

Chaos Day facilitation for improving the resilience of cloud-based digital services

A Chaos Day is a well-defined and informative learning process to help teams building and running cloud-based solutions to identify weaknesses and potential failure modes in the overall system. Modelled on chaos engineering ideas, we develop insights and actionable improvements to improve resilience and fault tolerance.

The complexity of cloud-based digital services means they operate on the edge of failure. Chaos Days help teams and organisations manage this risk by exploring the business impact of IT failure modes, and then investing time in people, products and processes to improve system resilience. We work closely with teams to design and run experiments in which faults are deliberately injected into the target system to explore and learn from their impact. Every step of the Chaos Day approach helps identify improvements, whilst the improved understanding of system, team and process behaviour equips participants to deliver more resilient changes in the future.

Our Chaos Day approach has been proven through several iterations of running it with large, public and private sector organisations, each composed of multiple delivery teams owning customer-facing services that support high volumes of transactions. Our service is delivered by a small, multidisciplinary team, collaborating closely with team members and stakeholders to guide them through the preparation, running and review of one or more Chaos Days. Coaching and mentoring are integral aspects of the service to help the team become independent in running future Chaos Days regularly.

The service comprises a planning phase, during which the EE consultants help the team map out the system and identify experiments to run. The Chaos Day itself is then run as a 1-day event during which EE consultants embed themselves in the Chaos Team and together run failure injection experiments and study the outcome. Learnings arise naturally from experiment design and execution. These are further built upon by carefully documented post-mortems that the EE consultants help to facilitate with the Chaos Team and those impacted by the experiments. This activity and the dissemination of the post-mortem notes help spread learnings that improve system resilience and incident response processes.

Features

- A proven approach, validated by public and private sector organisations
- Leads directly to more resilient, maintainable and operable systems

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- Based on sound chaos engineering principles
- Identifies weaknesses throughout all parts of the system
- Can be run with single or multiple teams
- No special tools or technology required
- Run in real environments, pre-production or production
- Fixed price, low cost, delivered through facilitated 1-day workshops
- Includes online learning material, an open-source playbook
- Fun, engaging and informative for participants

Benefits

- Teaches an engineering approach centred around resilience
- Provides clear learnings and identifies actionable improvements
- Improves team knowledge and understanding of system behaviour
- Builds expertise in diagnosing and resolving incidents
- Grows skills in collaboration, communication and analysis during high-stress periods
- Improves incident analysis, management and post-mortem review
- Shares patterns for making services more resilient
- Makes services and dependencies simpler, clearer and easier to understand
- Improves observability so engineers can isolate failures and fix faster
- Improves documentation, eg more informative exception messages and runbook documentation

Pricing

Chaos days are priced on our standard G-Cloud SFIA rate card. For guidance, these are indicative person-days for each activity:

Activity	Person days
Context setting	1-2
Experiment design	1
Chaos day	2
Post-mortem(s)	1

Examples of Chaos Days in action

A day of chaos

We spend a lot of our time thinking about how best to shield our clients from the potential pitfalls of digital business. We ask ourselves, “What’s the worst that could happen?” and work hard to mitigate the risk.

As part of these efforts, we ran a ‘Chaos Day’ with one of our clients, a major Government department that hosts around 50 digital delivery teams, distributed around the UK. These teams design, deliver and support hundreds of microservices that serve online content to the department’s varied customers.

The microservices all run on a single platform, itself run by seven Platform Teams that take responsibility for distinct areas (infrastructure, security and so on). Equal Experts collaborates on the ongoing development of the Platform, with an array of infrastructure engineers, developers, testers and delivery leads spread across these teams.

Inspired by the Netflix’ Chaos Monkey and Amazon’s Game Day, the Platform Teams planned and executed their own Chaos Day to see just how well they and the Platform coped when everything that could go wrong.

Be alert

Why run such an event now? Since moving to Amazon Web Services (AWS), the Platform had benefited from improved stability and performance. We followed AWS’ best practices, using Auto Scaling Groups (ASGs) and multiple Availability Zones (AZs) to improve the availability of the Platform.

Another factor was that the client’s digital service teams were well versed in dealing with traffic peaks. So we felt the time was right to put the resilience of the Platform and its teams to the test and make sure no laurels were being sat on.

Unleash chaos

We aimed to test the impact of a perfect storm of things going wrong during our client’s busiest time of year. The chaos ranged from key engineers were hit by a bus, to half of our AWS infrastructure going down (all simulated: no animals, production systems, or people were harmed in the course of the event!).

The event was fun, frantic and a great learning experience. As with any event of this kind, we learned a few things to consider if running a similar kind of exercise:

Planning

Coordinated chaos sounds like an oxymoron, but to get the most from our Chaos Day, some planning was required. To keep the precise nature of our chaos a surprise for the teams facing it, our planning session was split as follows:

- An initial open session, to define the mechanics of Chaos Day – such as which environment would be used, who would participate, which Slack channels to use, and what was expected from the Platform and digital service teams.
- A second session, limited to our Agents of Chaos. We chose highly experienced, knowledgeable members from each platform team to fill these roles ie. the people you really wouldn't want to be hit by a bus (but that wouldn't really happen would it?)

Execution

We ran the game day on our Staging environment, while running peak load tests in the background. The Chaos team was kept separate from Platform Teams and injected chaos in secret throughout the day. The Platform Teams treated issues as though they were real Production ones.

Over twenty chaotic disruptions were injected across the day, including failures to microservices, instance types, deployment tools, team members (i.e. making them unavailable / hit by a pretend bus), and availability zones.

The Platform Teams put up a valiant fight against the onslaught – especially as real Production issues occurred on the same day (with a certain sense of inevitability).

Learnings

We followed up with a retrospective to identify what went well, what we needed to address and how we'd improve future Chaos Days. The improvements we identified included:

- Run it more regularly (at least quarterly);
- Run it further ahead of the next annual peak;
- Widen the scope of the teams we involve (e.g. we have an API team, who weren't included this time).
- (Stretch goal) Run it in Production!

Even so, the day was a real success. It provided tangible confirmation that the platform is performant and resilient, and that the team is able to cope with a wide range of failures that might occur.

Bugs are inevitable in any complex system, though, and the day would have been a failure if none had been found, so it was helpful that 22 issues were identified as a result of the exercise.

Equal Experts engineer chaos at John Lewis & Partners

Equal Experts has been working with John Lewis & Partners since 2018, to help them improve their ability to deliver and operate online retail services. This includes replacing existing eCommerce applications with cloud-based microservices running on the John Lewis & Partners Digital Platform (JLDP). This bespoke platform-as-a-service enables product teams to rapidly build and run services, using Continuous Delivery and Operability practices, including “You Build It, You Run It”.

We recently partnered with John Lewis & Partners to run their inaugural Chaos Day. We were delighted to share our expertise. The John Lewis & Partners engineers gained valuable learnings about how revenue-impacting failures could occur, and how best to mitigate them. They also learned the requisite skills and knowledge to run their own Chaos Days independently.

Organised chaos

John Lewis & Partners has 25 product teams building 40 services on their platform, which is built and run by two platform teams. This has created around 100 microservices, internal and external components, and downstream dependencies.

At Equal Experts, our experience of Chaos Days is to start small and then iterate. Rather than explore the impact of chaos on all teams and services, our first Chaos Day at John Lewis & Partners had two teams participating: one platform and one product team. A test environment was selected as the target for all experiments. To forewarn the organisation of any unintentional impact, and whet appetites for future Chaos Days, we preceded Chaos Day 1 with a presentation to John Lewis & Partners IT personnel on our approach.

Experiment selection and design

Two weeks before Chaos Day, we met with the most experienced members of the platform team, who would become the agents of chaos. The people in this role design and execute the experiments, which the rest of their team detects and responds to, as if they were real

production incidents. We intentionally asked for the most experienced platform engineers in order to test response skills liquidity within the team.

We gathered around a whiteboard, and one of the engineers sketched out their platform architecture. The group then jointly brainstormed possible experiments, considering:

- What failure modes would we learn about, e.g. loss of connectivity, an instance being terminated or network slowdown
- What impact would we expect, e.g. impact on customer transactions
- What response would we expect, e.g. the service auto-heals, an alert is fired, or nobody notices!
- How would normal service be resumed, e.g. if the resolution is unsuccessful, how would the injected fault be rolled back?
- If this experiment were to run in isolation, e.g. would a monitoring fault limit learning from other experiments?

The agents of chaos came up with 40 ideas, which we reviewed and whittled down to 10. We did this based on risk and impact to John Lewis & Partners, i.e. which failures were most likely to happen and damage the business. Two weeks were then spent developing and testing the code and configuration changes for fault injection ahead of the Chaos Day itself. The agents of chaos had their own private Slack channel to aid collaboration without revealing to other team members what havoc was soon to be unleashed.

An example of something that was developed in this period was code to randomly terminate Google Kubernetes Engine (GKE) pods. The platform runs microservices in GKE pods, which don't have a guaranteed lifetime. The code developed was then used in a Chaos Day experiment to learn more about how microservices respond to pod termination.

Chaos execution

On the day itself at John Lewis & Partners, the agents of chaos locked themselves away in a meeting room, with plenty of snacks. They worked their way through their Trello board of chaos experiments. We monitored each experiment closely to analyse the impact and team response.

In one experiment, we simulated a Google Cloud SQL failure by stopping a database instance without warning. The owning team received alerts from the platform and reacted promptly, but they took longer than expected to diagnose and resolve the failure. There were some useful learnings about the owning team's ability to resolve issues themselves without platform team assistance.

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In another experiment, we reduced some outbound proxy timeout settings. We wanted to learn how well services handled failing requests to external dependencies. Some failures were detected by teams and responded to, but other failures went unnoticed. The agents of chaos had to provide a tip-off before the owning team became aware of a remaining problem. Some useful learnings on awareness, ownership and alerting came out of this.

Chaos reviews

As John Allspaw puts it: “People are the adaptable element of complex systems”

After the Chaos Day, we held a review with all the people impacted by and involved in the chaos experiments. First, we established a joint timeline of events. Then we all shared what we saw, thought, did, and didn't do in response to the chaos. During this process, various improvements were identified and added to the appropriate team's backlog. These included:

- Runbook changes to improve the diagnosis of uncommon HTTP status codes.
- Alerting on database issues to enable a faster resolution time.
- Access permission changes to enable teams to self-serve on Cloud SQL issues.

The Chaos Day review was published using a similar format to a standard post-incident review and hosted on an internal documentation site. Now, anyone working at John Lewis & Partners can learn what happened and hopefully be inspired to run their own Chaos Day.

We also presented the key learnings from the Chaos Day at a monthly internal community meeting, where all the John Lewis & Partners delivery teams socialise over pizza to learn what's new.

Summary

It was great fun, and really rewarding to help John Lewis & Partners run their first Chaos Day. The John Lewis & Partners engineers have created some valuable learnings and developed new skills around improving resilience and running Chaos Days. The organisation has also developed a greater interest in Chaos Engineering, and more teams are keen to get involved. Plans are underway for a second, wider Chaos Day, which will involve more product and platform teams.

For more information on the work with one public sector client, see this presentation by one of our consultants - [Running Chaos Days on large platforms even in today's Remote-First world](#).

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Services

We have four core UK-based teams that provide expertise and advice to the organisation, our clients and our partners:

Data and AI

The Data and AI service helps clients make better use of data and create powerful AI solutions that improve and transform any business. We use our deep expertise in data engineering to improve the quality of data that flows through the organisation, providing better insights into customers and operations. Applying our expertise in MLOps, Generative AI, AI in the SDLC and algorithms, we help upskill client teams, automate key services and create new ones.

Design and Product

The Design and Product service helps clients increase adoption and user satisfaction by designing exceptional digital products and services. We use our expertise in user-centred design and product management to discover and solve the most valuable problems, aligned to a client's digital strategy. We help to create delightful customer experiences that deliver real business value, increased user engagement, better brand reputation and additional revenue.

Technology Strategy

Our Technical Strategy service helps teams to confidently navigate the technology landscape and make decisions that will sustain long-term value. Our expertise covers all aspects of technology strategy, including architectural choices, operating model changes and the adoption of emerging technologies. Using our extensive industry and technology experience, we help to plan the practical steps clients need to be ready for the future.

Modernisation and Platforms

Our Modernisation and Platforms service helps to accelerate time-to-value and reduce total cost of ownership, while scaling digital products and systems. Using modern engineering practices, we help to build and run cloud-native services and improve heritage systems. We bring deep expertise in cloud architectures, secure delivery, "you build it, you run it", and platform engineering on AWS, Azure and GCP clouds.

Team

Our core culture and business model prioritise providing value and doing what is best for all our stakeholders, particularly our clients, rather than maximising short-term profits and shareholder returns. Our founders sold the business to an Employee-Owned Trust (EOT) in May 2024 to secure the long-term future of our collaborative approach, highlighting this commitment. The EOT trustees include the founders and representatives of our employees, Associates and clients, ensuring the interests of all stakeholders are considered and balanced in our operations.

Equal Experts is a worldwide network of technology experts who are dedicated to driving innovation. We have Business Units in the UK (London and Manchester), USA, South Africa, Germany, the Netherlands, Australia and India. Our resourcing model is based on a core of permanent senior consultants and a supply chain of 4,000+ carefully selected, expert, independent SME consultants - our Associate network. On a typical engagement, we pass ~£2 in every £3 of our contract income directly to this network, creating opportunities for entrepreneurship and helping new SMEs to grow.

90% of our consultants have more than 12 years of experience (average more than 18 years) in the development, delivery, operation and maintenance of digital services using agile methods. Many have significantly more and, in some cases, are global influencers, authors and presenters. Their maturity and pragmatism mean they are highly collaborative, happy to transfer knowledge and keen to help clients build internal capability.

We have grown organically, mostly through personal referrals, prioritising quality, experience and cultural fit above all else. After a rigorous selection process, experts are added to our network, whether we need them immediately or in the future.

We select the most suitable people for any contract role from this large pool, not just from a bench of off-charge employees. Our model is resilient and efficient; we form small expert teams, reducing cost and risk for our clients, while achieving outcomes faster than less experienced teams. Our experts train and upskill the whole supply chain, including client staff and those of other suppliers. We have delivered many public and private sector systems (e.g., for HMRC, HMPO, Defra, DWP and MoJ), including CNI, over the past 17+ years using this model. Our approach is data-driven, user-focused and sustainable, allowing us to deliver results quickly and efficiently, using small teams of real experts.

Our standard working model for teams is hybrid remote/on-site, with a core generally based close to client offices, minimising travel costs and environmental impact. This

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ensures they can be on-site for workshops, meetings and onboarding activities, and can work collaboratively with client team members, stakeholders and other suppliers. In the words of one client, *“your consultants truly leave their Equal Experts badges at the door”*.

Our focus on senior talent means that all our consultants have the skills and experience required to thrive in dynamic, challenging client environments. It means we can focus on work that adds real value, rather than micro-managing more junior consultants. Our non-hierarchical structure also allows us to operate with lower overheads. For our teams, this creates a mature, pragmatic and innovative working environment, where they can implement the best solutions of their already distinguished careers. And for our clients, it translates to better services, delivered faster and at lower overall cost. We were ranked 2nd in Glassdoor’s UK Best Places to Work 2025, up from 4th in 2024, and 15th in Newsweek’s Most Loved Workplaces 2022.

For more information and case studies, please visit <https://www.equalexperts.com/> or contact us at solutions@equalexperts.com.

Roles

Collectively, our consultants have the multi-disciplinary experience and expertise needed for successful transformation to cloud-first delivery, live service maintenance and new operating models. Our network gives us fast and flexible access to the DDaT skills our clients need. We have specialists in all areas required for digital success, including:

- Delivery managers
- Change managers
- Product managers
- Engagement managers
- Strategic advisors
- Security specialists
- Data scientists
- Data engineers
- Data architects
- Technical leads
- Technical architects
- DevOps consultants
- Developers
- Testers
- Business and performance analysts
- Accessibility experts

- Service designers
- User experience designers
- Content designers
- User researchers

When a client needs specialists or niche skills, we can rapidly and confidently engage with other organisations in our established ecosystem of proven partners. EE interviews each partner consultant to ensure a high level of knowledge and cultural fit before we assign them to clients.

Public sector clients

We're proud to be one of the top suppliers to the public sector via the G-Cloud and DOS frameworks. Our services are also available through RM6190 Technology Services 4, RM6195 Big Data and Analytics (the only supplier on all 6 capabilities), RM6335 DALAS (Lot 2a) and DPS Frameworks including RM3764 Cyber Security 3, RM6173 Automation Marketplace, RM6094 Spark, RM6200 Artificial Intelligence and RM6235 Space-Enabled and Geospatial Services.

The Equal Experts approach has a successful track record of delivery across the private and public sectors. Some recent award-winning deliveries include:

- HMPO's passport renewal service,
 - ranked #1 public service with a score of 81.2/100 in the July 2025 ICS customer satisfaction survey.
 - Winner of Public Sector Project of the Year and Development Team of the Year at the UK IT Industry Awards 2024.
- HMRC's Data Platform Services Core Engineering Platform, winners of Computing DevOps Excellence Awards 2025 Best Implementation of DevSecOps.
- John Lewis & Partners Best Implementation of DevSecOps at the DevOps Excellence Industry Awards 2023

We know what it takes to implement and support cloud-based applications within complex public sector organisations and across large multi-vendor programmes. We understand and adhere to the GDS digital service standards for delivering solutions and handling and securing data within critical national systems. We have experience in consulting, deploying and supporting security-accredited solutions and have passed numerous GDS assessments. Many of our consultants hold current SC clearance (some have DV) as they have previously worked with public sector clients.

Equal Experts has helped implement digital services to government digital service standards (including passing many formal GDS service standard assessments) for:

- His Majesty's Revenue and Customs (HMRC)
- Department for Environment, Food & Rural Affairs (DEFRA)
- The Home Office and His Majesty's Passport Office (HMPO)
- Ministry of Justice (MoJ), His Majesty's Prisons and Probations Service (HMPPS) and His Majesty's Courts and Tribunals Service (HMCTS)
- Department for Work and Pensions (DWP)
- Department of Health and Social Care (DHSC)
- Department for Business, Energy & Industrial Strategy (BEIS)
- Border Force
- Department for Education (DfE)
- Registers of Scotland
- Office for National Statistics (ONS)
- Intellectual Property Office (IPO)
- States of Guernsey
- Cabinet Office
- Government Digital Service (GDS)
- Valuation Office Agency (VOA)

Planning

To build detailed knowledge of the context and domain for any project, an initial phase of planning, definition and knowledge transfer will generally take place at the start of an engagement.

We have found that this takes place most effectively through a short time-bound inception to develop a shared understanding and agreement on vision and objectives across a broad stakeholder group. This covers the business, technical and user aspects of the project and the outputs may include user personas and scenarios, key user journeys, as-is and desired business processes, a prioritised backlog of user stories, technical constraints and vision, and a release roadmap and plan. The techniques and principles applied are also used on an ongoing basis throughout the course of delivery, to ensure the solutions developed are fit for purpose and meet real and changing user needs.

This initial inception phase can be contracted separately if required.

Setup and migration

In addition to ongoing development and operation of live cloud-based services, we can help with the initial set up and migration as part of a transition to cloud. We look for opportunities to automate processes (for example, test, deploy) that will yield real benefit and high ROI. Our approach helps to address integration, dependencies and risk early. We capture actionable metrics to measure and manage progress towards meeting the agreed success criteria and KPIs identified for building and operating the service. The highly collaborative, interactive processes we follow foster continual learning and improvement of services. They help to establish and evolve the overarching service design, management processes and the team capabilities.

We can ensure projects hit the ground running through our experience in designing, configuring and setup of many continuous delivery and automated cloud deployment environments. These techniques allow software to be repeatably and reliably deployed and tested through each stage into production on the cloud. We have substantial experience when it comes to the tooling required for continuous delivery and automated software deployment, greatly facilitating the software set up, build and migration process, which increases programme productivity and reduces project risk and cost.

Quality assurance and performance testing

We hold ISO9001:2015 Quality Management System certification. All our consultants have extensive experience in both manual and automated testing, including performance testing, continuous integration and delivery into production environments at scale. With all clients, we actively encourage the adoption of robust and meaningful automated test coverage, delivery and test techniques, to reduce risk and safely increase delivery velocity. We are happy to work with a client's existing quality management system (QMS) where appropriate.

Security services

We hold ISO27001:2022 Information Security Management System, Cyber Essentials and Cyber Essentials Plus certifications.

We can provide the following security services if required:

- Security strategy
- Security risk management
- Security design
- Security incident management

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- Security audit services

Training

For every client, we aim to transfer and embed knowledge of technology and process innovation. Our consultants have the expertise, skills and enthusiasm to help transfer knowledge of new technologies and ways of working to our clients' team members, upskilling staff and helping to build their internal delivery competence and capability. This improves internal competencies and builds long-term sustainable capability, as clients migrate to modern cloud-based products and services. We tailor particular practices to address specific organisational constraints – we recognise that every organisation is different and there is no “one size to fit all”.

We tend not to offer classroom-based training as our consultants are happy to share their knowledge throughout a project. They take responsibility for helping individual client team members adopt new practices and ways of working.

Ongoing support

Our operational philosophy is “you build it, you run it”. The delivery team responsible for the development of a live service usually also takes responsibility for its operation. We have found that development teams which support their own products are motivated to deliver higher quality, more robust and maintainable code.

When a service is live with real users, we expect the delivery team to provide 2nd line (infrastructure, in conjunction with hosting support agreements) and 3rd line (applications) support during business hours. We can agree on an appropriate model for 24/7 on-call coverage if required - see our G-Cloud On-Call Support offering for details. We typically establish an on-call rota with delivery team members assigned weekly.

Our experience is that digital services are never really finished and that it is important to retain some level of investment to allow the addition of new features as the needs of customers (both internal and external) change. Our design of the end-to-end service can include establishing Service Level Agreements for ongoing service evolution and operational support (ensuring agreed levels of service availability).

User support

We provide an engagement manager on all G-Cloud engagements with responsibility for ensuring clients objectives are met and for addressing any issues with service delivery. Our engagement managers act as an escalation point and can be reached via phone or

email to respond to issues beyond the control of the team providing the service. Engagement management is included within our service pricing.

When a service is live with real users, we expect the delivery team to provide 2nd-line (infrastructure, in conjunction with hosting support agreements) and 3rd-line (applications) support during business hours, within the agreed service cost. We can agree on an appropriate model for 24/7 on-call coverage if required - see our G-Cloud On-Call Support offering for details. We typically establish an on-call rota with delivery team members assigned weekly.

Social Value, the Environment and CSR

Our values and ethos extend beyond our organisation and people, and we take our corporate social responsibility seriously. We are committed to working with all our clients to share our knowledge and learnings, and contribute to their CSR goals, e.g. we will facilitate discussions with their designated digital sustainability leads, to collaborate on environmental policy goals, discuss current practices for greening software and agree enhancements aligned with industry policies, like the Greening Government Strategy.

We willingly collaborate closely with our clients, other suppliers, competitors and the wider ecosystem to discuss, share and test innovative environmental and social value ideas and initiatives, to improve sustainable practices and create added value throughout any contract.

We will follow our proven social value methodologies for any G-Cloud 15 contract, aligned with the UK's Public Services (Social Value) Act 2012, PPN002 (PA2023) and the Social Value Model, and the UN Sustainable Development Goals, to actively create additional opportunities to develop, measure and improve social value for our client and their entire supply chain. In a recent [Government Transformation Magazine interview](#), Mike Potter, ex-UK Gov CDO recalled his HMRC experience partnering with us for transformative results. *"We didn't just buy their capability - we bought their culture,"* he said. *"Cultural alignment is key. When you pick partners who share your values and ways of working, you find areas of mutual advantage."*

We review, update and publish our Carbon Reduction Plan, Modern Slavery and EDI statements annually, are a Disability Confident employer, a member of the Business Disability Forum and a participant in the Government Digital Sustainability Alliance (GDSA). Our commitment to providing a fulfilling workplace for everyone is reflected in

Glassdoor's Best Places to Work in the UK, voted for by our staff, ranking us 4th in 2024, 2nd in 2025.

We complete the [EcoVadis](#) assessment tool, which evaluates performance across four dimensions: Environment, Labour and Human Rights, Ethics and Sustainable Procurement. We complete the assessment, create an improvement plan and review and update it annually. We willingly share the results with clients and use their feedback and learnings to influence our improvement plans.

Examples of other social value initiatives for clients include:

HMRC Joint Value Initiatives: we work closely with HMRC to organise and fund JVs, e.g.:

- [School visits](#) to encourage children to pursue STEM careers & find future data engineers,
- Data Engineering Academy - supporting HMRC to onboard and upskill new starters and develop their technical expertise through bootcamps and placements on EE projects,
- Hosting the [Women in Tech & Leadership Conference 2025](#) in collaboration with HMRC's Women in Tech Network.

Hace: We co-funded a [project](#) to develop an AI-based data analysis tool to objectively quantify a company's Child Labour performance.

Médecins Sans Frontières (MSF): We staffed a pro bono project to build the [Malaria Anticipation Project \(MAP\)](#), deployed in Lankien, South Sudan and being planned for Anka, Nigeria.

John Lewis: We shifted to lower-footprint GCP cloud data centres in Switzerland to meet JL's environmental sustainability goals.

Government: We are an active member of the Government Digital Sustainability Alliance ([See more details here](#)) and are actively working with Defra to implement exemplar projects such as:

- Implementing Green coding Standards ([See Version 1 Github](#)) in our teams working with Defra to help support learnings for wider Government.
- Working with Defra and our partner [Heata](#) to develop an innovative decentralised cloud compute project. The aim is to reduce the carbon footprint of cloud workloads by 80% and heat farmers' domestic water tanks to save them money.