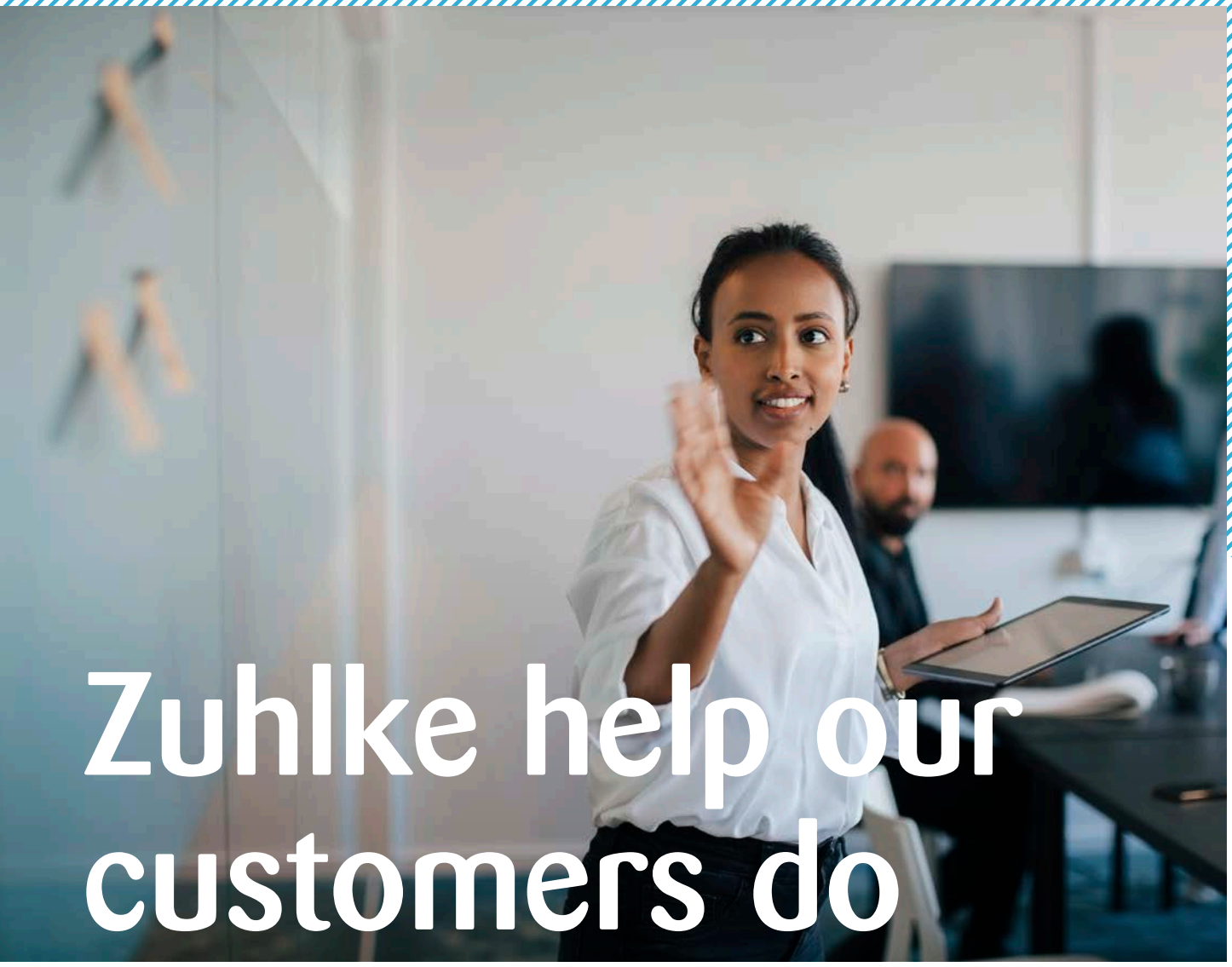

zühlke
empowering ideas
Cloud Delivery
Service Definition
Document
May 2024



Zuhlke help our customers do more with less

Contents

We're Zuhlke

Zuhlke was founded in Switzerland in 1968. We are a global innovation service provider. We specialise in strategy and business innovation, digital solutions and applications and device and systems engineering.

In the UK we are located in London, Manchester and Edinburgh.

We specialise in delivering requirements which are of strategic importance or difficult. We help our customers implement digital services and to also grow their own capability.

We have won the prestigious British Computer Society team of the year award for the design, build and operation of government cloud-based services in the media spotlight.

56 of years of innovation | GDS compliant | Award winning | Secure by design | Outcome focused | Accessibility compliant

Where we are

United Kingdom
- Edinburgh
- London
- Manchester

Austria
- Vienna

Bulgaria
- Sofia

Germany
- Frankfurt
- Hamburg
- Hannover
- Munich
- Stuttgart

Hong Kong
- Hong Kong

Portugal
- Porto

Serbia
- Belgrade

Singapore
- Singapore

Switzerland
- Bern
- Zurich

Vietnam
- Ho Chi Minh City

What makes us great

Trust

We always put our customer's best interests first.

Simplify

We cut through complexity and make the difficult possible.

People

Technology is the easy bit. We succeed through good collaborative relationships.

Decisions

We help our customers take good decisions based on evidence.

Pragmatic

We help our customers balance their competing priorities and constraints.

Do more with less

We implement technology and better ways of working to achieve more.

Our commitment to HM Government policy

Wellbeing

Our mental health first aiders are trained to look out for our customers, our partners, as well as our own people.

Equal Opportunity

We provide equal opportunity employment. We invest in helping disadvantaged communities grow digital skills.

Fighting Climate Change

We are leading the way to show how open data accelerates decarbonisation of our national energy system.

Tackling Economic Inequality

We bring small & local businesses, start-ups, not-for-profit and academics into our ways of working.

Covid-19 Recovery

Nature journal reported that our NHS Covid-19 app averted 1 million infections and saved thousands of lives.

Accessibility & Inclusion

We design, build and operate services that are accessible and inclusive to all.

Award Winning

British Computer Society: Development Team of the Year (2021)

Zuhlke designed, developed and operated the NHS Covid-19 app that was used by 28 million people. Nature journal found that our work averted 1 million infections, kept 44,000 people out of hospital and saved thousands of lives.

TOPRA Awards for Regulatory Excellence: Innovation (2023)

Our work for the NHS Covid-19 app won the innovation award for outstanding achievement, for the successful implementation of innovative ideas for efficiency, productivity and processes.

The Banker: Mobile Innovation (2023)

Transactional government services can learn from private sector innovation. Our work for HSBC rocketed them from 5th to 1st place for market share.

Our core experience

Zuhlke helps government do more with less.

We deliver digital services that automate business processes and which include digital twins by default. This cutting-edge approach equips policy teams to design, implement and improve impacts on citizens in near real-time.

- Data and AI
- Cloud
- Engineering
- Managed services
- Mobile apps
- Digital strategy consulting
- Legacy systems transformation
- Service and experience design
- Business process automation
- Physical device engineering

Who we work with

Public Sector

We help government do more with less by designing, building and operating digital services that revolutionise the beneficial impact on society.

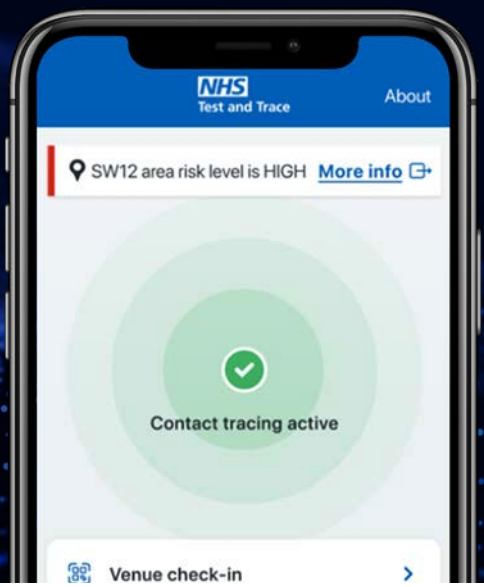
Healthcare

We are one of few suppliers who design and build accredited (IS0 13485) medical devices and digital solutions.

Commercial

We are innovation partners to organisations in finance, energy, healthcare, transport, industrial and retail sectors.

NHS Covid App



We designed, built and operated the NHS Covid-19 app and supporting infrastructure.

Challenges

1. Design a contact tracing app that citizens trust
2. Gain a large audience so scientists could break Covid transmission chains
3. Work fast and safely in the media spotlight

Benefits

- Acquired a large audience of 28 million people
- Averted 1 million Covid infections and saved thousands of lives
- 12-weeks from ideation to launch passing all GDS and security assessments
- 1st certified mobile medical device in the UK
- Secure anonymous contact tracing
- Support for 13 languages and accessible for all

Government's Trusted Advisor for Open Data

Data is on the critical path to decarbonisation of the UK energy sector.

Challenges

1. An energy system designed in the 1950s needs fundamental overhaul and redesign.
2. Change impacts many commercial, central and local government organisations.
3. A 'shared' digital and data infrastructure for all organisations to use is needed.
4. Automated data exchange is needed to keep the lights on in a grid of millions of generators.
5. Digital systems must integrate with other economic sectors (utilities and built infrastructure).
6. Legacy systems are everywhere. Digital skills in the sector are low.

Benefits

On government's behalf we assessed National Grid ESO £556m digital portfolio.

Our work put in the public record the sectors over reliance on on-premises technology.

We act for government to provide 130 organisations with expert data advice.

We conceived the new organisations the sector need, such as the 'Energy Digitalisation Delivery Body'.

We designed the sectors future energy consumer data consent model.

We help local authorities understand how to operate open data ecosystems.

Trusted by Governments Internationally at Scale

Financed by member states the Comprehensive Nuclear-Test Ban Treaty Organization (CTBTO) is tasked with building up the verification regime of the Comprehensive Nuclear-Test-Ban Treaty.

We are a trusted digital services partner and have delivered 35 projects over 10 years.

Challenges

1. The International Monitoring System (IMS) consists 321 monitoring stations and 16 laboratories. Many locations are remote and difficult to access posing major engineering and logistical challenges.
2. All digital work must retain the trust of 187 countries.

Benefits

- Digital product and service design in collaboration with scientists
- Geospatial and environmental data at scale
- Digital services for expert users
- Probabilistic data visualisation
- Digital services that interact with physical devices and environment
- Development and maintenance of web, mobile and embedded software systems

Efficiency at Scale
Swiss Rail

Swiss national railways (SBB) are famously punctual and very efficient.

Zuhlke is the trusted digital partner behind SBB. We have delivered 24 programmes since 2017 and continue to design, build and operate the digital services that help contribute to SBB's well-deserved reputation.

Benefits

- Next generation ticket vending machines and step to being paperless
- Augmented reality passenger assistance apps
- Apps to help passengers find available train seats and make train boarding faster
- Train shunting and communications
- Intelligent early warning systems for infrastructure and rolling stock using machine learning

Digital Services at Scale for Co-Op Group

Zuhlke are the Co-Op Group's lead digital services partner.

Challenges

1. Help Co-Op acquire digital skills which are challenging to recruit for regionally
2. Ramp capability up and down on demand
3. Development of new services and support of legacy systems

Benefits

- Scale digital team by 30% at speed
- Good cultural fit with Co-Op teams and work to same standards and principles
- Full delivery lifecycle from design to build and support
- Full cross functional teams from design to engineering and test
- Work in accordance with measurable SLAs
- Support for enterprise architecture, security, infrastructure and engineering teams

Software as a medical device

We have a long-term track record as one of few companies on the planet certified to design and build software as a medical device. Our NHS Covid-19 app delivery was the first certified mobile medical device in the UK.

The rise of artificial intelligence, plus the speed at which software can be changed compared to hardware, has seen fast growth in digital services that can interact safely in medical situations and with people's lives.

We research, review, plan, design and develop high quality, regulatory compliant SaMD solutions and platforms, at pace, maximising value. We are ISO 13485 certified.

Zuhlke worked on the machine learning that gives AOT's Carlo surgical robot it's vision. This robot has achieved regulatory approval and now cuts bone on live human patients.

Features

- ISO13485 and ISO62304 compliant development
- Best practice UX, using research, ideation, prototyping, testing and analytics
- Iterative, incremental working software delivery including customer feedback
- Rapidly develop complex web and native applications
- Small cross-functional teams, embedding feedback and best practice in delivery

Benefits

- Deliver rapid regulatory compliant solutions
- Deliver best in class customer experience journeys
- Decrease design and service costs
- Deliver more accurate features, faster
- Decrease time to market


Urgent Digital Delivery
Critical Digital Delivery

Urgent Digital Delivery
Critical Digital Delivery

Zuhlke are relied on to support urgent digital delivery needs. We have proven ways to navigate complex and chaotic situations like the Covid pandemic.

We put our government customers in calm control of their situation. We do this at national scale, in the media spotlight.

We do all this whilst also working to business-as-usual best practice standards, pass assessments and keeping the long-term cost of ownership of solutions low.

Features

- Rapid deployment of Agile multi-disciplinary teams onsite, nearshore and remote
- Best practice to cut through complexity and simplify way ahead
- Help take best decisions by providing good evidence
- Integrate policy and subject matter experts into day-to-day delivery practices
- Design, build and operate digital services with 24 x 7 support
- Pass all GDS and NCSC assessment
- Write technical papers for Prime Minister's Office to take urgent decisions
- Proven ways of working

Benefits

- Accelerated delivery during crises, from months/years to weeks
- Solve the most complicated challenges fast
- Open, transparent working, to align many organisations fast and cost effectively
- Design solutions with low cost of ongoing ownership
- Rapid iterative delivery to respond to unfolding circumstances
- Support emerging needs, efficiently without incurring unnecessary cost
- Digital Twin included by default, to integrate enable policy design react in near real-time
- Microsoft certified partner
- AWS certified partner

Digital Applications: Design, Build and Run

Our approach is fully compliant with government ways of working.
We design, build and operate digital applications:

- New greenfield applications
- Transform existing legacy systems
- We take over development responsibility from others.
- We take over support responsibility from others.

Technical Approach

Engineering Excellence

- Work with local Architectural guidance
- Work to local IT principles
- Digital & data architecture and build
- Mechanical & electrical design and build

Product Excellence

- User needs led (UX/UR, service design)
- Automated UX assurance
- Digital twin by default
- Data ecosystems and data service design

Security Excellence

- Work with local Cyber policies
- HMG Security Policy Framework
- NCSC Email
- NCSC Development & Deployment
- ISO27001 & Cyber/Cyber + certified

Delivery Approach

Life Cycle Excellence

- Work with local technical delivery principles
- Consulting
- GDS (Discovery to Live & Retire)
- Support (3rd and 4th line) up to 24 x 7
- Agile (Scrum/Lean/Kanban/AgilePM)

People Excellence

- 100% of DDaT roles (2,000 people)
- SC clearance just in time
- No other sub-contractors needed
- Ramp-up (structured with briefing)
- Ramp-down (knowledge + handover)

Continuous Improvement

- Measure
- Retrospective reviews
- Continuous knowledge management
- Training, mentoring, coaching (team)
- Training, mentoring, coaching (others)
- Presumed open working

Transition Approach

Understand & Validate Early

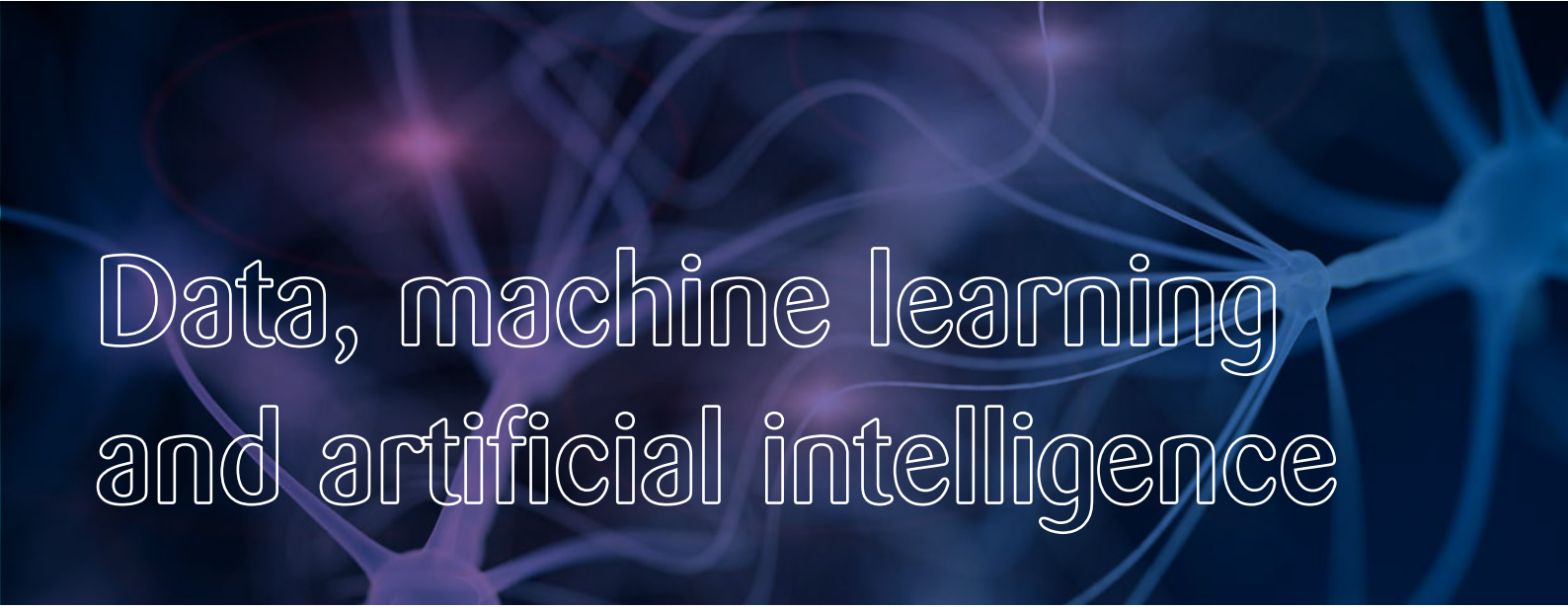
- Pre-Engagement workshops
- Lift-off (structured start)

Establish for Excellence

- Risk management
- Governance (Portfolio/Project)
- Communications
- Standards & Consistency, KPIs & Measures
- Continuous roadmap + staffing forecast
- Knowledge management approach

Scale for Excellence

- Transition stages (plan, prepare, shadow, reverse shadow, BAU)
- Dependencies (identify, mitigate, manage)
- Deliverables (milestones, sign-off)
- Knowledge (1:1 briefing, documentation, handover, maintain)
- Take over development team responsibility
- Take over service support responsibility



Data, machine learning and artificial intelligence

We put your data to work to reform business processes and provide better and more valuable services to citizens and users.

We unlock your data, make it useable and join it with other data sources to create new value.

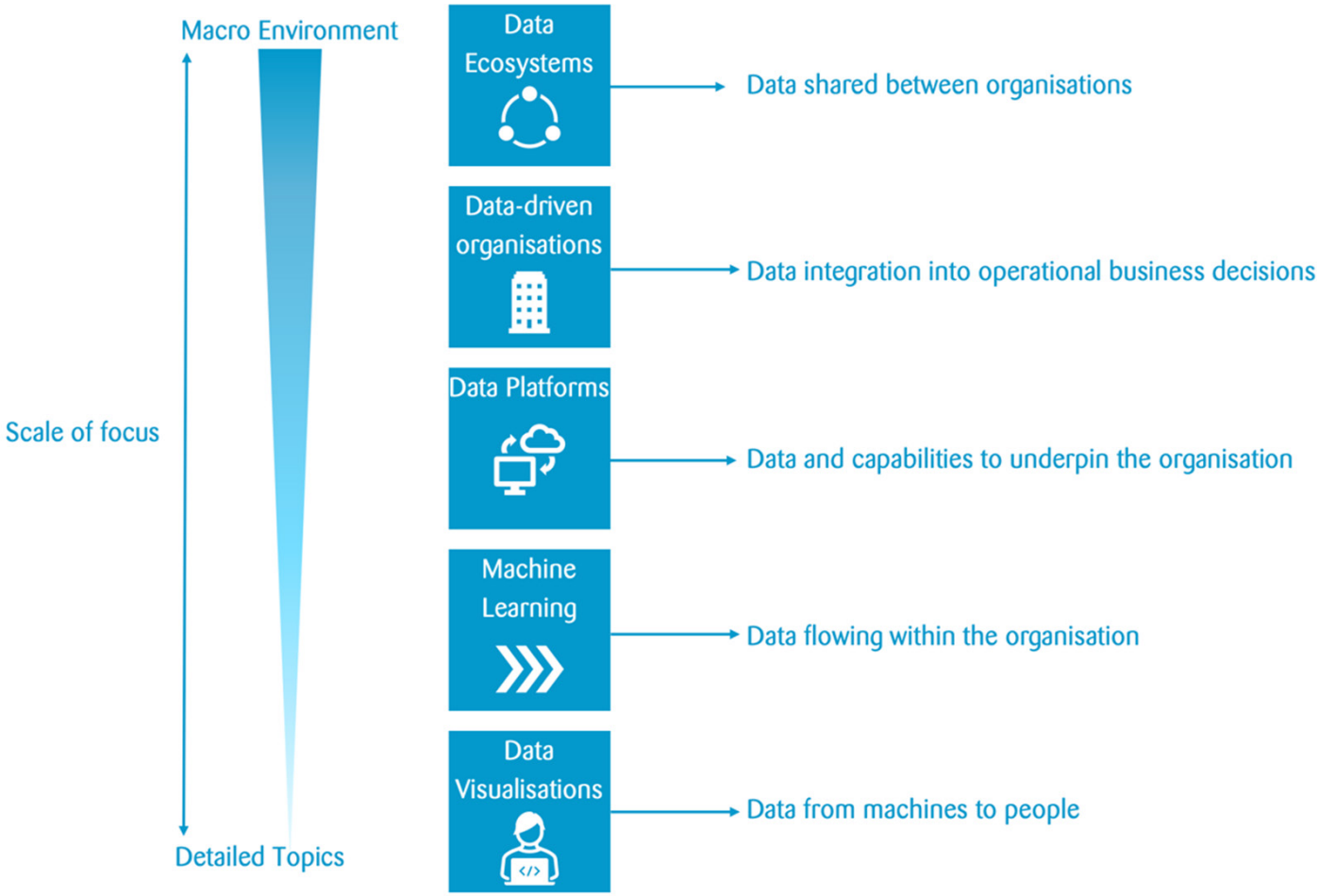
We make the leading edge achievable and affordable. Artificial Intelligence makes it possible to tackle some of the biggest challenges of our time from the climate crisis to global health-care.

Whatever the scale and impact of your challenges, AI solutions and data technologies can solve your toughest problems and unlock better outcomes.

Machine learning technologies such as computer vision, natural language processing, time series methods and reinforcement learning enable you to make better decisions, optimise processes and innovate new products and services.

Transformation Model

Our services are designed to transform your operations at different levels:




Discovery

Discovery

Zuhlke has successfully delivered award winning Discovery phases for Government clients, aligned to guidelines and the Service Standard in the Government Service Manual (GDS).

We collaborate with you to define a new digital product or service. We are user needs led and supported by understanding existing technologies, processes, policies and strategy.

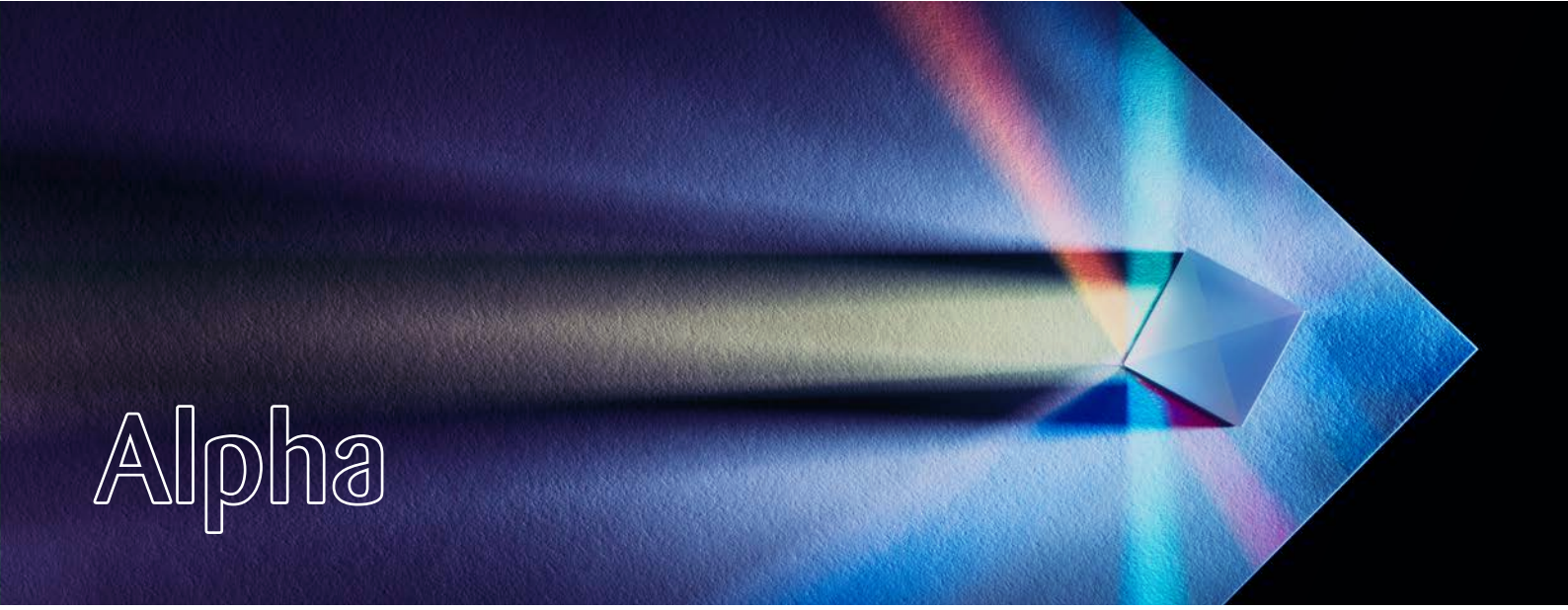
Features

- Structured kick-off to align stakeholders and ways of working
- Open, trusted collaboration with all relevant people and organisations
- Define a service vision and future, to-be, multi-channel blueprint
- User research and prototyping to understand user needs
- Analysis of existing service operations, policies and business processes
- Analysis of existing technology with consideration of how to overcome constraints
- Final deliverable of Alpha definition, with prioritised roadmap and estimates
- Timescale 4 to 8 weeks depending on circumstances

Benefits

- Clear understanding of user needs and value of product or service to them
- Rapid prototyping and feedback to refine and optimise user insights
- Structured approach to identify unknown, unknowns.
- Pragmatic approach to solving impacts, challenges and constraints
- Identification of risks with mitigation
- Identification of opportunities
- Validation of business strategy and exploration of options to proceed
- Trusted to provide recommendations to proceed to Alpha, or halt if business case is not proven

Alpha



Alpha

If Discovery answers the question “should we”, in Alpha we answer the questions “can we?” and “if we can then how?”. We establish viable plans to proceed to Beta and Live.

We are expert at transforming existing legacy systems and business processes. We can also be relied on to prove the way forward for products and services which are strategically vital or complicated.

Features

- Agile iterative approach to prototype development, informed by user research
- Discovery hypotheses tested based on user, business and technical needs
- Prove service viability, establish a culture of continuous value/improvement early
- Service design approach to assure service adoption
- Understand technical feasibility with technical spikes and prototyping
- Assessment of data landscape and integration with data strategy
- Continued validation, refinement of user needs, user experience and usability
- Delivery management focused on risk, dependencies and value
- Revised delivery roadmap and plan for Beta
- GDS Alpha service mock assessment

Benefits

- GDS compliant value-based delivery aligned to business case
- Rapid risk reduction, output of viable Beta plan
- Capable of passing GDS service assessment
- User need led validation of technical needs
- Open and transparent working, steered by value for money/outcomes
- Cost effective engagement and commercial models
- Blended team delivery to enable our customer to grow their own in-house capability efficiently

Beta

Beta

Zuhlke take the best solution conceived during Alpha and start building it for real.

We integrate to existing services and replace those which need to be reformed. We deliver the roadmap iteratively in end-to-end thin slices, looking for opportunities to make functionality useable at an early point to get feedback. This enables us to adapt and improve services during the build phase itself, based on actual usage and implementation experience.

Features

- Rapid iterative development. Incremental working software
- Automate, build, test, deploy and release tailored for cloud
- DevOps and build deployment pipelines for CI/CD
- Uses open-standard, open source and supports assisted digital
- Quality assurance
- Service delivery based on business value, delivered early and often
- Continuous validation of end-user experience, usability and accessibility
- Delivery approach assures risk reduction, dependency management and integration
- Continuous security assessment to assure the growing service is safe
- Service design approach to ensure early and rapid service adoption

Benefits

- Award winning GDS compliant proven delivery approach
- Digital twin included by default
- Ability to scale team, with UK government compliant near-shore lower cost options
- Open transparent working to ensure focus on benefits and outcomes
- Alignment with government standards and GDS Beta service assessment
- Alignment to technical and architectural strategy and target operating model
- Focus on robust infrastructure and long-term cost of ownership
- Improved end-to-end service for service users
- Low risk approach to transforming legacy systems, challenging integrations and dependencies for critical services.

Live

Our approach to managing national scale government digital services that are of critical importance is award winning.

We support, maintain and continuously enhance services to ensure that government services that people rely on remain excellent.

We manage networking, server operating systems, applications and end end-to-end digital services. We manage AWS, Azure, Google Cloud platform on-premise hosted and hybrid cloud services.

Features

- 24/7 monitoring/response IaaS, PaaS, Kubernetes and serverless platforms
- Support across networking, operating systems, applications and end-to-end services
- Cloud hosting, cost optimisation and management
- Cloud design, continuous improvement and deployment of services on demand
- NSCS aligned approach
- Support up to 24/7, including 3rd and 4th line
- Application Development and Management, Service Management, Incident/ Change Management
- AWS and Azure certified

Benefits

- Secure, ITIL aligned managed service
- Scalable, flexible service with tailored cost-effective commercial models
- Ability to draw on deep and wide skills as needed
- Proactive cloud cost optimisation to ease cost management
- Easily scale support up/down with cloud platform consumption
- Rapid, repeatable deployment and operation driven by automation tooling
- Enhanced access to cloud providers through our extensive international relationships
- Securely manage cloud platform monitored 24x7
- Tailored SLAs to meet your service requirements

Serverless Application Development

Serverless application development has evolved to give new ways to make the development process more efficient and enable a team to focus more of their effort on how to achieve a better outcome for users.

A serverless architecture allows developers to focus solely on writing code for their application logic, without having to worry about managing or scaling the underlying cloud infrastructure.

Zuhlke has provided award winning development of serverless applications of critical national importance for UK government.

Benefits

No server management

The cloud provider handles all server management tasks, which means that developers do not need to worry about provisioning, configuring or managing servers.

Pay per use pricing

You do not have to pay for idle capacity. There is no risk over pre-buying too much or too little capacity. You pay for the units of consumption, like throughout or memory and not for whole servers.

Flexible scaling

Applications can handle varying workloads without manual intervention. Applications are scaled automatically or by adjusting capacity toggling the units of consumption.

High availability

Serverless applications have availability built-in. You do not need to separately provision for high and fault tolerant availability. Cloud providers handle redundancy and replication of resources across multiple availability zones.

Cloud Capabilities

Cloud Capabilities

An alphabetical list of our cloud capabilities:

Amazon Web Services

Utilising a comprehensive suite of cloud computing services provided by Amazon.

Amazon Web Services (AWS) is a secure cloud services platform, offering compute power, database storage, content delivery, and other functionality to help businesses scale and grow. It includes a broad set of infrastructure services, such as computing power, storage options, networking, and databases, delivered as a utility: on-demand, available in seconds, with pay-as-you-go pricing.

What we Do

We have comprehensive knowledge and experience across the entire AWS platform.

We architect, optimise, and maintain complex, secure, and highly available systems.

We act as a mentor or consultant on AWS technologies and practices, stay up-to-date with the latest AWS developments, and can innovate cloud solutions.

Cloud Compute Solutions

Utilising cloud-based resources to perform computational tasks and host applications.

Cloud Compute Solutions encompass a variety of services provided by cloud platforms, allowing for scalable, flexible, and efficient computing capabilities. This includes Infrastructure as a Service (IaaS), Platform as a Service (PaaS), Container as a Service (CaaS), Function as a Service (FaaS), and serverless computing. Key components involve the deployment, management, and scaling of applications and services, enabling businesses to leverage the cloud for a wide range of computing needs.

What we Do

We are expert in cloud computing architectures, proficient in a wide range of cloud compute solutions and platforms.

We design, implement, and manage complex, scalable, and highly available cloud environments tailored to specific business needs.

We lead cloud transformation initiatives, advise on best practices, and stay up-to-date with the latest trends and technologies in cloud computing.

Cloud Consulting

Providing expert advice and solutions to organisations for cloud adoption, optimisation, and transformation.

We analyse, recommend, and guide organisations through the process of cloud adoption, migration, optimisation, and ongoing cloud strategy.

Our cloud consultants assess business and technical requirements, identify suitable cloud solutions, and design architectures that meet specific organisational needs.

Our people have deep understanding of cloud platforms, services, and best practices, as well as the ability to communicate effectively with stakeholders and lead strategic planning initiatives.

What we Do

We are expert in cloud computing strategies, capable of leading complex cloud transformation projects.

We have deep knowledge of multiple cloud platforms and services, advanced cloud architectures, and industry-specific solutions.

We provide strategic consultancy on cloud governance, cost optimisation, security, and compliance.

We employ strong analytical and communication skills to align cloud strategies with business objectives and drive innovation.

Cloud Data Storage Solutions

Utilising cloud environments to store, manage, and retrieve data effectively and securely.

We have understanding of and apply the various data storage services offered by cloud providers to address diverse data storage needs.

We provide expertise across different storage types like object storage, file storage, and block storage, and their use cases.

We provide skills that encompasses designing and implementing scalable, durable, and secure data storage solutions that can support applications, backup and recovery, archiving, and disaster recovery strategies.

What we Do

We provide expertise in cloud data storage solutions and design and implement highly available, scalable, and secure storage architectures that meet specific business and regulatory requirements.

We implement data migration strategies, integrate storage solutions with other cloud services, and optimise storage performance and costs.

We lead large-scale data storage projects and provide strategic advice on best practices and emerging storage technologies.

Cloud Disaster Recovery and Business Continuity

Implementing strategies and technologies in the cloud to ensure operational resilience and rapid recovery from disruptions.

We plan, design and implement disaster recovery (DR) and business continuity (BC) strategies using cloud services.

Our service is based around an understanding of the principles of risk assessment, impact analysis, and recovery objectives to maintain business operations during and after a disaster.

Our capabilities cover data backup, replication, failover processes, and recovery testing in cloud environments to ensure minimal downtime and data loss.

What we Do

We provide cloud disaster recovery and business continuity expertise. We architect comprehensive DR and BC solutions that span multiple cloud environments and geographical regions.

We use advanced techniques for data protection, application recovery, and business operations continuity.

We lead DR and BC initiatives, conduct detailed risk assessments, and ensure that recovery strategies meet or exceed business requirements and industry standards.

Cloud Governance & Cost Management

Implementing strategies and tools to manage and optimise cloud resources and expenses.

Our service encompasses the development and application of policies, practices, and tools that ensure effective governance, compliance, and financial management within cloud environments.

Our capability is based on understanding cost structures, implementing governance frameworks, managing cloud spend, optimising resource utilisation, and ensuring that cloud operations align with business objectives and regulatory requirements.

What we Do

We provide cloud governance and cost management, to design and implement comprehensive governance frameworks and cost optimisation strategies across complex cloud environments.

We use advanced tools for financial management, governance, and compliance.

We lead initiatives to significantly reduce costs, ensure organisational alignment with cloud best practices, and advise on policy development and risk management.

Cloud Identity & Access Management (IAM)

Securing cloud services and resources through user identity verification and access control.

Our service involves understanding and applying identity verification, access control, and user privilege management within cloud environments.

Our capability encompasses creating, managing, and enforcing policies that control how individuals and systems can interact with cloud services and resources. This includes knowledge of authentication methods, authorisation protocols, user lifecycle management, and compliance with security standards and regulations.

What we Do

We are expert in cloud IAM, able to architect and manage comprehensive identity and access frameworks in complex cloud environments.

We are proficient in advanced security protocols, compliance requirements, and IAM best practices.

We lead IAM strategy development, conduct security audits, and provide guidance on enhancing cloud security posture.

Cloud Landing Zones

Designing and implementing structured environments within cloud platforms to enable secure and scalable cloud adoption.

This service involves planning and creating cloud landing zones, which are standardised environments within cloud platforms designed to support secure, scalable, and efficient cloud adoption and operations.

Our capability includes configuring foundational services, access controls, network structures, and governance policies to ensure a consistent and compliant cloud environment.

We employ cloud landing zones to help organisations manage multiple applications or workloads in the cloud more effectively, providing a framework for resource organisation, security, compliance, and connectivity.

What we Do

An expert in cloud landing zone strategy and implementation, able to architect complex environments that meet specific organisational needs. Proficient in advanced cloud architecture principles, security and compliance standards, and automation for efficient landing zone management. Can lead large-scale cloud adoption projects, ensuring that the landing zones support a wide range of applications and workloads while maintaining governance, cost-effectiveness, and operational excellence.

Cloud Native Development

Building and deploying scalable applications designed to run in the cloud environment.

We understand and apply the principles and methodologies of cloud native development, which are focused on creating applications specifically designed to take advantage of cloud computing frameworks.

Our approach includes using microservices architecture, containerisation, continuous integration/continuous delivery (CI/CD) pipelines, serverless architectures, and other cloud-centric technologies to build, deploy, and manage applications that are resilient, scalable, and fully integrated with cloud services.

What we Do

We provide expertise in cloud native development, with capability to design sophisticated cloud native applications and to lead development projects.

We use advanced methodologies and technologies for cloud native architectures, such as service meshes, serverless computing, and immutable infrastructure.

We optimise applications for performance, cost, and scalability, and provide strategic guidance on adopting cloud native practices.

Cloud Networking Solutions

Developing network architectures within cloud environments to support scalable, secure, and efficient data flow.

We plan, design, and implement networking solutions within cloud platforms.

We configure virtual networks, subnets, VPNs, gateways, and routing to ensure secure and efficient connectivity among cloud services, between on-premises and cloud environments, and across different cloud platforms.

We optimise network performance, ensuring high availability, and integrating cloud security best practices.

What we Do

We deploy expertise in cloud network architecture and capability to design scalable network infrastructures that meet specific business and security requirements.

We bring deep understanding of hybrid and multi-cloud networking strategies and multi-regional cloud strategies.

We lead network transformation projects, optimise network performance and costs, and ensure compliance with regulatory standards.

We bring knowledge and experience of the latest cloud networking technologies and best practices.

Cloud Security

We ensure the confidentiality, integrity, and availability of data and services in cloud environments.

We provide a capability that understands and applies security measures and best practices to protect data, applications, and infrastructure in cloud computing environments.

Our approach encompasses a broad range of security disciplines including identity and access management (IAM), data encryption, network security, compliance, and threat management.

We design secure cloud architectures, implementing protective measures, and managing security operations to safeguard against threats and vulnerabilities in cloud platforms.

What we Do

We provide expertise in cloud security to design and implementing advanced security architectures for complex cloud environments.

Our approach includes threat modelling, risk management, incident response, to ensure compliance with stringent regulatory standards.

We lead security initiatives, advise on best practices and emerging security technologies, and develop comprehensive security strategies that align with business objectives.

Edge Computing in the Cloud

Integrating edge computing with cloud services to optimise application performance and data processing.

We provide a service to design, implement and manage systems that combine edge computing with cloud computing technologies.

We process data near the source of data generation (the “edge” of the network) rather than relying solely on centralised cloud services.

This approach reduces latency, saves bandwidth, and improves privacy and security.

We provide capability to deploy and manage edge devices, integrate them with cloud platforms, and developing applications that can operate effectively across both environments.

What we Do

We provide expertise in edge-to-cloud architectures, capable of designing systems that seamlessly integrate edge computing devices with cloud services.

We provide capability in advanced topics such as real-time analytics at the edge, machine learning model deployment and automated device lifecycle management.

We lead projects to innovate and optimise edge and cloud integration, ensuring high performance, scalability, and security.

Google Cloud Platform (GCP)

Utilising Google’s suite of public cloud services and resources for computing and hosting.

Google Cloud Platform (GCP) is a collection of cloud services that Google offers, which allows clients to build, deploy, and scale applications, websites, and services using the same infrastructure as Google.

It provides a wide range of services covering compute, storage, networking, big data, machine learning, and the internet of things (IoT), as well as cloud management, security, and developer tools.

What we Do

We provide expertise in the full range of GCP services, with capability to architect complex cloud solutions that are secure, scalable, and highly available.

We are up to date with the latest Google Cloud innovations and best practices and provide strategic guidance and technical leadership on GCP-based projects.

Hybrid Cloud

Integrating and managing a combination of on-premises, private cloud, and public cloud services.

We design, implement, and manage hybrid cloud environments, which combine on-premises infrastructure with private and public cloud services.

Our approach includes understanding the technical and business requirements, data sovereignty issues, network connectivity, interoperability, portability, security, and compliance considerations associated with deploying a hybrid cloud strategy.

What we Do

We provide expertise in hybrid cloud solutions, capable of designing hybrid environments that meet specific organisational needs.

We provide capability in advanced networking, security architectures, and data management strategies across on-premises and cloud platforms.

We lead hybrid cloud initiatives, advise on strategic planning, and ensure seamless operation and governance across diverse IT environments.

IoT in the Cloud

Integrating and managing Internet of Things (IoT) devices and data using cloud services.

We design, implement and manage IoT solutions that leverage cloud computing platforms.

Our approach includes collecting, processing, analysing and acting on data from IoT devices using cloud-based tools and services.

We provide capability to create scalable, secure, and efficient IoT ecosystems, with capabilities for real-time data processing, storage, analytics, and device management facilitated by the cloud.

What we Do

We provide expertise in IoT solutions powered by cloud computing to architect comprehensive IoT ecosystems that leverage advanced cloud capabilities, such as edge computing, artificial intelligence, and machine learning for data analysis.

We develop scalable, secure, and resilient IoT applications that meet business and technical requirements.

We lead IoT in the cloud projects, drive innovation and mentor others in best practices and emerging technologies.

Microsoft Azure

Utilising a comprehensive suite of cloud services provided by Microsoft to build, deploy, and manage applications.

Microsoft Azure is a cloud computing platform and infrastructure created by Microsoft for building, testing, deploying, and managing applications and services through Microsoft-managed data centers.

It provides a range of cloud services, including those for compute, analytics, storage, and networking.

Users can pick and choose from these services to develop and scale new applications, or run existing applications in the public cloud.

What we Do

We provide expertise in Azure to design and implement sophisticated solutions using a wide range of Azure services and technologies.

We deploy capability in advanced areas such as Azure Active Directory, Azure Kubernetes Service, and Azure Synapse Analytics.

We lead cloud transformation projects, provide strategic advice, and stay updated with the latest Azure developments and features.

Migration to the cloud

Transferring digital business operations, data, applications, and services from on-premises infrastructure to the cloud.

We plan, execute and manage the process of moving data, applications, and other business elements from an organisation's existing on-premises infrastructure to a cloud environment.

We provide a service to assess and select what to move to the cloud and choose the right cloud service model (IaaS, PaaS, SaaS), planning the migration to minimize disruption, executing the transfer securely and efficiently, and optimising the new cloud environment for cost, performance, and security.

What we Do

We provide expertise in cloud migration strategies to lead large-scale migration projects.

We use advanced techniques for transferring complex and sensitive data, applications, and workloads to the cloud.

We address compliance, security, and technical challenges, and optimise cloud environments post-migration.

We provide strategic guidance and best practices for successful cloud adoption.

MLOps in Cloud

Implementing machine learning operations (MLOps) practices within cloud environments to streamline the development, deployment, and management of machine learning models.

We provide a service that applies DevOps principles to the lifecycle of machine learning models in cloud environments, enabling automated testing, deployment, and monitoring of models.

Our approach encompasses setting up continuous integration and continuous delivery (CI/CD) pipelines for ML projects, managing data and model versioning, and ensuring scalable and efficient model serving.

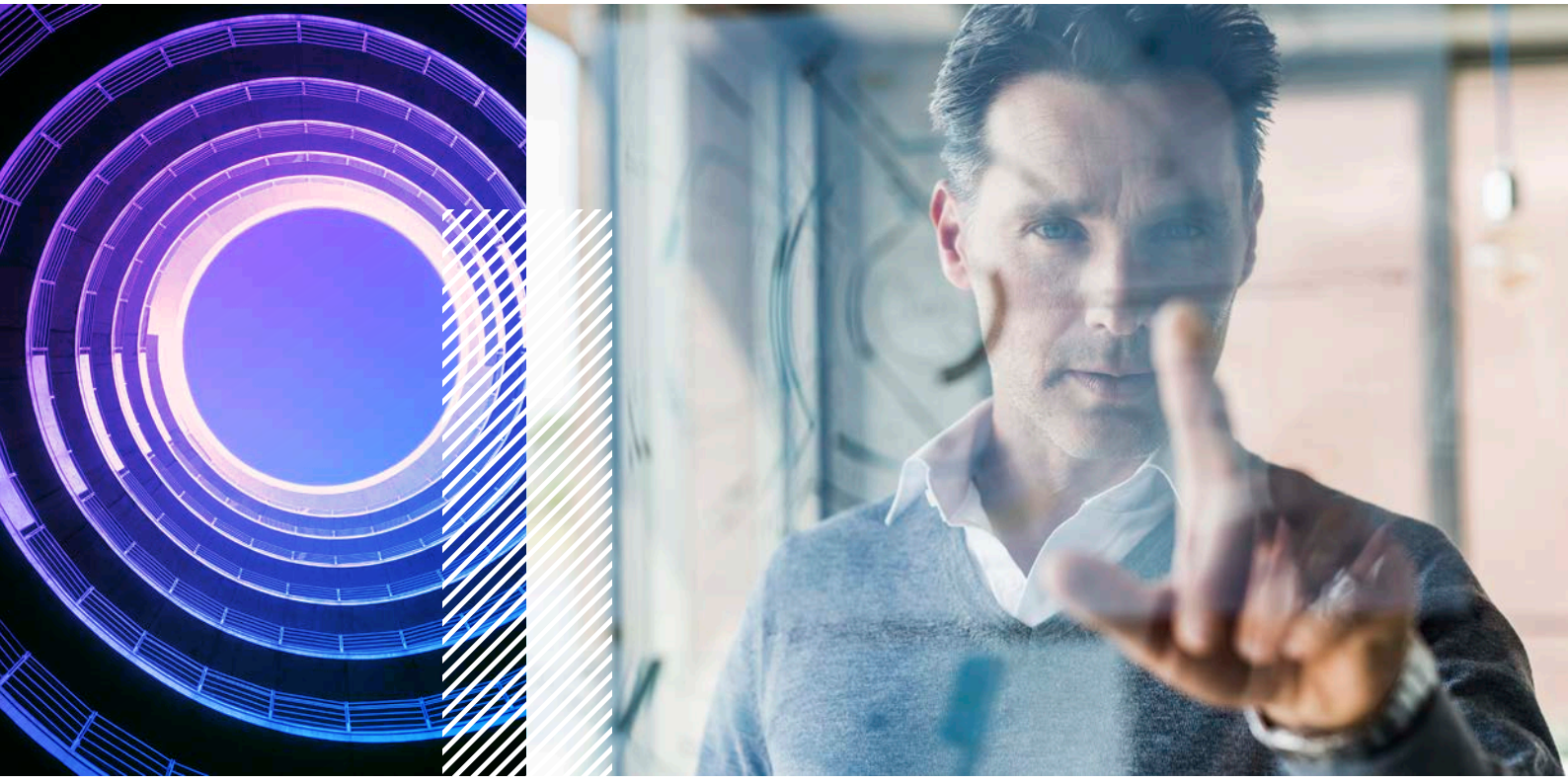
MLOps in the Cloud also includes monitoring model performance, managing resources, and ensuring compliance and security for ML workflows.

What we Do

We provide expertise in MLOps within cloud environments, to architect and implement sophisticated MLOps frameworks that integrate seamlessly with cloud services.

We provide capability that uses advanced techniques for data management, model versioning, automated testing and deployment, and scaling ML models.

We lead MLOps strategy development, mentor and enable others in MLOps best practices, and to drive innovation in ML operations.



Multi-Cloud

Utilising and integrating multiple cloud services from different providers to meet diverse business requirements.

Our service involves the strategic selection, integration, and management of cloud services from various cloud providers to achieve specific business objectives.

Our approach is founded on our knowledge of the strengths and weaknesses of different cloud platforms.

We design solutions that leverage the best features of each, ensuring interoperability, managing data and application portability, and addressing security and compliance across different cloud environments.

What we Do

We provide expertise in multi-cloud environments to architect solutions that seamlessly integrate services from multiple providers.

We deploy capability in advanced networking, security, and data management strategies specific to multi-cloud architectures.

We lead multi-cloud strategy initiatives, provide governance, and ensure business continuity and compliance across cloud platforms.

Private Cloud

Designing, implementing, and managing cloud services on a private network, exclusive to a single organisation.

We apply the principles and technologies for setting up and managing a private cloud infrastructure.

We configure and maintain compute, storage, and networking resources within a private network to ensure the cloud environment is secure, scalable, and compliant with organisational policies and regulations.

Our approach covers aspects such as virtualisation, resource pooling, automation, self-service access, and chargeback models.

What we Do

We provide expertise in private cloud technologies and infrastructure to design and implement sophisticated private cloud solutions tailored to organisational needs.

We use advanced virtualisation techniques, automation, orchestration, and integrate with existing systems and workflows.

We lead private cloud initiatives, develop and enforce governance policies, and ensure operational excellence.

Serverless

Designing and implementing applications and services without managing underlying servers.

We provide a service to apply serverless computing concepts to build and deploy applications and services without the need for server management.

Our approach uses managed services that automatically provision, scale, and manage the infrastructure required to run code, store data, and integrate services. We implement serverless architecture to enable developers to focus on writing application logic while leveraging the cloud provider's services for dynamic scaling, high availability, and event-driven execution.

What we Do

We provide expertise in serverless architecture to design scalable and efficient serverless applications.

We provide capability in advanced aspects of serverless computing, including orchestration, API management, continuous integration and delivery, and cross-service integrations.

We lead serverless projects, mentor and enable others in best practices, and provide strategic advice to maximise the benefits of serverless computing.

Sustainable Cloud Solutions

Designing and implementing cloud solutions with an emphasis on sustainability and environmental impact.

Our service involves strategic planning, development, and management of cloud-based solutions with a focus on minimising environmental impact and promoting sustainability.

Our approach assesses the energy efficiency of cloud services, optimising resource utilization, selecting eco-friendly cloud infrastructure, and employing practices that contribute to reduced carbon emissions and a smaller environmental footprint.

What we Do

We provide expertise in sustainable cloud computing, to lead initiatives to design, implement, and optimise cloud solutions that significantly reduce environmental impact.

We bring deep understanding of energy-efficient technologies, renewable energy sources, and industry best practices for sustainability.

We advise organisations on achieving their sustainability goals through innovative cloud strategies.

Empowering ideas

We believe that innovation and technology are a positive force of change for business and society. We support our clients to envision and create a sustainable future