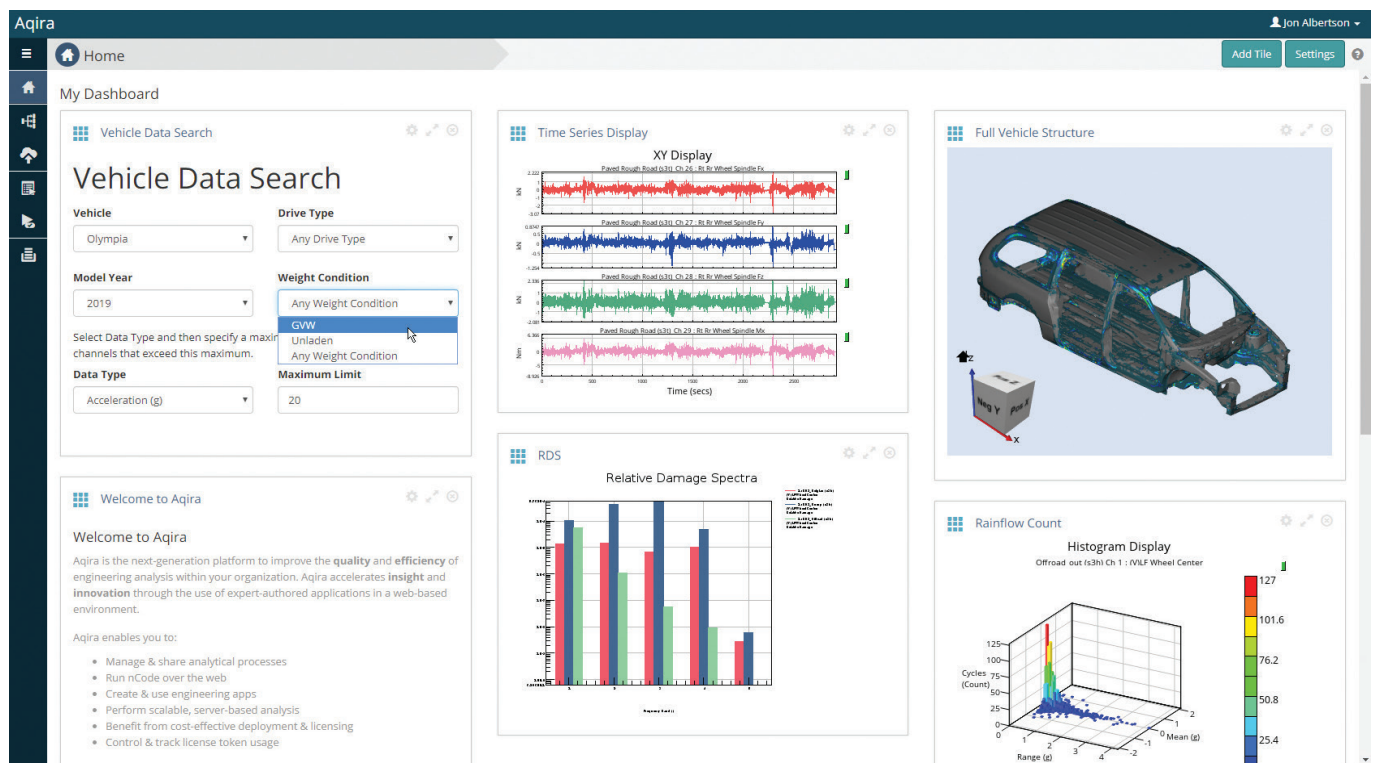


AQIRA

Web-based collaboration for data and analysis

Aqira is a web-based system for creating, sharing, and running engineering apps and analysis processes enabling remote working from anywhere. It provides powerful test data management that enables metadata searches across large volumes of measured data. It delivers an integrated solution for uniting engineering processes, encapsulating expertise, and driving collaboration across physical test and CAE simulation departments. Offered using token-based licenses, Aqira provides cost-effective global licensing access to an unparalleled solution for gaining insights from validated engineering algorithms, machine learning, and data analytics. Using cloud-ready technology, Aqira can be deployed on-premise or on cloud-hosted Linux virtual machines.



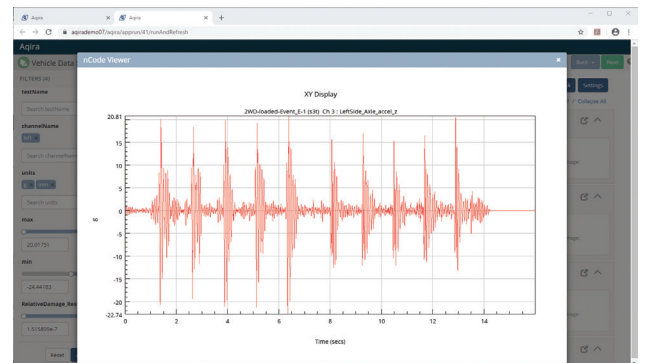
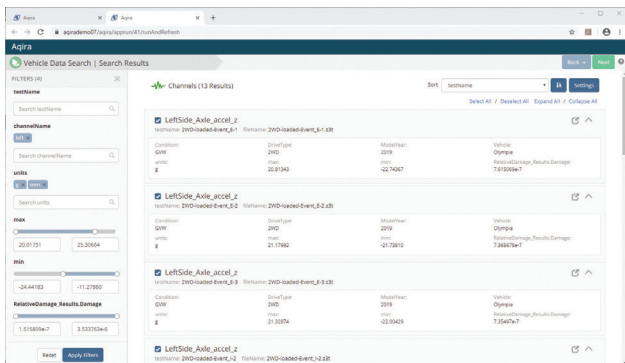
The screenshot displays the Aqira web interface with a dark blue header and a sidebar. The main content area is divided into several panels:

- Vehicle Data Search:** A search form with fields for Vehicle (Olympia), Drive Type (Any Drive Type), Model Year (2019), Weight Condition (dropdown menu with options: Any Weight Condition, **GW**, Unladen, Any Weight Condition), Data Type (Acceleration (g)), and Maximum Limit (20).
- Time Series Display:** A grid of four XY Display plots showing acceleration data over time (0 to 2000 seconds) for different channels: Paved Rough Road (3Hz) Ch 26 - Rr Br Wheel Seigide Fz, Paved Rough Road (3Hz) Ch 27 - Rr Br Wheel Seigide Fy, Paved Rough Road (3Hz) Ch 28 - Rr Br Wheel Seigide Fz, and Paved Rough Road (3Hz) Ch 29 - Rr Br Wheel Seigide Mx.
- Full Vehicle Structure:** A 3D CAD model of a vehicle chassis with a coordinate system (X, Y, Z) and a small box labeled 'HBK Y Part Z'.
- RDS (Relative Damage Spectra):** A bar chart showing damage spectra across various frequency ranges.
- Rainflow Count:** A 3D histogram display for 'Offroad out (3Hz) Ch 1 : WLF Wheel Center', showing cycles (Count) on the vertical axis and Range (g) and Mean (g) on the horizontal axes. A color scale on the right ranges from 25.4 to 127.

AQIRA ENABLES YOU TO

- Share knowledge and expertise through easily created engineering apps
- Perform data analytics and apply data science techniques using Python and nCodeDS
- Search large volumes of measured data and related files
- Access nCode software and flows using a web browser
- Benefit from cost-effective deployment and licensing

Scalable analytics and test data management



ANALYSIS AND SIMULATION APPS

Aqira contains enhanced capabilities for running nCode analysis software and Python scripts over the web. Engineers can create new analyses or edit existing processes to perform engineering tasks such as cleaning measured data, running time and frequency domains analyses, and performing CAE-based fatigue analysis all within Aqira's simple web-based interface.

Aqira's engineering apps focus more on the results and efficient decision making – rather than on the details of the analysis. Apps encapsulate expert defined processes and are a great way to easily share validated, up-to-date analytical processes with engineers of varying experience.

Apps are created using an intuitive drag and drop approach and similarly, user-defined front-end pages are graphically and interactively defined. Aqira provides this highly configurable user experience on top of a disciplined infrastructure that serves to provide a more controlled overall process. The owner of an app can determine which individuals or groups of users have access to the app, while still providing the flexibility to enable global collaboration.

FIND DATA AND EXTRACT THE RIGHT INFORMATION

Engineering future products generates huge amounts of virtual and measured time series data. An even greater challenge is gaining the most value from these data resources, both now and in the long term. How do you find the right data, what are the key engineering insights and how does it compare with previous results?

Aqira enables you to find data and extract the right information. With built-in data search capabilities, users can reduce time spent looking for data files, eliminate unnecessary tests, and avoid storing high volumes of digital data that is never re-used.

This dynamic capability enables critical information to be easily found, down to an individual sensor or channel based on metadata criteria. Aqira can access and index a wide variety of data files on the network without the need to copy, move, or translate. Aqira will automatically extract metadata and calculate statistics for powerful, interactive searching by users within your team or throughout your organisation. Data can be automatically analysed by embedding searches as part of engineering apps that you can create for your application. Find, analyse and visualise data from anywhere using a web-browser without ever needing to locally download anything.

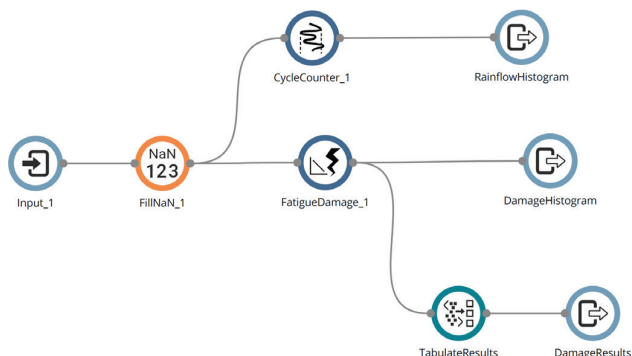


DEMOCRATISATION AND HOW TO DELIVER ITS BENEFITS

Democratisation promises to deliver real benefits for durability analysis by capturing corporate knowledge and making targeted, well-defined simulations easier for more engineers to perform.

Learn how Aqira **enables engineering teams with increased workloads of analysis to be more effective** and efficient through easily configured web apps. Download a white paper at: <https://www.hbkworld.com/en/products/software/analysis-simulation/durability/aqira-standardize-global-engineering-processes>

Gain actionable insights and maximise value with high performance data analytics



nCodeDS: SCALABLE STREAMED DATA ANALYTICS

Designed for scalable deployment within Aqira, nCodeDS resolves many of the increasing challenges faced by engineers – from high sample rate throughput of data acquisition systems to analysing digital bus data with time-stamped messages and error codes. Additionally, nCodeDS offers both the performance and the ease-of-use required to analyse high volumes of unstructured data related to product usage and engineering applications often found in big data systems.

Analysis is performed by composing a set of validated engineering algorithms into workflows that achieve a well-defined complex operation. Integration with Python and native support of pandas data frames also enables a vast flexibility with connections to big data systems and open source data science tools. Example algorithms include:

- Data cleaning
- Data manipulation
- Statistics and histograms
- Resampling, digital filters and frequency spectra
- Cycle counting, fatigue damage assessment

A powerful democratisation platform for engineering data, Aqira is an unparalleled solution for addressing the demands of engineers, managers, and IT.

ENGINEERS

- Improve quality of analysis through easily shared analytical processes and apps
- Reduce time spent finding right data and right process
- Flexible with wide range of engineering tools for advanced data science, machine learning, and big data analytics

ENGINEERING MANAGEMENT

- Capture IP and corporate knowledge with engineering apps
- Less-expert users perform more analysis
- Accelerate decision making with faster, centralised analysis

IT MANAGEMENT

- Get global usage of Prensia Access token licenses with time-zone scaling on unit draw for cost effective usage
- Improve management of license tokens through easily defined groups of users
- Reduce IT effort by enabling interactive web-access to nCode software and avoiding many local installations

EXPLORE OTHER NCODE SOLUTIONS

nCode GlyphWorks

Data processing system for signal processing and durability analysis.

nCode DesignLife

CAE-based durability analysis system for fatigue life prediction and test-CAE correlation.

nCode VibeSys

Data processing system for vibration analysis.

Premium Materials Database

High-quality fatigue parameters of steels, aluminium alloys, and additive manufacturing materials.

ABOUT US

We help engineers deliver durable and reliable products and avoid the cost of unexpected failures. Our software brands for durability and reliability, nCode and ReliaSoft, empower data-driven confidence through accurate analysis and simulation, enabling customers to achieve success through failure prediction.

For more information, please visit: www.hbkworld.com

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