Mistral Data Limited Product Review
Q2 2023 (April – June)

MISTRAL DATA

RAIL OPERATIONS

Q2 2023 (April to June) Delivered

A key theme across the quarter was surfacing the right information to the right people, to expedite informed decision making.

Our control to staff messaging platform, **Papagayo**, received some improvements following feedback from users. **Papagayo** transforms staff communication providing the ability to share accurate information to impacted staff quickly, ensuring consistent, timely and targeted messaging to any staff, at scale.

Improvements included message templates making message creation even quicker, especially during times of disruption, speeding up the flow and delivery of information to front line staff.

Within **Sirocco**, we've worked collaboratively with SWR and Network Rail, on a proof of concept to define the source of delays. Having created a new map overlay, **Sirocco** can now illustrate markers for the location of delays which can be used to identify delays early, before they build up and impact services.

Berth Maps continues to grow with the creation of further maps across the Avanti network, and the creation of a **Service List** - illustrating all TOC services based on punctuality, completing the core feature set of the product.

Investing in the future of Berth Maps, a Proof of Concept was completed for **Depot Management**. This PoC is an interactive map with drag/drop functionality to document the location of units on roads in depots, providing individuals and teams a view of unit placement.

Development of **Sarma**, a stock and crew allocation and rostering product, continued to roll out Crew rostering and allocation features, as we move towards UAT and in production dates. Delivered features include:

- Final crew rostering functionality and links to interfaces such as HR/Payroll systems, enabling Rostering teams to create and amend long and short term rosters
- Identifying requirements for on the day allocations, enabling Resourcing teams to respond and allocate any changes to Staff on the day in response to current operational conditions
- Developed a Book on status dashboard so Controllers are aware of Staff presence - creating visibility of any risks in terms of Staff availability and therefore risks to train services
- Completed integration of all business rules including Terms & Conditions, H18 and Fatigue Index so rosters/allocations are compliant across all elements of the system

STAFF COMMUNICATION

Q2 2023 (April to June) Delivered

Resource has largely been invested in supporting ongoing Sarma development, for features required within our staff app, **Solano**.

Key development includes a view for staff, showing their **on the day diagrams** including all activities, services and updates, as well as their required booking on and off times.

Additionally we've developed a view of **individual published rosters** by day and week and base roster by day, week and month, up to the end of the base roster period, allowing staff to view their roster 6 or 12 months in advance.

When a reminder may be needed for staff to undertake particular announcements (short platforms etc), we've created **diagram annotation** capability - allowing staff to create any notes required on their diagram or daily roster.

Solano is a single app asset for staff, pulling together all relevant information for services and diagrams. Contributing to this vision, Solano - through integration with Sarma - **will display user skills and qualified routes**, enabling staff to see when they need to refresh skills and route knowledge.

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CUSTOMER

Q2 2023 (April to June) Delivered

Building on the success of Message Orchestration (Timetable Comparator), we delivered a further module for **Cancellations**.

The cancellations solution identifies travellers with impacted services and sends alerts about changes to their travel and what options they have to replan.

The solution now identifies both planned timetable changes in the days leading up to travel (TC), and real time on the day cancellations.

Within the industry and without this solution, customers are not informed in advance and the onus is on the customer to seek out the relevant information themselves, creating a significant source of frustration for customers and a customer service challenge.

For Operators using **Kamet**, emails can be created with the easy to use template builder ensuring these customer notifications can be out in the market, assisting passengers quickly.

Kamet is a customisable and scalable communication platform – both easy to use and capable of handling high volumes of data within a second, and latency down to milliseconds – essential for communicating critical information during times of disruption.

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REVENUE MANAGEMENT

Q2 2023 (April to June) Delivered

A **Ventoux Steering Group** has been reformed, to discuss the long term roadmap, defining enhancements to continually improve the product.

With the successful migration AWS, the previous **Ventoux roadmap** has largely been implemented, with the majority of remaining items needing a re-evaluation of requirements, benefits and prioratisation.

Potential enhancements identified by the group for consideration include simplification of the use of profiles and rules and further improvements in the area of forecasting and forecast accuracy measurements.

Some improvements to the user interface have been made, specifically for the **visualisation of bookings by origin/destination groups and buckets**, so users can visualise bookings and highlight high earning journeys easier.

Similarly, a new view has been created, visualising a whole day for a particular route - illustrating all competitor services and their respective durations and fares.

With the breadth and depth of data available from Ventoux, **further Mistral integrations** have been realised, including data covering equipment type. This information into Mistral can then be shared with Solano, enabling Solano staff users the location of Standard Premium units, used at Avanti West Coast.

BI & ANALYTICS

Q2 2023 (April to June) Delivered

Work continues to migrate all datasets and reporting into Snowflake. Within the quarter **Passenger Counting reporting has been made available in Snowflake**, enabling better insights and reporting of commercial data. Discovery for the second phase, covering the remainder of passenger count sources is now underway.

The migration of **CRM data and Gateline reporting to Snowflake** is also complete, alongside some change requests to the CRM report covering opted out customers. This work enables historical data along with improved data quality and reporting to be available to users in Snowflake.

REMOTE ASSET MANAGEMENT

Q2 2023 (April to June) Delivered

The **Mistral/Ventoux SRS integration** continues to progress. This has been a significant piece of development, building on the existing integration of real-time passenger reservations. Ultimately this will address the limitations of the NRS legacy stats file that restricts reservations to 4 on a single journey.

Additionally work has completed for a **Service Cancellation flag**. This enhancement is to utilise Darwin data to cater for scenarios where a service cancelled in CIF/VSTP can still run - ensuring that data shared from Mistral more accurately represents service cancellations.

Work on **Zonda** has concentrated on further user interface enhancements, increasing adoption due to improved experience, and updates to geofencing and rules, enabling further use cases which required the use of targeted geofencing, associated with rules to generate location specific alerting - allowing focussed targeting of known or suspected operational challenges.

Out with this planned work, the Zonda development team has also created: the architecture/back end preparation required for an upcoming Electric Vehicle trial, accommodating the inclusion of historical data into channel views, adjusted rule severity inputs for Notus rules, and completed channel mapping for the new sanding module.

RAIL OPERATIONS

Q3 2023 (July to September) Planned Deliverables

Sirocco

Papagayo Phase 1 Feedback - Further improvements in the area of limiting access to certain roles, based on recently defined internal processes at SWR

Papagayo Phase 2 – Cancelled and Extra Stops - Mistral based alerts based on schedule changes to be propagated through Sirocco to Solano.

Speed Management Phase 2 - Import TSRs by mile/chain and alert if the speed is exceeded within the area affected

Depot exit delay dashboard - Ability to assign delay to Network Rail if units delayed from exiting a depot by red signal

Berth Maps

Address gap analyses between BM and CCF/P2/TMIS - Extend Berth Maps and its new Service List to include other features of CCF/P2/TMIS identified in gap analyses and suggested by potential users to make the product even better.

Interactive berth maps for depot management - Continue with the PoC started in Q2 and demonstrate it to fleet and depot staff. Productionise if funding is available.

Sarma

People and Leave Management dashboards - Completion of dashboards to enable people and leave management functionality as well as application of Skills and Route Knowledge.

Payroll interface (Hull/Lumo) - Completion of payroll data export including interface testing to ensure accurate data is sent downstream to Payroll systems.

TPE/SWR Additional Development - Commencement of development required for TPE/SWR in addition to core system to enable effective 'scaling up' of Sarma.

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STAFF COMMUNICATION

Q3 2023 (July to September) Planned Deliverables

Solano

SWR Incident Reporting Phase 1 - Delivery of first set of forms for Incident Reporting in SWR

AWC Integral Data Integration - Connection from Station Defect Reporting Supplier Integral to Mistral AWC Defect Reporting

Reservations - Reserved seat view to see seats reserved per leg with bike reservations

Station View - Berth Maps - Station staff will have a view of berths around their station in addition to GPS view

Sarma Notifications - Schedule changes from Sarma that will also update the diagram in Solano once acknowledged

Solano Mobile Web View - Limited functionality Solano mobile browser view with On the day focus

Solano Notices - Begin work to provide access to Operating Notices and other operating documentation with read receipt and signoff capture. Will extend into next quarter

Data Conductor

Seasonal leaf fall (Sanding) amendments - Adjustments to increase API calls to Mistral and several user – interface changes to support Autumn preparedness

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CUSTOMER

Q3 2023 (July to September) Planned Deliverables

Denali

GDPR - Compliance with FG Data Retention policy, consent management for marketing and regular data purges

Legal Basis (AWC) - Update DG Consent to use Legitimate interest as the legal basis instead of Contract for Service messages and extend validity to 99 years

O16 (SWR, AWC) - Apply U16 rule ID to DG consent widget in customer touchpoints

Purple Wifi (AWC) - Integrate Dataguard Consent into Purple Wifi and ingest feed into Denali and SFMC

Hull Trains Denali (HT) - Integrate HT fully into Denali, ingest Icomera datafeed and provide downstream into Kamet

AWC items (AWC) - Provide Refunds, Reservations, Railcards and Promo codes into SFMC

REVENUE MANAGEMENT

Q3 2023 (July to September) Planned Deliverables

Ventoux

Email alert for CSI - Allow CSIs to be configured to send emails to alert analysts to developing situations (e.g. unexpected burst of bookings during the day)

Consider sales restrictions and other exclusions in the forecasting logic - Avoid using suspect data (e.g. bookings on strike or engineering days) for forecast calculations

Forecast Accuracy - Make available calculations of accuracy for forecasts.

Refresh of Sales Restrictions in Real Time - Use real time feed from RARS rather than applying changes in the overnight batch processing

Personalisation of UI - Ability to hide columns not of direct interest to the user

Allow route or region based calendars - Allow certain forecasting dates (e.g. school holidays) to be defined differently for different routes (e.g. Manchester and Liverpool usually have different half-term holidays)

MISTRAL DATA

BI & ANALYTICS

Q3 2023 (July to September) Planned Deliverables

BI

BPC: Fleet & Mileage Actuals - User testing and Go live

BPC - Switching initiatives on and off - Development, UAT and Go live

BPC - New DFT Mapping Business rule calculation - Create a new business rule to cerate another reporting view for the Dft

BPC - AWC Balance sheet split - Split the BS into the 3 sub-profit centres automatically based on business rules

Passenger Counts reporting in Snowflake – Phase II (manual counts for TOCs) - Explore, design and development solutions for manual count sources into Snowflake

eTVD dataset in Snowflake - Design and develop TTK scanning app dataset in Snowflake

SAP RISE – Phase 1 - BI systems to migrate to SAP cloud, plan and set up support and maintenance process in new environment.

SAP RISE – Phase II (Adapt BW to new SAP S4AHANA system) - Gap Analysis, design and development for new S4HANA source system

CRM – Leaky bucket and consents shift for customers (CR for TPE) - To add leaky bucket logic and create a aggregation of consents on daily basis

Webtis reporting in Snowflake - Explore and discovery of Webtis dataset for migration to snowflake

REMOTE ASSET MANAGEMENT

Q3 2023 (July to September) Planned Deliverables

Mistral

Mistral-Ventoux integration: 4 seat reservations - Completion of the SRS work for Hitachi (following completion of CAF)

Papagayo enabling - Completion of automated use cases

Hitachi testing - Build of new testing environment to accommodate Hitachi requests for end to end testing

Alstom testing support - Support for SRS testing

GWR Relocates (short forms) - Removes/relocates reservations where there is a variation in reserved v actual stock (tackling short forms).

Staff API changes for Solano - Enables Solano to look at service changes due to call at a location regardless of origin or prior location which enables users to view services to all stations that can be reached in the next hour

701 network setup and ingest - Assuming SOW approved, creation of technical environment to receive counts

Zonda

Instrumental - Data ingest of fuel monitoring data from Instrumental into the core Zonda platform

G30 trial - data ingest - Set up Grinsty feed for data ingest for electric vehicle trial for one train

G30 trial - data mapping - Create and introduce all relevant data mapping associated with converting raw data feeds into meaningful channel and event data

G30 trial visualisation and alerts - Create the appropriate graphs, visualisations, data tables, rules creation, rules editing and alert distribution

G30 trial - battery management feed - Create a battery management feed including the introduction of a IOT collector to ingest and distribute battery related data from the vehicle PLC

G30 trial - battery management mapping - Create and introduce all relevant data mapping associated with converting raw data feeds into meaningful channel and event data

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