



Overview:

Challenge:

The Mecklenburg-Vorpommern State Police was looking for a solution to help manage its information more efficiently by standardising and aggregating data from different sources. They also needed user-friendly analysis tools to provide more reliable, complete and up-to-date decision-making information.

Why IBM?

The organization chose IBM initially because their solution offered a broad range of user friendly functions and helped Mecklenburg-Vorpommern State Police to solve their need to bridge heterogeneous data sources and provide their users with well performing reporting and analysis tools.

Solution:

A solution consisting of IBM Cognos 8 Business Intelligence, IBM Cognos Framework Manager, IBM Cognos Report Studio, IBM Cognos Query Studio and IBM Cognos Analysis Studio provides managers at every level with fast and transparent access to important decision making information throughout the organisation.

Key Benefits:

Homogeneous, automatically updated decision-making information; targeted provision of information based on requirements; single-entry and multiple use of data; and fast, flexible multidimensional analyses in an easily understandable format.

“The possibility of combining information and viewing it from all angles has opened up completely new approaches for investigation work.”

—Police Commissioner Thomas Helm

Mecklenburg-Vorpommern State Police

The Mecklenburg-Vorpommern State Police Gains Constant Control Over Day-to-Day Police Work, Thanks to IBM Cognos 8 BI

Around 6,000 agents and staff work in the offices of the Mecklenburg-Vorpommern State Police, maintaining law and order over an area extending from Schwerin and Usedom to Neustrelitz and Cape Arkona. This includes the policemen and women on the beat, who attend road traffic accidents, acts of violence, burglaries, eco-crimes and disputes. To patrol its coastline and lakes, the state of Mecklenburg-Vorpommern needs a coastguard, as well as a criminal investigation department and riot police for more serious situations. All of these areas work together, exchanging and generating information, each with different data requirements. They also cooperate with the Federal Criminal Police Office and police forces in other German states.

Readers of newspapers or detective novels understand the importance of comprehensive and up-to-date information for police work. However, it's not just major crimes that need solid foundations for decision making; this is an essential requirement for day-to-day police work as well. To address this need, the Mecklenburg-Vorpommern state police is relying on an IBM® Cognos® solution to provide its managers at every level with fast and transparent access to all information throughout the organisation. Visibility is improved thanks to standardised data and a wide range of analysis options – in the operational area of inquiries and searches, for resource planning and tactical and strategic control, as well as for long-term analyses of criminological phenomena and scientific investigations of crime trends.

Challenges faced

High data volumes do not necessarily mean high levels of knowledge

It is police procedure to record every incident attended, including all the relevant details. In a large state such as Mecklenburg-Vorpommern, high volumes of new data are generated every day. “However, there was no standard state-wide system capable of summarising the data from the current police situation and making it available in real time. In many cases paper was still used. Reports were written sometimes in Word, sometimes in Excel, and there were frequent duplications,” says Police Information and Evaluation project manager, Chief Superintendent Johannes Kanski.



The heterogeneous nature of the data meant that rapid analysis was difficult, an essential requirement for inquiries, searches or tactical resource planning. To obtain a complete picture, managers sometimes had to accept critical delays and significant extra work for their staff. A great deal of manual effort was required to produce variable or tailored analyses of data. In short, there was a lack of valid information, available in the right format, at the right time and in the right place.

Strategy followed

In 2004, the interior ministry of Mecklenburg-Vorpommern launched a long-term project entitled Police Information and Evaluation, intended to create new foundations for all aspects of the police force's information management. IBM was brought on board as the project partner. The aim of the PIA project was to implement a state-wide reporting and analysis system based on a data warehouse.

“We needed to collect and aggregate decision-making information, derived from the data entered in different systems by every employee at every workstation, in a central database. From here, it could then be made rapidly available to all authorised users based on target groups. Since the users are not IT experts, we needed a simple and intuitive interface – along with a great depth of analysis and flexibility,” explains the project manager.

To achieve this, all organisational knowledge needed to be prepared in a standardised format and made available without delay for operational, tactical and strategic decision making. This improved visibility was also expected to optimise internal structures and processes. The data source was a data entry and processing system introduced in 1999 called Elektronische Vorgangsassistent (EVA). This application records police data in a standardised format.

A clear view of the current situation at all times

Entitled “Situation Updating and Analysis”, the first PIA sub-project was implemented in 2005. Knowledge of the current policing situation is a basic requirement for every department manager and control centre agent. What has happened in the last 8, 24 or 72 hours? Is there anything significant to report from neighbouring police stations? What do I and my staff need to prepare for? The verbal handovers and individual lists used before the PIA project were replaced by a state-wide, standardised updating system. All authorised agents could access consistent and reliable information from all LPMV departments throughout the organisation, making duplicate entries and media breaks a thing of the past.

The data warehouse is updated automatically every hour on the basis of the information recorded in the EVA system, guaranteeing that no data is lost or unavailable for decision-making. “Users can access standard reports or apply individual filters to quickly and easily display the relevant information on their screen, in table or graph format,” explains Silke Kaiser, application developer from the very start of the project.

Single entry, multiple usage

In addition to day-to-day resource planning, this standardised view also provides the foundations for the decisions made by higher-level organisational units, from the inspectorate to the board and interior ministry. A wide range of analyses can be run on far more reliable data, to support ongoing inquiries or adjust tactical and strategic directions. Are any localised clusters apparent for certain offences? Is our response time fast enough across the board?

“The possibility of combining information and viewing it from all angles has opened up completely new approaches for investigation work,” explains Police Commissioner Thomas Helm, responsible for specialist police aspects of the “PIA” project.

Users can access extensive search options and ad-hoc analyses to create in-depth, customised views. In future, the PIA sub-project “Multidimensional analysis of incident data and load indices” will also open up the possibility of multidimensional analyses based on data cubes. Predefined dimensions, indicators, levels and categories create a transparent view of information, immediately highlighting any trends.

“The load index shows, for example, how many officers will be occupied, for how long and in which key areas, allowing us to draw conclusions to improve our resource planning in the future. This will help us to develop the organisation on a more reliable and forward-looking basis,” says Helm.

More accurate statistics and prevention

A third PIA sub-project, scheduled for completion by mid-2010, is devoted to police crime statistics. The trigger was the change from sending reports to the Federal Criminal Police Office in the form of aggregated state lists at the end of the year to the real-time transmission of individual data records for each incident. The new police crime statistics system relies mainly on the data entered, once only, in the incident processing system.

“This gives the PIA-based case statistics a new level of detail. They can be analysed by managers in at least nine dimensions, allowing customised and effective insights. Once again, the results can be displayed in list or graph form in one of the 16 cubes, or as bar charts or line diagrams,” explains Kaiser.

Threshold values can be highlighted, with absolute and relative indicators calculated in real time. This means that any statistical peculiarities, patterns or trends are immediately apparent and can be incorporated in subsequent planning and

prevention. Thanks to the PIA project, any deficient information with an impact on data quality is quickly identified, while daily updates ensure that statistics are up to date at all times. Data records are transmitted directly to the Federal Criminal Police Office or other states via an interface, eliminating any delay.

Benefits realised

The PIA project has taken the LPMV’s information management to a new level, thanks to the IBM Cognos business intelligence solution. Standardised and up-to-date information is now available throughout the entire state, easily accessible to around 750 decision-makers. User-friendly, customisable analyses are available for everyday police work, as well as for medium and long-term planning and prevention. This allows more targeted control of manpower and financial resources, more efficient working practices across the entire organisation, as well as a clearer and optimised view of structures and processes in context. The citizens of Mecklenburg-Vorpommern therefore enjoy a two-fold benefit: greater public safety and more targeted use of public funds.

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