

# Digital Consulting

Trackbase deliver technology and data solutions across the GB rail industry.



### **Cloud Hosting**

Our systems engineers are experts in the use of AWS and Microsoft Azure, and specialists in providing cloud support to rail organisations.



#### **Cloud Business Transformation**

Our consultants are both domain specialists and cloud experts, able to fully understand rail stakeholders' problems and effective solutions.



### Cloud Data Science & Analytics

Our data scientists specialise in rail-specific problems, creating new solutions in partnership with stakeholders.



### **Cloud Software Development**

Our software engineers are highly experienced cloud specialists, delivering rail-specific solutions to customers with an Agile approach.

# Operating Model

Across these business areas, we deliver a variety of cloud-specific services.

### **Problem Definition**

Technical Consulting, Stakeholder Engagement, Rail Business Analysis



Business Change

Change Management, Benefits Quantification



Hypothesis Testing

Rail Data Science, Machine Learning, Data Exploration



**Solution Implementation** 

Rail Software Development, Data Engineering, User Design



## Expertise

At Trackbase we have a unique combination of four, key differentiators:



### Cloud-driven Approach

We're experts in providing cloud software, hosting and support across both AWS and Microsoft Azure.



### **Domain Expertise**

We possess a deep understanding of rail data and problems, complimented by close stakeholder relationships.



### **User-focussed Solutions**

We work closely with end-users when building technical solutions, ensuring high usability and value of the end-product.



### Proven Track Record

Our team all have years of experience in the rail industry delivering technical solutions to a high standard.

## Service and Capability List

Trackbase offer the following cloud-specific services via G-Cloud 14:

- Data Migration
- Data Science & Analytics
- User Interface Design
- Software Development
- Technical Project Management
- Amazon Web Services
- Microsoft Azure

## **Data Migration**

Trackbase's Computer Scientists and Data Engineers support rail organisations complete major data migration projects using their domain-driven expertise. Our team works across multiple systems, with a focus on Cloud-based outputs, using an Agile delivery methodology to complete data migration projects on-time and in-budget.

#### Features

- Migrate large, complex datasets to new systems.
- · Combines real-time and historical data.
- Specialised data migration for rail databases.
- Reproducible data cleansing for rail data.
- Expertise in ETL tools (informatica).
- Expertise in on-prem solutions (Oracle).
- Expertise in cloud-based solutions (AWS/Azure).
- Expertise in database technology (SQL Server/PostgreSQL).

- Increased understanding of legacy datasets.
- Reduced risk of project delays.
- Reduced risk of project over-spend.
- Agile delivery approach to data migration.
- Cloud system agnostic (AWS/Azure/etc.).
- Rail data knowledge reduces upskilling time required.



## Data Science & Analytics

Trackbase's industry leading Data Scientists specialize in rail-specific data and problem sets. We provide expertise to rail organisations aiming to gain value from their under-utilised data. We explore a variety of data science techniques to understand the primary causes of industry problems. We implement highly-usable solutions deployed on cloud-based technologies.

#### **Features**

- Domain expertise in rail data science.
- Data collection specific to GB rail data sets.
- Use of advanced analytics techniques, specific to rail.
- Usable web-based solutions built in Python or R.
- · Includes rapid visualisation and reporting.
- Use of machine learning and AI.
- Continuous learning and innovation.
- Collaboration between our data scientists and the clients team.
- Focus on measuring the impact of data-led actions.

- Enhances rail operations with domain-specific insights.
- Enables teams with tailored GB rail analytics.
- Streamline processes with Python/R web solutions.
- Accelerates insights with rapid visualization.
- Promotes innovation for continuous improvement.
- Facilitates collaboration for customized solutions.
- Empowers decision-making with intervention impact measurement.
- Provides tailored reporting solutions.



## User Interface Design

Trackbase's Designers and User Experience Specialists are experts in producing tailored, web-based solutions for rail-specific clients. Their problem-driven approach, combined with expertise in cloud-based solutions, enables Trackbase to develop highly intuitive user interface designs rapidly with a high degree of collaboration with end users.

#### Features

- Designs based on robust user research and needs analysis.
- Rail-specific domain knowledge.
- User motivations and expectations understood before building.
- Sketching, wireframes and prototypes to progress designs.
- Use of various tools (Sketch, Axure, Figma).
- Interactive prototypes to increase user input.
- Regular deliverables (personas, journey maps, prototypes).
- Agile process utilised for faster, more efficient delivery.

- Collaborative approach increases usability of end-product.
- Encourages the adoption of user-centric design approach.
- User interface and user experience expertise.
- Flexible, fully configurable service models which drive value for money.
- Ability to rapidly scale teams to meet requirements.
- Rail-specific service range to satisfy any type of functional requirement.
- Increased in-house knowledge reduces dependence on suppliers.



## Software Development

Trackbase's Software Developers are experienced in delivering cloud-based solutions to clients within GB rail. Our team offer a best practice approach to software engineering, based on an Agile delivery methodology. We focus on delivering maintainable, secure and highly-performant code with a continuous improvement approach.

#### **Features**

- Agile delivery methodology with regular, usable releases.
- · Technology agnostic, experienced across multiple stacks.
- Support for entire software lifecycle.
- Rail expertise across all developers for tailored development.
- Cloud development, including APIs in all solutions.
- Cloud agnostic (AWS/Azure/Google Cloud/etc.).
- Full documentation including user guides and architecture.

- Enhanced security measures ensure data integrity and user confidentiality.
- Scalable infrastructure adapts to fluctuating user demands.
- Cost-effective solutions optimize budget allocation for maximum efficiency.
- Agile development methodologies for rapid iterations and improvement.
- Compliance with industry standards ensures regulatory requirements met.
- Dedicated support teams for troubleshooting and maintenance.
- Integrate with existing rail systems seamlessly.
- Robust backup and disaster recovery safeguard against data loss.
- · Rail-tailored solutions for specific business needs and optimal performance.



## Technical Project Management

Trackbase offers Technical Project Management across all levels, from support to lead. Our project managers specialise in delivering technical projects for rail-specific clients, using their unique skillset of both technical understanding and domain knowledge. Our experience has been demonstrated by delivering projects across a variety of rail clients.

#### **Features**

- Technical Project Management and leadership using agile methodologies.
- Investment appraisals, business cases, and business planning.
- Scheduling and cost analysis.
- · Requirements gathering and stakeholder management.
- Manage risks, assumptions, PCs and health checks.
- Transformation and change management control.
- Benefits management and realisation.
- Reporting, dashboards, metrics and strategic insight.
- Project handover management, mentoring and coaching.

- Business analysis to realise benefits and reduce costs.
- · Reduce effort required in project planning.
- Provide informed decision-making capabilities.
- PMO delivers efficient execution metrics and scale.
- Change managers deliver rail specific change programmes.
- Programme managers integrate multiple projects.

### Amazon Web Services

Trackbase provides organisational and architecture design, system migration, software development, and operations services, optimised for AWS. We support GB rail clients develop and maintain a cloud-first approach, navigating from Cloud strategy through to Agile AI/ML led cloud-native operations to drive significant business transformation.

#### **Features**

- Rail-specific AWS experienced consultants.
- Use of AWS-specific and open-source components.
- · Resilient and secure AWS infrastructure by default.
- Full design, configuration and implementation of AWS instances.
- Defined architecture of AWS packages.
- Migration to AWS support.
- Continued support and management of AWS services.
- Disaster recovery in-built across AWS availability zones.

- Advice on your rail industry's complex technology initiatives.
- Provide recommendations for developing/executing technology roadmap.
- Support for defining the architecture for AWS delivery
- Best practices, architectural patterns, and operational guidance.
- Training, coaching, and mentoring to build AWS skills and competencies.
- Optimised delivery processes to increase productivity and reduce costs.
- Accelerate cloud adoption within rail.
- AWS or open-source component agnostic.



## Microsoft Azure

Trackbase provides organisational and architecture design, system migration, software development, and operations services, optimised for MS Azure. We support GB rail clients develop and maintain a cloud-first approach, navigating from Cloud strategy through to Agile AI/ML led cloud-native operations to drive significant business transformation.

#### **Features**

- Rail-specific MS Azure experienced consultants.
- Use of Azure-specific and open-source components.
- Resilient and secure Azure infrastructure by default.
- Full design, configuration and implementation of Azure instances.
- · Defined architecture of MS Azure packages.
- Migration to MS Azure support.
- Continued support and management of MS Azure services.
- Disaster recovery in-built across MS Azure availability zones.

- Advice on your rail industry's complex technology initiatives.
- Provide recommendations for developing/executing technology roadmap.
- Support for defining the architecture for MS Azure delivery
- Best practices, architectural patterns, and operational guidance.
- Training, coaching, and mentoring to build Azure skills and competencies.
- Optimised delivery processes to increase productivity and reduce costs.
- Accelerate cloud adoption within rail.
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