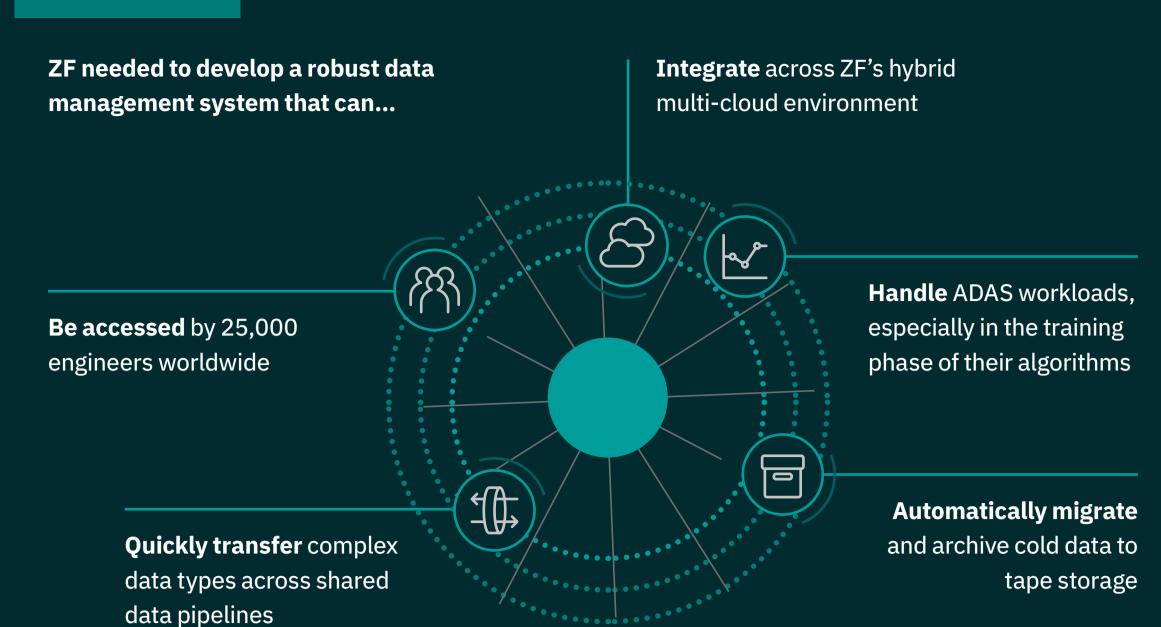
Building the ZF Hybrid Data Bridge

ZF Friedrichshafen is a major player in automotive, and one of the few manufacturers in the world that offer an extensive range of ADAS/AD technologies. ZF needed to tap into IBM's expertise to build the most robust the data management platform.

ZF's challenge



Our solution stack

Together with IBM, ZF is building the Hybrid Data Bridge – the most powerful data management system.

IBM Spectrum Scale High-performance data management

IBM Spectrum Scale storage solution provides superior scalability, resiliency and control to handle demanding data analytics, content repositories and technical computing workloads for ADAS/AD development.

IBM Spectrum Scale is the foundation for building ZF's global namespace. It allows engineers to create active data copies and form data lakes across ZF's hybrid multi-cloud environment, enabling real-time global collaboration for their development teams. The automated data migration and tiering function optimises storage utilisation, helping R&D managers to simplify data management and reduce storage costs.



Efficient workflows for complex data formats IBM AREMA orchestrates automotive video

IBM AREMA

workflows for ingesting, curating and using data during the full life cycle of training and developing ADAS/AD solutions. AREMA forms the heart of ZF's Hybrid Data Bridge. Its AI-integrated workflow solution allows

engineers to automate the processes of archiving

and sensor files. It automates the end-to-end

and extracting metadata from various automotive data formats (including ADTF, MDF, rtMAPS and ROS), and to initiate subsequent workflows for labelling and training. This is improving ZF's overall workflow efficiency and agility and allows engineers to fully manage and control the data production processes.

across long distances

IBM Aspera®

IBM Aspera software can reliably transfer ADAS/AD data of any size across any distance, at line speed.

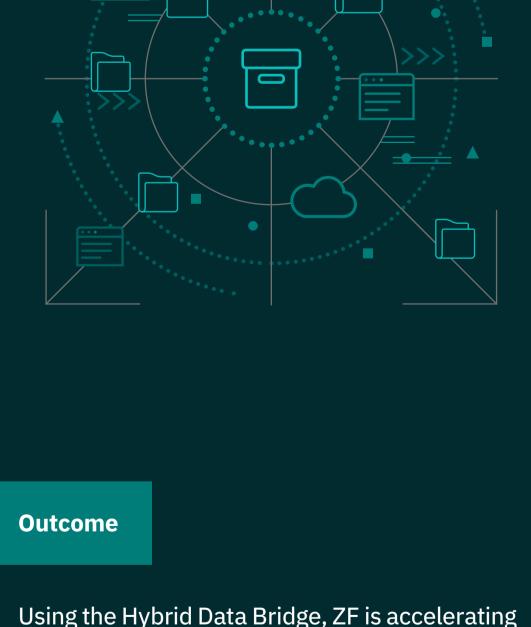
High-speed data transfers

distribute and sync more than 70 terabytes of engineering data each day across their global locations. By efficiently utilising available network bandwidth, ZF can architect

Using IBM Aspera, ZF's engineers can quickly transfer,

highly scalable workflows running across a hybrid multicloud environment and accelerate their project schedules for their ADAS development and test teams.





ingest and data-centric workflows while retaining

continuous and company-wide control over the

platform Red Hat OpenShift is a leading open source container application platform based on Kubernetes – the basis for the world's most successful ADAS/AD development solutions.

containerised applications to accelerate ADAS/AD

software development, AI/ML training, simulation,

empowers ZF engineers to manage their hybrid

verification and validation. The easy-to-use interface

Using OpenShift, ZF can create and scale

cloud container & DevOps

multi-cloud resources in one place, while allowing R&D managers to build engineering environments with speed, agility and confidence.

ADAS/AD development processes. "Managing huge amounts of data in a hybrid multi-cloud environment is very important.

Transparent access to files in data lakes with low latency is essential when developing autonomous vehicles, where we have to process images and information from many different data sources."

- Harald Holder, Director of IT Infrastructure Platforms, ZF Friedrichshafen

vehicle experiences of the future.

With unparalleled automotive knowledge and proven data management solutions, IBM is your strategic partner to help you build the most powerful ADAS/AD data platform, so you can create the most secure and reliable autonomous