BJSS

MLOps Assessment for BJSS clients | **Duration:** Four weeks

Outcome: A clear picture of your current level of maturity and readiness for MLOps and a concrete list of immediate remedial actions to move you up the maturity curve and achieve your ambitions

BJSS & MLOPS

BENEFITS OF MLOPS

Organisations that deploy AI and machine learning have improved their profits by up to **15%. But 85% of projects don't** make into production. This is often caused by a lack of data availability and quality, operational and technical silos and an inability to demonstrate and explain your models' accuracy. MLOps overcomes these challenges through a reliable & repeatable method that quickly deploys models in **weeks rather than months!**
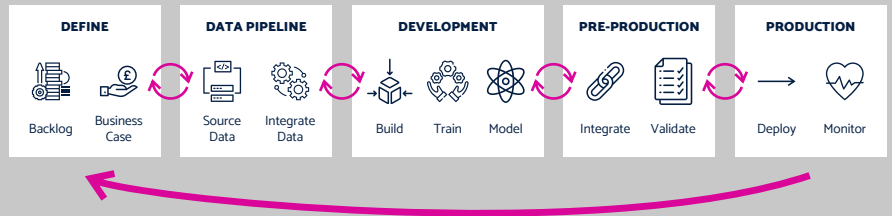
Repeatable Processes → **Reduced Time to Value Creation** → **Increased Return on Investment**

MLOPS PRINCIPLES

MLOps is DevOps applied to data science and machine learning. It is a holistic approach to designing, experimenting, developing, deploying and managing ML models with a one-team ethos and a goal to reduce operational costs while maximising opportunities.

DEFINE — Backlog, Business Case
DATA PIPELINE — Source Data, Integrate Data
DEVELOPMENT — Build, Train, Model
PRE-PRODUCTION — Integrate, Validate
PRODUCTION — Deploy, Monitor

OUR MLOPS SERVICES

We support you through every phase of your MLOps journey, regardless of your current maturity level.

ADVISE
MLOps Assessment and Strategy

We provide a four-week assessment of your MLOps readiness and maturity utilising our proven framework. We then issue tailored recommendations based on your unique circumstances.

We also provide further strategic advice to support your MLOps strategy, technology selection, roadmap, operating model, change assessment and governance.

BUILD
MLOps Platform Delivery and Transformation

Following a steel-thread approach, we work with your team to select or develop a machine learning model and deploy it while building an MLOps platform containing the required tools and capabilities.

We collaborate closely and work in hybrid teams where possible so expect your colleagues to learn by doing.

RUN
Data Science as a Service

We have strong experience supporting clients through MLOps transformations and help you bridge the traditional skills gap, enabling you to create a mature data science capability which delivers long term value.
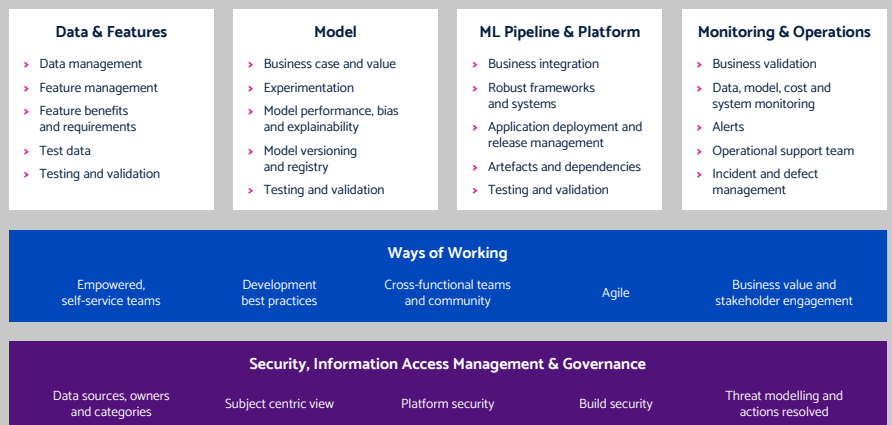
Once your MLOps model and platform have been deployed, we work with you to ensure they are continuously improved and your data models are kept up to date.

MLOPS ASSESSMENT

Gain a detailed picture of your current MLOps capabilities and concrete recommendations to reach your aspirations through our MLOps assessment.
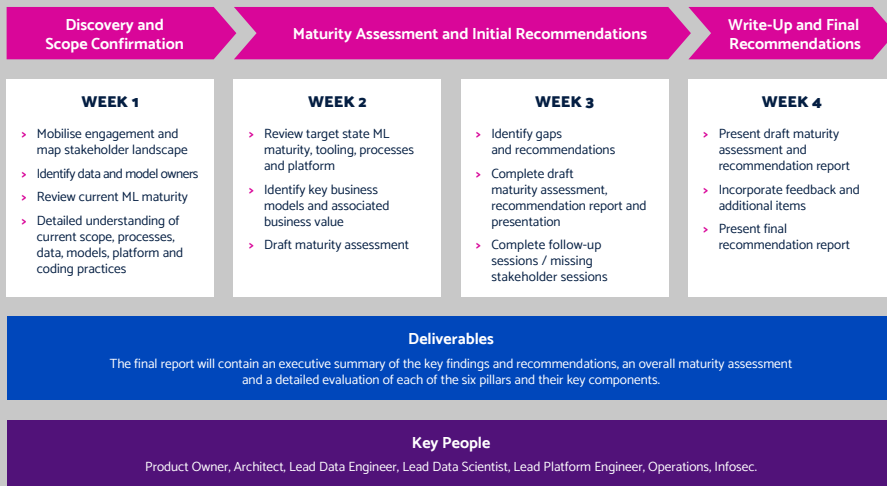
The assessment is supported by our evaluation framework which examines the six pillars of machine learning operation and gives actionable insight into your level of maturity across 30 criteria:

- **Ways of Working:** Are your teams following best practice and able to achieve their objectives?
- **Data & Features:** Is your data sufficient, useful and accessible?
- **Model:** Are your models robust, maintainable and performant?
- **ML Pipelines & Platform:** What level of automation can your models rely on?
- **Monitoring & Operations:** What solutions do you have in place to keep track of models accuracy over time?
- **Security & Governance:** What processes and tools do you have in place to manage access to data and secure your platform?

Data & Features	Model	ML Pipeline & Platform	Monitoring & Operations
Data management	Business case and value	Business integration	Business validation
Feature management	Experimentation	Robust frameworks and systems	Data, model, cost and system monitoring
Feature benefits and requirements	Model performance, bias and explainability	Application deployment and release management	Alerts
Test data	Model versioning and registry	Artefacts and dependencies	Operational support team
Testing and validation	Testing and validation	Testing and validation	Incident and defect management

Ways of Working

Empowered, self-service teams	Development best practices	Cross-functional teams and community	Agile	Business value and stakeholder engagement

Security, Information Access Management & Governance

Data sources, owners and categories	Subject centric view	Platform security	Build security	Threat modelling and actions resolved

INDICATIVE ENGAGEMENT

We cover all aspects of your MLOps capabilities through interviews, workshops, code and documentation reviews. Below is a roadmap of what a typical engagement looks like.

Discovery and Scope Confirmation → **Maturity Assessment and Initial Recommendations** → **Write-Up and Final Recommendations**

WEEK 1
- › Mobilise engagement and map stakeholder landscape
- › Identify data and model owners
- › Review current ML maturity
- › Detailed understanding of current scope, processes, data, models, platform and coding practices

WEEK 2
- › Review target state ML maturity, tooling, processes and platform
- › Identify key business models and associated business value
- › Draft maturity assessment

WEEK 3
- › Identify gaps and recommendations
- › Complete draft maturity assessment, recommendation report and presentation
- › Complete follow-up sessions / missing stakeholder sessions

WEEK 4
- › Present draft maturity assessment and recommendation report
- › Incorporate feedback and additional items
- › Present final recommendation report

Deliverables
The final report will contain an executive summary of the key findings and recommendations, an overall maturity assessment and a detailed evaluation of each of the six pillars and their key components.

Key People
Product Owner, Architect, Lead Data Engineer, Lead Data Scientist, Lead Platform Engineer, Operations, Infosec.

MATURITY LEVELS

We move you from a position of failure to success.

HIGH
- › Full automated model deployment
- › One team ethos
- › Frequent releases
- › Automated performance monitoring

Outcome:
- › High quality models
- › Low cost to innovate
- › Higher throughput of models released
- › Increased revenue and profit

MEDIUM
- › Re-usable components
- › Automated pipelines
- › Automated data and model validation
- › Increased number of releases
- › Manual performance monitoring

Outcome:
- › Experimentation speed increased
- › Quality issues improved, throughput still constrained

LOW
- › Manual deployment of models
- › Dependencies on key individuals
- › Siloed data science and operations
- › Infrequent releases
- › No performance monitoring

Outcome:
- › Quality issues with deployed models
- › High cost to innovate
- › Long timelines to release new models

MLOPS ASSESSMENT OUTCOMES & BENEFITS

Outcomes
- › Level of current maturity against the six MLOps maturity pillars with a clear explanation for each score
- › Recommended level of maturity against current MLOps aspirations
- › Actionable prioritised recommendations for immediate remedial actions to improve current level of maturity

Benefits
- › Excellent understanding of the root causes for the challenges you've faced around data science and machine learning
- › A clear way forward immediately after the assessment
- › Outcomes are tailored to your organisation and developed in collaboration with you and your team
- › Ability to move from the 85% project failure group to the 15% success group

MLOPS SUCCESS STORIES

We support some of the world's leading organisations to become successful with MLOps.

Major Retail Bank

Reducing time to deploy a model from **15 months to two months**.

Insurance Company

"The learnings shared have been in the ways of working, understanding the science behind our data and we now have a way to iterate through design. It's been an outstanding achievement, considering the short time we've been together!

For me, it's been a joy and a very successful engagement. We're grateful to the BJSS team and all the support they have given us."

Head of Data, Major Insurance Company

Trusted by our 80 active clients, we collaborate to deliver complex, innovative technology, engineering and industry solutions that millions of people use every day.

- Commodities & Utilities
- Financial Services
- Health & Social Care
- Public Sector
- Retail & Consumer Markets
- Insurance

ABOUT BJSS

The leading technology and engineering consultancy

1,700+ Talented people working together on complex projects

15 Locations across the UK, USA, Europe and Australia

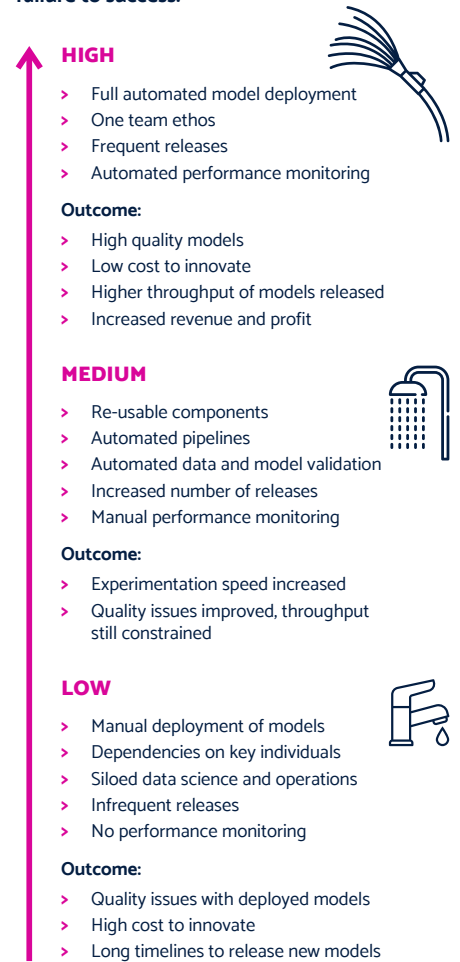**>30** Active engagements within Retail & Consumer Markets

Seven tightly-integrated services, all underpinned by Digital Transformation and delivered by Enterprise Agile®

- › Technology & Engineering
- › Cloud & Platform
- › Managed Service
- › Data & AI
- › Strategy
- › Design
- › Intelligent Automation

BJSS works with some of the world's largest public and private sector organisations:

NHS Digital · itv · Disclosure Scotland · CO OP · Driver & Vehicle Standards Agency · BARCLAYS · NatWest · edf · HSBC