## Limited Functionality Acknowledgment

Recognizes the constraints and limitations inherent in the platform



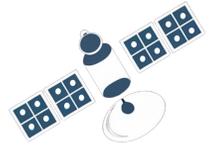
## Transparency

Provides clear and open access to data and processes.



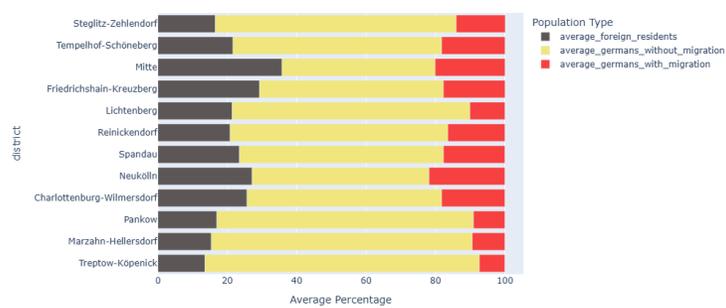
## Audit Trails

Maintains a record of all actions and changes for accountability.



# Addressing Gaps in Skills and Needs

Population by District, Berlin (2020-2023)



year	2020	2021	2022	2023	Comments
district					
Charlottenburg-Wilmersdorf	48423	48830	48858	53630	Increase: 10.8%
Friedrichshain-Kreuzberg	57083	52829	54988	55838	Decrease: 2.2%
Lichtenberg	28531	26893	29805	31563	Increase: 10.6%
Marzahn-Hellersdorf	22830	22413	26230	26649	Increase: 16.7%
Mitte	79401	72185	81178	83611	Increase: 5.3%
Neukölln	42870	40347	42790	45313	Increase: 5.7%
Pankow	38007	36980	40120	39164	Increase: 3.0%
Reinickendorf	25386	24248	27251	27344	Increase: 7.7%
Spandau	24379	24938	26342	25564	Increase: 4.9%
Steglitz-Zehlendorf	22879	23901	23757	23719	Increase: 3.7%
Tempelhof-Schöneberg	39081	34975	39290	41776	Increase: 6.9%

## Timeliness

Generative AI solution automates report generation, reducing time to compile and distribute data.

## Accuracy and Consistency

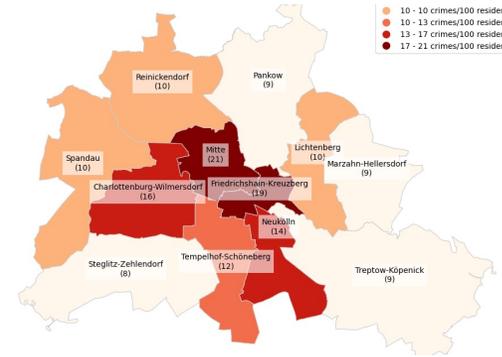
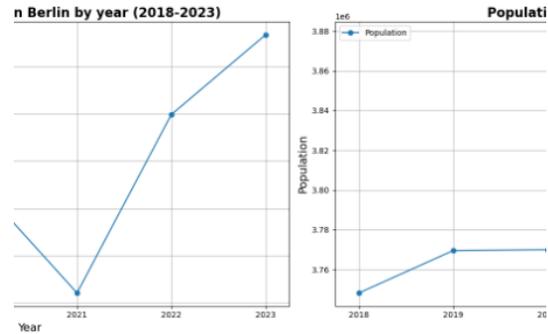
AI models minimize human error and maintain consistency by using structured data analysis.

## Enhanced Decision-making

AI-generated insights optimize resource allocation and improve responses for both immediate needs and long-term planning.



# Enhancing Usability and Accessibility



insights that can inform policymakers, researchers, and the general public.

Analysis: Ukraine Year before, First year, and Second year of War.

Time trends by event type

The number of explosions/remote violence, in particular, has a noticeable peak in the first year of the war, which suggests a period of intense conflict. Notably, the frequency of protests and riots drops, likely overshadowed by the more severe conflict events.

- On 26 November 2018 - Ukrainian President Petro Poroshenko had imposed martial law on Ukraine in response to a massive concentration of Russian troops along the border between the two countries.



User-friendly dashboards visualize risk assessments and offer recommendations for preventive measures.

The AI analyzes various datasets to identify patterns signaling potential instability.

Provides timely insights into potential risks to facilitate proactive risk management.

Can seamlessly integrate with existing data management systems for a streamlined workflow.

Visual Dashboards

Pattern Recognition

Risk Assessments Forecasting

Integration with Existing Systems



# Developing Next Iterations for the Journey to Continue

## PLAIN 2.0

PLAIN is being upgraded to **PLAIN 2.0**.

In parallel, we are honored to have been selected as the **Community Manager** for the Parliamentary Questions Application, one of the two projects to be enhanced under the new framework.

## Collaborative Approach

The community of Ministry Developers will collaboratively address and prioritize individual use cases, enhancing platform utilization and enabling AI workflows across ministries.

## Elevate platform utilization



In our complex world Data as a Service (DaaS) for Parliamentary Questions of the government is a system designed to facilitate access to and analysis of parliamentary data. A primary data source in Germany for this purpose is the **Dokumentations- und Informationssystem für Parlamentsmaterialien (DIP)**, provides an API for querying government documents, offering read-only access to parliamentary processes. While DIP serves as a strong foundation for data access, enhancements are needed to support broader search domains/dimensions and more advanced analytical capabilities, independent from the country.

### CHALLENGES

- Limited Search Capabilities:** The DIP API is restricted to predefined domains.
- Data Integration Complexity:** Incorporating data from various legislative Countries, Periods and consistency across
- Lack of Advanced Analytics:** The system does not inherently support AI-driven Analysis.
- Scalability and Flexibility:** Developing applications that can scale and adapt to new data requirements or changing political landscapes remains a challenge.

### ADVANTAGES

- Enhanced Understanding:** Using graph structures provides a holistic view of the data, allowing the system to better understand and contextualize relationships between different pieces
- Improved Summarization:** Community-based summaries deliver concise and meaningful overviews of complex networks, making it easier for users
- Efficient Retrieval:** By considering graph-based relationships, the system can retrieve more relevant and contextually accurate search results

### NEXT STEPS

The integration of Data as a Service for parliamentary questions, combined with advanced AI analytics, offers a powerful tool for understanding and exploring government data. By expanding search domains and leveraging both DaaS and EaaS, we provide a flexible and scalable framework for analysts, researchers and developers. This approach enables new forms of application development and data-driven insights that span multiple legislative periods, illuminating trends and policy evolutions.

We can extend and incorporate other country sources, too.



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### WHO WE ARE

As experts in AI and BI, we develop customised software solutions that use your data intelligently or enhance existing data. We specialise in data source & AI as a service.

### OUR MISSION

We create trust in data sources and AI models. We accelerate decision-making processes, improve efficiency and realise AI solutions in a cost-saving manner.

### OUR SERVICES

Customised, open source-based API solutions for data as a service & AI as a service. Our expertise ranges from data acquisition to implementation in SaaS, DMZ or air-gapped environments.



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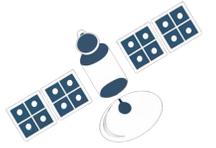
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# AI Challenges in Edge Environments

## 3 challenges:

### Selecting efficient models

balance efficiency and performance as large models may not run effectively on limited edge hardware.

### Handling data constraints

limit and secure data handling as edge systems lack the vast data streams available to cloud-based models.

### Managing budget

Monitor, control and adjust hardware and operational costs constantly to align with limited resources.



Hyperscalers, like AWS, Google & Azure, or large models like ChatGPT, Sonet, etc. use abundant, non sustainable resources.

**A Hybrid Approach** - using local models and integrating with cloud when needed - can maximize performance and cost-effectiveness.

*“Effectively utilizing the potential of AI and data analysis requires, above all, innovation, collaboration and cross-departmental thinking. PLAIN is the first productive data analysis platform to be made available to all federal departments and downstream authorities, enabling AI to be used in any area. With this approach, we are primarily creating access to test AI applications for the federal administration and to quickly launch solutions thanks to AI, regardless of the area involved.”*



**Hans-Christian Mangelsdorf**, PLAIN Program Manager  
and Chief Data Scientist at the Federal Foreign Office



Alpin Insight AI

# Thank you

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