Triad

G-Cloud 14 Service Definition

Digital Cloud Service Development and Delivery Lot 3 Cloud Support

07/05/2024

Contents

1 Introduction

1.1 Triad Company Overview

For over 30 years, the UK public sector has been trusting Triad to define, design and deliver digital solutions. From the start of the “as a Service” model, we have encouraged and supported deployment to the cloud. Our customers include the Cabinet Office, Ofgem, the Ministry of Justice (MOJ), the Home Office, the Department for Business, Energy and Industrial Strategy (BEIS) and the Department for Transport (DfT).

Early adopters of Agile, Triad has extensive experience of the Government Digital Services (GDS)’s Service Design Manual, Design Principles and Digital Service Standard. We consistently deliver cloud solutions on time and within budget, demonstrating excellent user engagement, high quality and speed of delivery.

1.2 Value Proposition

Delivering informative, intuitive, accessible, performant public services on a tight budget is probably your aim. Whether citizen-facing or back-office, your digital services must be produced efficiently and effectively. This takes experience of operating in an environment governed by strategy and policy and subject to continuous scrutiny, as well as expertise in relevant methods and technologies.

Triad consistently delivers cloud-based solutions on time and to budget that:

- Reduce costs
- Increase productivity
- Improve adoption

We achieve this by taking a user-centric approach and applying lean and innovative thinking. This results in attractive, useable services with optimised processes. We design efficient architectures that lower costs and we proactively seek opportunities for reuse.

Continuous improvement underlies everything we do, so the journey to excellence keeps going for as long as you engage us.

Our customers tell us they value our high integrity, accountability and openness. They highlight that we “go the extra mile”, working in their best interest and being their critical friend. It is always our intention to leave you a solid foundation that extends and endures beyond simply completing the contract.

1.3 What the Service Provides

With this G-Cloud service, you can engage Triad to develop and deliver cloud-based solutions. We can support you in any of the following scenarios:

- Building a new digital service from scratch
- Updating an existing service

- Replacement and decommissioning of legacy systems
- Transitioning an existing service from your on-premises systems to the cloud
- Assessing automation feasibility (including Virtual Workforce Assessments (VWAs) to identify best return on investment) and running proofs of concept
- Establishing, upskilling and running capability practices and Centres of Excellence

You may want us to help you with some or all of the work at any or all of the phases of the project. Whatever your cloud development and delivery needs, we will support you with planning, design, delivery and deployment.

Our consultants and teams can design, develop and deliver a broad range of digital services including process and workflow automation, data analysis and reporting and websites. We have a proven track record of delivering digital cloud services using open source software and solutions. We have particular specialisms in Microsoft-based solutions, Intelligent Automation, Blockchain and Geographic Information Systems (see Section 3 for details).

1.4 Overview of the G-Cloud Service

As shown in Figure 1 below, you can buy any or all of the Agile phases (green arrows) of a project – Discovery, Alpha, Beta and/or Live. For each Agile phase that you buy, we will agree with you the appropriate resources, methods, techniques and tools selected from the white service boxes.

If you are running the development phase yourself and you need specific support, you can buy that support on a “pick and mix” basis from the white service boxes. Each service in the diagram is also available as a service in its own right on G-Cloud and are listed below for completeness.

- Agile Project Delivery: Full Digital Service Development and Continuous Improvement
- Cloud Programme Management and Project Management Services
- Cloud Service Delivery and Release Management
- Business Analysis and Digital Solution Design Service
- Cloud User Research (UR) and User Experience (UX) Services
- Digital Cloud Service Development and Project Delivery
- Testing and Quality Assurance of Cloud Services
- Intelligent Automation and Robotic Process Automation (RPA) in the Cloud
- Blockchain and Innovation Technologies for the Cloud
- Geospatial Cloud Services
- Microsoft Cloud Consulting, Delivery and Support Service

- Cloud Delivery Partner Service
- Cloud Artificial Service
- Cloud Cyber Service
- Knowledge and Information Management Cloud Service
- SharePoint Cloud Service
- Dynamics365 Cloud Service
- Power Platform Cloud Service
- Cloud Service for Policing: SC, DV, STRAP
- Cloud Data Service
- Cloud Data Science, BI and Analytics Service
- Cloud Migration Service
- Cloud Discovery Service
- Legacy Modernisation Service
- Ruby Cloud Migration Service

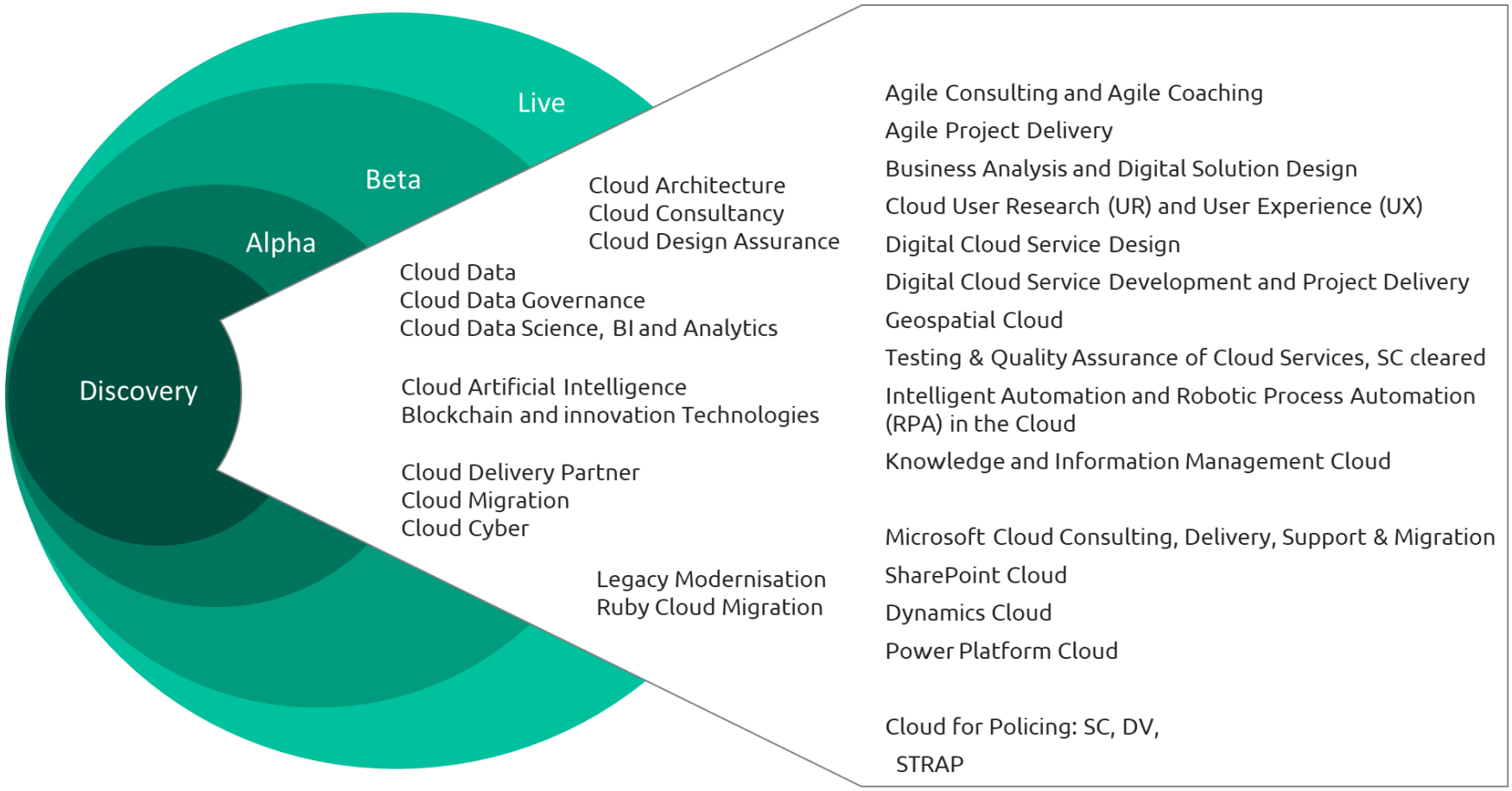

Figure 1: A comprehensive portfolio to develop and deliver digital cloud services
Bringing you over 30 years' digital experience in the public sector with Agile and GDS expertise

2 The Service in Detail

2.1 Delivering the Agile phases

To support your digital cloud service project, you can buy any or all of the Agile phases of a project – Discovery, Alpha, Beta and/or Live.

Discovery

Triad Discoveries:

- Cabinet Office
- Ministry of Justice
- Electoral Commission
- Department for Communities and Local Government (now MHCLG)
- Department for Transport

Discovery will uncover and understand the problem that your new digital cloud service will solve.

Business analysts will understand the processes, the organisation and the government legislation and/or policy being implemented. They will consider the constraints and improvement opportunities this information presents.

User Researchers will learn about the users of the proposed service, what their needs are and what they are trying to achieve. User Experience (UX) Designers will start to sketch out how the service might look and feel.

Technical Architects will understand the technical landscape including relevant strategies, policies and constraints.

If we are running the whole Discovery, we will include Project Management services so everything runs smoothly.

The Discovery report will detail all findings, conclusions and recommendations, and feed into the business case for continuation.

Alpha

Triad Alphas:

- Ministry of Justice
- Department for Transport
- Department for Business, Energy and Industrial Strategy
- Cabinet Office
- Home Office

Alpha provides the opportunity to try out different solutions to the problems identified during Discovery.

Business Analysts, UX Designers and Technical Architects will provide guidance to developers and testers who will build prototypes, test different ideas and explore different approaches.

These prototypes and approaches will test the riskiest assumptions made during Discovery and the most challenging elements of the service. The code built may be complex and possibly not yet production quality; as a result, it is natural that some will be dispensable.

By the end of Alpha, you will be able to decide which ideas and approaches are suitable to take forward into Beta.

If a GDS assessment is required at the end of Alpha, we can support you through this process.

Beta

Triad Betas:

Ministry of Justice

Department for Transport

Cabinet Office

Ofgem

Department for Environment, Food & Rural Affairs

Beta is where you will start to implement the ideas and approaches chosen from Alpha. We will create an Agile development team to build the service.

A typical team will include Business Analysts; front end, back end and full stack Developers; Testers, including specialist skills such as accessibility testing; DevOps for continuous integration and delivery (CI/CD); and discrete skills such as Delivery Management and Release Management.

Early in Beta, the team will start to plan for transition to Live by considering how the service will integrate with or replace existing services. To support this, we will run a Private Beta with a limited number of users who will provide valuable feedback so the team can learn and iterate improvements and further functionality before moving to Public Beta.

As the service matures and is ready to run at scale, you will need to conduct another GDS assessment before approval to move to Public Beta.

We have the experience of passing GDS assessments to support you through both the Public and Live assessment processes.

Live

Triad Live Services:

Ministry of Justice

Department for Transport

Ofgem

Cabinet Office

During the Live phase, you may want us to support the service and continue to iterate and make improvements. We will address constraints identified at Beta and develop the service by adding new functionality to meet new requirements and transitioning or integrating existing requirements.

We will adjust the team size and skills to suit the agreed scope of work.

Typically, we will implement a DevOps approach to support Live services, which will cover one or more of seven components: application maintenance; automation tooling and provisioning; operational support; security operations; cloud architecture and assurance; database administration; continuous improvement to enhance performance.

2.2 Delivering the G-Cloud Services (Resources, Methods, Techniques and Tools)

Having decided if you wish to buy a specific Agile phase or an end-to-end Agile project, we will put together a suitable multi-disciplinary team and an appropriate set of methods, techniques and tools. We will select these from the white service boxes shown in the diagram below.

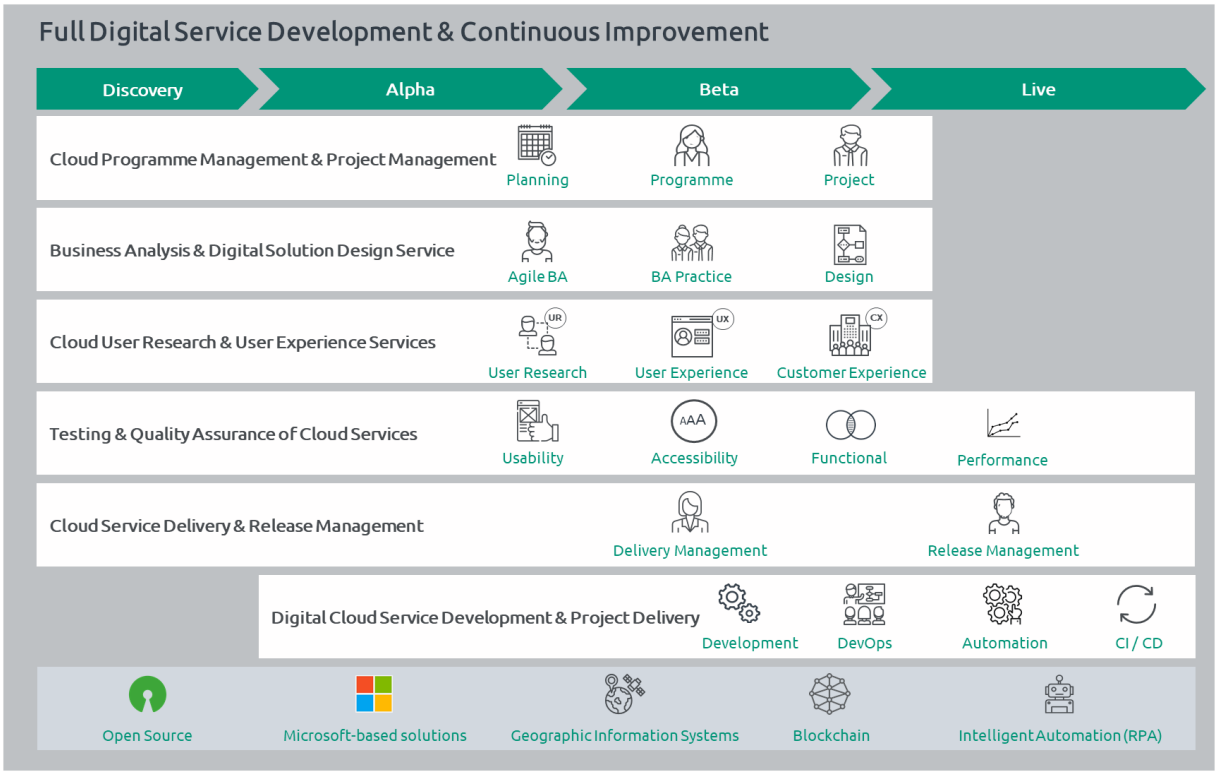

Figure 2: A comprehensive portfolio to develop and deliver digital cloud services
We will match the resources, methods, techniques and tools to your chosen project

As mentioned above, if you are running the phase yourself and you need specific support, you can buy that support on a "pick and mix" basis from the white service boxes. Each white service box is also available as a service in its own right on G-Cloud.

Below, we explain in more detail:

- **Why** you might want to buy each service
- **What** the service offers
- **Who** will be in our team
- **How** we will deliver the service
- **Where and When** we can deliver the service

2.2.1 Cloud Programme Management and Project Management Services

Why

- To give you confidence to deliver your digital cloud services to time, cost and quality
- To support you through GDS assessments
- To reduce your project risks
- Our teams have managed projects for the MOJ, DfT and Ofgem and passed over 15 GDS assessments

What

- Agile programme and project management for end-to-end Agile projects or discrete Agile phases (Discovery, Alpha, Beta, Live)
- Intelligent use of traditional techniques to support public sector governance, reporting and risk management

Who

- Experienced Triad Programme and Project Managers with public sector and GDS experience used to working with Agile and traditional methods, techniques and tools
- Qualified in Prince2, Kanban, Scrum, SAFe, LeSS and Nexus
- Capable of coaching and mentoring to promote customer self-sufficiency
- Experience of working in multi-vendor programmes

How

- Planning and managing using an appropriate approach selected from Prince2, Kanban, Scrum, SAFe, LeSS and Nexus
- Implementing effective stakeholder engagement
- Collaborating in Agile ceremonies and using collaboration tools including Trello, Jira and Confluence
- Progress and finance reporting through written reports, flash reports and regular checkpoint meetings
- Promoting an open, no-blame culture
- Supporting skills assessments and upskilling via education and coaching

When

- Flexible to suit scope and complement in-house resources

Where

- In person and virtually to optimise costs and communications

2.2.2 Business Analysis and Digital Solution Design Service

Why

- To drive development of user-centric digital cloud services that meet business objectives and user requirements
- To bring high quality and sustainable, predictable velocity to development teams
- To bring constructive challenge and external perspectives
- Our teams have performed business analysis and design for the MOJ, the Met Police, DfT, the Electoral Commission, the Cabinet Office, DCLG (now MHCLG), the Home Office and Ofgem

What

- Agile business analysis, automation feasibility and design for end-to-end Agile projects or discrete Agile phases (Discovery, Alpha, Beta, Live)
- Individuals or complete practices

Who

- Experienced Triad Business Analysts (qualified in Kanban, Scrum, SAFe, LeSS, Nexus) with public sector and GDS experience across all Agile phases
- Capable of coaching and mentoring to promote customer self-sufficiency

How

- Following best practice and user-first principles in line with GDS guidelines
- Engaging with stakeholders especially with Product and Service Owners
- Understanding business context, processes, user requirements and pain points via workshops, interviews, observation and shadowing
- Creating personas and customer journeys
- Defining processes, features, epics and user stories for the Product Backlog and non-functional requirements
- Documenting using Universal Modelling Language (UML) and Business Process Modelling Notation (BPMN) and creating prototypes
- Working with the Product Owner to prioritise the Product Backlog, design the Minimum Viable Product and sprint plans
- Using Agile ceremonies to refine and learn lessons
- Collaborating with User Researchers, UX Designers, Developers, Testers and Technical Architects to design and build holistically
- Ensuring traceability from end result to original intent
- Supporting skills assessments and upskilling via education and coaching

When

- Flexible to suit scope and complement in-house resources

Where

- In person and virtually to optimise costs and communications

2.2.3 Cloud User Research (UR) and User Experience (UX) Services

Why

- To develop a deep understanding of the people that will use your digital cloud service
- To inform development of adoptable, accessible digital services
- Our teams have performed user research and user experience design for the MOJ, DfT, the Cabinet Office and Ofgem

What

- Agile user research and UX design services for end-to-end Agile projects or discrete Agile phases (Discovery, Alpha, Beta, Live)
- Individuals or teams

Who

- Experienced Triad User Researchers and UX Designers with public sector and GDS experience used to working across all Agile phases
- Qualified in Kanban, Scrum, SAFe, LeSS and Nexus
- Capable of coaching and mentoring to promote customer self-sufficiency

How

- Embedding user research into the project and collaborating with Business Analysts and users from the outset on analysis and findings
- Focusing on understanding user behaviours, needs and motivations through observation techniques, task analysis and feedback
- Employing interviews, focus groups, workshops, personas, use cases, surveys, usability tests and prototypes to find out more about our users; and define, design, test and refine the content
- Creating wireframes to perform scenario testing and conducting A/B testing to confirm screen design choices
- Ensuring that the user experience is consistent with GOV.UK guidelines, language and design patterns
- Designing content with particular reference to inclusivity, accessibility and usability
- Delivering user research in every sprint to help the teams learn quickly and iterate ideas
- Testing user journeys end-to-end and improving quality of the delivered functionality by collaborating with the testers early, especially for accessibility and usability testing
- Supporting skills assessments and upskilling via education and coaching

When

- Flexible to suit scope and complement in-house resources

Where

- In person and virtually to optimise costs and communications
- At Triad's specialist UX laboratory

2.2.4 Testing and Quality Assurance of Cloud Services

Why

- To establish testing and QA to support cost-effective, continuous release of high-performing cloud services with minimal defects
- To ensure accessibility for users of assistive technology
- To bring an independent QA perspective of software and platform engineering in a DevOps environment
- Our teams have performed testing and QA services for the MOJ, DfT, the Cabinet Office and Ofgem

What

- Testing and QA services for end-to-end Agile projects or discrete Agile phases (Discovery, Alpha, Beta, Live)
- Individuals or teams and access to Triad's in-house UX empathy labs

Who

- Experienced Triad Testers with public sector and GDS experience used to working across all Agile phases
- Qualified in Agile, SOLID, Test Driven Development (TDD) and Behaviour Driven Development (BDD)
- Capable of coaching and mentoring to promote customer self-sufficiency

How

- Implementing an 'outcome-based' test strategy and adopting an 'automation by default' principle complemented with manual testing
- Maintaining focus on business outcomes by using TDD and BDD
- Implementing the Triad testing toolkit for all test types for all requirements: unit, integration, API, GUI, exploratory, accessibility tests, static code analysis plus reducing performance-based defects through load, stress, volume, soak and scalability testing and capacity planning
- Improving service quality by collaborating with full Agile team, especially for accessibility and usability testing
- Designing and executing complex, large scale integration testing including third party test assurance
- Checking for infrastructures performance, including network provisioning, platforms and hosting across LAN, WAN and cloud
- Preparing for operational readiness focusing on monitoring, alerting and risks to the service, and supporting testing of deployment, support processes, failover, recovery, resilience, portability and stability
- Supporting skills assessments and upskilling via education and coaching

When

- Flexible to suit scope and complement in-house resources

Where

- In person, virtually and/or at Triad's lab

2.2.4.1 Automation Tooling to support Testing and Quality Assurance

Triad has extensive experience of Testing and QA automation tooling. The table below shows the tools we typically implement for the different test types. We also offer other test types and have experience of a wide variety of toolsets. This is not an exhaustive list, therefore if the test type or toolset you require is not mentioned here please do contact us and we can advise as to our experience.

Test Type	Tooling Experience
Integration and API	SoapUI, Postman, Swagger, RestAssured and RestSharp
GUI	Selenium Webdriver, WebdriverIO and Protractor
Load	JMeter, Taurus, Gatling and Blazemeter
Security	OWASP ZAP
Static code analysis	SonarQube
Multi browser, cross browser and device testing	BrowserStack, SauceLabs and AWS Device Farm
BDD	Cucumber, Specflow
Continuous Integration	Jenkins, Docker, Concours CI, TeamCity and Travis CI Cloud native solutions: AWS CodePipeline, Azure DevOps, Google Cloud Build
Accessibility (WCAG2.1) including tests for • keyboard only navigation • tests with screen reader and speech recognition software • testing with browser plugins that report accessibility violations • tests for colour contrasts • testing subtitles and captions • testing text transcripts of audio content	Selenium-Axe-Java and Selenium-Axe-C# Color Oracle, WCAG colour contrast analyser, Colorblindly, Axe – chrome and Firefox extension and vision impairment simulation goggles JAWS, NVDA, ChromeVox Voiceover on Mac/IOS devices, Talkback on Android devices ZoomText and Dragon Naturally Speaking

2.2.5 Cloud Service Delivery and Release Management

Why

- To assess, plan, coordinate and manage delivery of new digital cloud services and handle new releases to time, cost and quality
- Our teams have performed delivery and release management for the MOJ, DfT, VCA, Ofgem, the Home Office, and the Youth Justice Board

What

- Delivery and release management services for end-to-end Agile projects or discrete Agile phases (Discovery, Alpha, Beta, Live)
- Individuals or teams

Who

- Expert Triad Delivery Managers and Release Managers with public sector and GDS experience used to working across all Agile phases
- Qualified in Kanban, Scrum, SAFe, LeSS and Nexus Agile
- Capable of coaching and mentoring to promote customer self-sufficiency

How

- Delivering value against the product vision by maintaining a team delivery and learning cadence
- Using Agile techniques to manage sprint planning and Agile ceremonies, and traditional project management for governance and reporting
- Motivating the team, removing blockers to progress and performance
- Ensuring effective working with stakeholders and other teams
- Owning the Release Management lifecycle including scheduling, coordinating and managing releases
- Managing relationships and coordinating work between multiple teams
- Managing a register of updates, patches, security improvements and hardware upgrades that form the release content
- Facilitating the provision of automation tools
- Managing, mitigating and communicating risk and issues
- Continually improving delivery and release management processes
- Participating in CAB meetings to discuss release scope and/or roadblocks
- Maintaining a release repository and managing key information such as build and release procedures, dependencies and notification lists
- Learning and applying relevant new software development and configuration management methodologies and technologies
- Supporting skills assessments and upskilling via education and coaching

When

- Flexible to suit scope and complement in-house resources

Where

- In person and virtually to optimise costs and communications

2.2.6 Digital Cloud Service Development and Project Delivery

Why

- To develop digital cloud services of high quality with sustainable, predictable velocity
- Our teams have performed development services for the MOJ, DfT, the Cabinet Office, Ofgem, BEIS and the Home Office

What

- Development services for end-to-end Agile projects or discrete Agile phases (Discovery, Alpha, Beta, Live)
- Individuals or teams

Who

- Triad Developers, DevOps engineers and automation testers (senior to junior) with public sector and GDS experience used to work across all Agile phases
- Qualified in Kanban, Scrum, SAFe, LeSS and Nexus
- Capable of coaching and mentoring to promote customer self-sufficiency

How

- Meeting user needs by translating user stories and design approaches into adoptable and accessible digital services
- Engaging with users and Agile team colleagues in meaningful interactions and Agile ceremonies to share ideas and gain feedback to improve services
- Prototyping both programme and physical outputs to demonstrate ideas and options including use of assistive technologies
- Supporting backlog prioritisation to ensure optimum business value is delivered
- Designing, creating, testing and documenting new or amended software
- Using modern standards throughout automation and testing
- Managing and continuously improving all aspects of the availability of services including capability, functionality and sustainability of service components
- Implementing robust information security to ensure the confidentiality, integrity and availability of services
- Developing maintainable and supportable services

When

- Flexible to suit scope and complement in-house resources

Where

- In person and virtually to optimise costs and communications

2.2.6.1 Development Tooling to support Service Development and Continuous Improvement

Triad has extensive experience of a wide variety of frameworks, tools, databases and languages and have listed some of the most popular below. This is not an exhaustive list, therefore if the one you require is not mentioned here please do contact us and we can advise as to our experience.

Languages	Databases
Java, JavaScript/ES5, Typescript, Solidity C#, HTML 5, VB.NET, CSS3, Razor, Ruby	PostgreSQL, SQL Server, MongoDB, Oracle, Elasticsearch
Frameworks / Standards	**Continuous Integration & Testing**
ASP.NET Core, .NET Core, .Net Framework, Microservices Bootstrap, AngularJS, Spring, Spring Boot, REST and RESTful APIs AMQP, CQRS, JSON Web Tokens, Polly, Swagger GOV.UK Frontend toolkit Heroku Open source	Jenkins Artifactory, GIT, JMeter, Nexus Selenium, Gherkin, Postman, aXe, OWASP ZAP, WAVE, JAWS, Voice Over, NVDA Cloud Native pipeline management: Azure DevOps, AWS CodeBuild, GCP Cloud Build, GitHub Actions, Bitbucket Pipelines
Middleware	**Cloud Services**
RabbitMQ	Google Kubernetes Engine (GKE) Azure Kubernetes Services (AKS) Cloud SQL, Azure SQL, Azure App Services
Other Tools / Products	
Docker, Kubernetes, Kibana, LogStash, Stackdriver, Liquibase, Hibernate, Entity Framework, Terraform	

2.3 Cultural Fit

You will find our style collaborative and transparent, working alongside your own staff and other supply partners. We have a strong 'no-blame' culture. Our focus is to deliver excellence. Everyone has a clear role and responsibility, and we hold them to account in a constructive and supporting way, helping to identify and remove blockers.

You will benefit from predictability in planning, the effectiveness of common governance and reporting across all business services, and an upskilling of your staff to adopt new roles. By planning for handover and establishing solid ways of working from the outset, transitions into live service and business as usual (BAU) become embedded and not an afterthought.

2.4 Associated Services

In summary, the following Triad services are detailed within this service definition and available on the Digital Marketplace.

- Described in Section 2 above:
  - Agile Project Delivery: Full Digital Service Development and Continuous Improvement
  - Cloud Programme Management and Project Management Services
  - Business Analysis and Digital Solution Design Service
  - Cloud User Research (UR) and User Experience (UX) Services
  - Testing and Quality Assurance of Cloud Services
  - Cloud Service Delivery and Release Management
  - Digital Cloud Service Development and Project Delivery
- Described in Section 3 below:
  - Microsoft Cloud Consulting, Delivery and Support Service
  - Intelligent Automation and Robotic Process Automation (RPA) in the Cloud
  - Blockchain and Innovation Technologies for the Cloud
  - Geospatial Cloud Services

In addition, you can also buy the following Triad services through the Digital Marketplace:

- Agile Consulting and Agile Coaching for Cloud Services
- Cloud Consultancy Services delivering Cloud Strategies and Digital Transformation outcomes
- Digital Cloud Service Design
- Cloud Architecture Services: Enterprise Architecture, Solution Architecture and Technical Architecture
- Cloud Design Assurance Service
- Cloud Platform Operational Support and Application Support

3 Specialist Cloud Solutions

All the services described in Section 2 above can be delivered by individuals and/or teams. You can select any Agile stage or a complete project, and any one or a selection of the services. We can design, develop and deliver a broad range of digital services including process and workflow automation, data analysis and reporting and websites. In this section, we expand on four speciality areas: Microsoft-based solutions, Intelligent Automation, Blockchain and Geographic Information Systems.

3.1 Microsoft-Cloud Consulting, Delivery and Support Service

Our specialist Microsoft practice can develop and deliver solutions for you using Microsoft 365, SharePoint, Dynamics, Power Platform (Apps, BI and Automate) and WorkPoint.

A Gold standard Microsoft partner, we hold eight Gold standard competencies: DevOps, Data platform, Data analytics, Windows and Devices, Application Development, Cloud Platform, Cloud Productivity and Application Integration. These have all achieved the Gold standard following reviews and testing by Microsoft.

Importantly, assessment focuses on actual projects delivered for customers – how Triad helps turn data into actionable insights. For example:

- An Office 365 application to help the day-to-day running of the Houses of Parliament, incorporating the “look and feel” of a typical GOV.UK service.
- A hybrid SharePoint and .Net application to replace the legacy ERP system of a national firm of surveyors, incorporating a geospatial component that improved the management of land parcels for their clients.

3.2 Intelligent Automation and Robotic Process Automation (RPA) in the Cloud

For solutions that involve multiple, repetitive tasks, we will assess the suitability of an Intelligent Automation (IA) approach. Suitable projects will then include Robotic Process Automation (RPA) for example, Microsoft’s Power Platform.

Although often associated with the banking, insurance and logistics industries, IA can equally apply to the public sector. It is typically suitable for process and workflow systems such as case management and application processing. For example, Triad used an IA approach for:

- Working at a central government department, we were asked to review 40 poorly performing Microsoft PowerApps and Flows. By rationalising the number of flows, optimising data loading, implementing error handling and moving data operations to background tasks, we improved the reliability, performance, and customer satisfaction. Screen load times reduced from 30+ seconds to less than 1 second and unexpected flow failures reduced significantly.

3.3 Blockchain and Innovation Technologies for the Cloud

Blockchain is a disruptive technology that permanently and securely records transactions without the need for a trusted intermediary. Originally designed to underpin crypto-currency exchanges, it is now being used for other contract-based transactions such as digital artistic rights.

Being serial pioneers of new technology, we researched and included blockchain in our portfolio early, so we could expand the scope of potential solutions that we offer our clients. To deliver blockchain, we partnered with enterprise technology company Stratis Group Ltd (Stratis). We chose Stratis because its blackchain platform and smart contracts are written in the widely used C# programming language on Microsoft's .NET core framework, which fits with our Microsoft Gold standard status and meant our developers would be familiar with the platform. To cement the partnership, we ported an existing parcel tracking application to the Stratis blockchain utilising smart contracts.

Under the partnership, Stratis helps us identify where blockchain is the best-placed technology to resolve our clients' business problems. We then collaborate to develop, deploy and market blockchain applications to help businesses improve operational processes, enhance security and reduce costs to unlock ROI.

As blockchain evolves and becomes more understood and accepted, we will seek opportunities to use it for the benefit of the public sector.

3.4 Geospatial Cloud Services

For over 16 years, we have been supporting our clients' Geographic Information System (GIS) projects. Our GIS practice understands all the major commercial-off-the-shelf (COTS) and open source GIS technologies including Esri, MapInfo, Google, Envitia, GeoServer, OpenLayers and PostGIS.

As well as individuals and teams to develop and deliver cloud-based GIS solutions, we have used our in-house expertise to develop Zubed, a user-friendly web-based mapping engine. Zubed can integrate location intelligence with any critical application. By putting a smart mapping front-end onto critical applications (such as business intelligence, customer relationship management (CRM), recruitment and talent management), Zubed takes business data intelligence to the decision maker, wherever they may need it.

We can use Zubed (available unlicensed) in our cloud-based development projects where we need to create true web-GIS applications. For example, integrating an intuitive map-based presentation of data with state-of-the-art targeted search technologies.

4 Data Protection

4.1 Information Security and Assurance

To give you the confidence that Triad is committed to implementing robust information security and assurance, we commit to maintaining the following certifications:

- ISO9001:2015 for the provision of IT consultancy services
- Cyber Essentials and Cyber Essentials Plus
- The IASME Governance standard (self-certified)
- ISO27001 for defining, implementing, operating, and improving an Information Security Management System (ISMS).

We always consider information security and assurance requirements as a crucial part of running our business and delivering our services. We will build in and test appropriate security measures and controls, liaising with third parties where appropriate. If you require appraisal and assurance of your current systems and strategic advice on enhancements to better meet business need and/or reduce costs, our security consultants can advise you at executive and business stakeholder level.

4.2 Data Back-Up and Restoration

Data back-up and restoration (including customer data) are covered in our routine ISO-certified company procedures and are documented in our Business Continuity Plan.

On customer projects, we will always discuss your data back-up and restoration processes when we develop digital cloud services for you or with you. We will consider the nature of the data and any legal obligations, the architecture, your existing processes (including those provided by any cloud hosting provider or managed service provider) and any constraints. We will design and document a back-up and restoration process as part of the handover documentation and transfer the relevant knowledge, so you can be confident of operation. This will typically be your responsibility once the system is operational.

4.3 Business Continuity Statement/Plan

Triad has robust business continuity plans covering the whole company operation. We can provide you with details on request.

4.4 Privacy by Design

Triad is GDPR compliant and will design GDPR-compliant systems in place for you. To protect citizen data, we have security systems in place to ensure all data under our control is safe and secure. If your digital cloud service includes a requirement to have access to citizen data, we will become a data processor for the provision of the service. As part of the project initiation process, we will discuss with you what access will be given to data and show where we will be a data controller or a data processor. Based on this conversation,

we will put in place a data sharing agreement to ensure we are fully aware of how we should handle data on your behalf. We will also carry out privacy impact assessments to identify any risks to the data and any extra security we may need to ensure we comply with the data sharing agreement.

5 Service Provision

5.1 Ordering and Invoicing

5.1.1 Ordering

Orders for Triad services follow the procedures and processes outlined in our Quality Management System (accredited to ISO9001:2015). There are three defined stages: clarification, review and acceptance.

- Following any clarification requests from you, we will provide a written response based on your needs, which sets out our recommended solution. The response is subject to management review and approval
- When you accept the solution, we will agree a Call-off Contract with you
- Once we have received the Call-off Contract, we will accept it and initiate Project Kick-off protocols: we will appoint a Project Manager; create record repositories (including for reporting and monitoring), allocate resources and set milestones

5.1.2 Invoicing

Using Triad's invoicing system and processes, we generate and promptly send accurate invoices in line with contracted payment terms and procedures.

The efficiency and accuracy of our invoicing is due to:

- Modern time capture software and applications driving invoice creation
- Automated reviews
- Regularly audited end-to-end finance processes

Verification checks are made throughout the invoicing process.

Please contact accounts@triad.co.uk for further information.

5.2 Pricing Overview

Prices for this G-Cloud service will be based on your specific requirements and our assessment of your needs.

All prices will be based on the day rates provided in the SFIA rate card and our Pricing document attached to this service.

5.3 Service Levels

Formal Service Levels are not applicable to this service. We will discuss and agree availability and scheduling with you when we draft the Call-off Contract.

5.4 Service Hours

Triad consultants work a professional working day.

The service will be available from 09:00 to 17:30, Monday to Friday excluding UK public holidays, unless explicitly agreed otherwise.

5.5 On-Boarding, Off-Boarding and Service Quality

We achieve smooth on-boarding and off-boarding by putting in place a Delivery Assurance Lead (DAL). The DAL will also oversee our team's ongoing performance, taking responsibility for:

- Rapid and early resolution of any issues including escalation
- Close-to-hand, direct line of communication for you and our team
- Mentoring individual team members to optimise quality and speed of delivery

5.5.1 On-boarding

On-boarding Digital Cloud Service Development and Delivery follows a simple, tried and tested formula based on a Project Kick-off meeting. At this meeting we:

- Introduce you to your single point of contact – this person's role will depend on the contracted service
- Review a draft project initiation document (a formal PID for major programmes or projects, or a light brief for smaller assignments) based on the Call-off Contract and formally agree at a minimum objectives, scope, tasks and timescales, roles and responsibilities, ways of working, governance and reporting

This initial document drives the provisioning of facilities and people for the project. If we are migrating a service to the cloud, we will build this into the project plan.

The Project Kick-off meeting fits into our overall on-boarding process as shown below, which includes mobilisation of the team and knowledge transfer, so we start delivering fast and effectively.

Figure 3: Triad's approach to assignment start-up

Experience and robust mobilisation processes from Triad will ensure success

5.5.2 Off-boarding

Throughout each project, we follow our three-phase knowledge transfer process to give you a professional off-boarding experience.

Starting during On-boarding, we will understand your requirements, map out the stakeholders and uncover dependencies.

During Delivery, we will operate continuous handover through close collaboration, open sharing and buddy working. In parallel, we will prepare comprehensive documentation and training plans.

During Handover to Live we will use formalised documentation, structured briefings and ad-hoc walkthroughs with your staff.

The diagram below shows the continuous handover process:

Figure 4: Structured knowledge transfer with continuous learning and handover

An end-to-end process deployed successfully at the MOJ, Ofgem and DfT

5.6 Customer Responsibilities

To help us build high quality digital cloud services at speed, we will need your buyer teams, project stakeholders and users to be available when we need them. In particular, we will need:

- A Product Owner responsible for business input and direction.
- A Service Owner responsible for quality of the service and for co-ordinating and communicating changes to the impacted organisations and users.

Depending on the scope of the project, we may need you to provide facilities and equipment, and access to premises and systems. We will agree this with you during the Project Kick-off.

5.7 Deliverables and Outcomes

We will agree specific deliverables and outcomes with you during the Project Kick-off. These will include project-specific deliverables and the benefits the project is designed to deliver.

5.8 Termination Process

Termination is in line with the standard G-Cloud terms and conditions available as a separate PDF attached to this Digital Marketplace service. In summary, the notice period needed for ending the Call-off Contract is at least 90 working days from the date of written notice for disputed sums or at least 30 days from the date of written notice for ending without cause.

6 Our Experience

6.1 Case Studies

6.1.1 Ministry of Justice (MOJ)

The MOJ's £1.2bn Digital Transformation Programme has been changing the way Her Majesty's Courts and Tribunal Service (HMCTS) operates since 2014. Triad has been a delivery partner from the beginning, providing teams and specialists for all agile stages to lead and support transformational and operational projects.

Digitising operations in the Magistrates' Courts was a major early challenge that HMCTS entrusted to Triad. The goal was to replace paper-based recording of the court proceedings and off-line data capture of results (into legacy system, Libra) with a fully-digitised product called Digital Mark-Up or DMU.

DMU was successfully implemented in more than 300 Magistrates' Courts across England and Wales; its accuracy and efficiency have streamlined court proceedings for 1300 users.

An article issued by HMCTS says: "*This gives legal advisers the ability to 'result' most cases directly in court (rather than writing longhand into a paper file in court, and passing the paper to an admin team to 'result' later by typing it into the system)*".

Our open and transparent approach to reporting project progress helped HMCTS senior stakeholders to see the level of insight they could and should expect from all development teams on the programme.

6.1.2 HM Courts and Tribunal Service (HMCTS)

Triad has been the business analysis (BA) capability partner for the Crime Programme since August 2017, with up to 23 BAs including a BA Practice Lead (PL).

The BAs deliver analysis in multi-disciplinary teams and cover functional specification, process design, data analysis, discovery definition and strategic analysis. Their work covers bespoke digital services using open-source frameworks and SaaS-based solutions for document storage, workflow integration, court bookings, messaging and notification. They work collaboratively with other suppliers and HMCTS staff to continuously deliver working software.

The complex and challenging stakeholder community (including judiciary, police, CPS, probation and the Legal Aid Agency) has variable digital and agile awareness. Our BAs often provide knowledge transfer to help upskill them so they can contribute productively. Drawing on experience and using robust collaboration techniques, our BAs build consensus on new service models and a digital delivery roadmap and have demonstrated the value of early and incremental delivery.

Our BAs were pivotal to delivering 200 pages of detailed designs for judicial sign-off in just six weeks, complete with cross-agency approval. Triad staff have been commended for the confidence they instil by valuing opinions and patient explanation.

6.1.3 Department for Transport (DfT)

The DfT Renewable Transport Fuel Obligation (RTFO) team manages legislative compliance for both the RTFO and Greenhouse Gas (GHG) Emissions Reporting Regulations using the ROS and GOS systems. A delivery partner to DfT for over ten years, Triad was tasked to develop GOS on a strategic platform suitable for migration of legacy systems including ROS.

We set up a cross-functional team and ran a highly user-centric Agile project. We used collaborative tools (Skype/Microsoft Teams and Slack) to run Agile ceremonies and support openness and transparency. Our team developed a deep understanding of relevant legislation enabling us to share insights with both DfT and fuel suppliers, whilst also upskilling both parties in Agile methods.

We designed the system using a microservices-based container architecture, orchestrated using Kubernetes and deployed to the cloud to provide a standard, modern, scalable and resilient platform. The architecture proved portable, taking less than two days to migrate from Azure to Google Cloud Platform.

Collaborating with the Gov.Notify team throughout, we provided valuable code changes and amendments to some GDS Patterns (access denied, pagination, email formatting).

We deployed the Minimum Viable Product (MVP) to the live environment on time, within budget, meeting quality expectations and went on to progress through private and public Beta to Live. We have had zero unplanned downtime and 100% deployment success.

6.1.4 Ofgem

The Energy Company Obligation (ECO) mandates energy suppliers to help improve the energy efficiency of their customers' premises. Ofgem manages the scheme for the government. Version 3 of the legislation (ECO3) required Ofgem to make substantial changes to its ECO service. Ofgem engaged Triad to work collaboratively to modernise the ECO2 system and extend its functionality to support ECO3 without the need for data migration or extended downtime, as the project faced a fixed budget and fixed delivery date.

Triad provided a multi-disciplined Agile team and, during the project, we flexed the team composition to optimise costs, address changing skill needs and maintain velocity. Tight timescales made close collaboration critical. Co-locating at Ofgem’s premises helped us build a seamless team and collegiate environment as well as hasten our understanding of Ofgem’s governance framework, processes and technology (based on Microsoft Team Foundation Server (TFS) and .Net).

In line with GDS guidelines, we used a Scrum approach, building a business priority-focused Product Backlog managed in TFS. We tightly scoped the first delivery as a "Minimum Viable Product" designed to be extended and enhanced through continuous improvement. Our in-depth technical knowledge and agile delivery expertise, including CI/CD and DevOps, enhanced the quality assurance process and led to User Acceptance Testing resulting in minimal rework.

ECO3 smoothly transitioned into live with zero priority 1 defects, no data migration and minimal downtime. We met the legislative deadline and key architectural objectives.

6.1.5 Vehicle Certification Agency (VCA)

Turning a huge volume of rich data, stored across diverse systems, into actionable executive data was a clear vision for the VCA's Finance Director (FD). He imagined an interactive view of performance – a dynamic presentation of the operational P&L across lines of business and departments with the ability to drill down to details. This would give insight into business operations to allow them to identify best practices to replicate and areas to improve. VCA engaged Triad to run a pilot in advance of a wider project to deliver full business value.

Using a copy of the VCA's financial data, we rapidly built a Proof of Concept (PoC) reporting database mapping each line of business to department and job codes, including customer and time-period breakdowns on their P&L. The PoC allowed the executive team to interactively change the content, apply filters and drill down into details and underlying transactions. Working closely and collaboratively with the VCA team, we gathered their feedback from the PoC then used Decision Power, our own data warehouse automation tool, to develop the live pilot.

To add more value to the database, the executive and management teams wanted to include data from different systems and other business sources. We added their business measures, products, services, job register, department structure and project and time recording to the database model.

By centralising so much data into a single, well-designed business model, the database started to reflect how the VCA understands itself and to enable valuable modelling.

The model provides simplified logical business views to specific users. This improves productivity by hiding the model's complexity and allowing them to focus just on their area.

6.1.6 Electoral Commission

The Electoral Commission is an independent body set up by the UK Parliament to regulate party and election finance and to set standards for well-run elections. As part of its objective to ensure transparency in party and election finance, it regularly publishes financial information on its website, such as donations and loans to political organisations, their spending in elections and referendums and the annual accounts of political parties. Triad were invited to redesign and redevelop the website in time for an approaching General Election.

To identify the different groups of website users, we interviewed users from the main political parties, political journalists and the Commission's own staff. We divided the information available on the website into three areas and created shortcuts to the most commonly used searches. This satisfied the needs of one user group. For the other user group, we added two basic search filters and a keyword search box to give an initial set of search results.

To test the user experience (UX) design, we shared an Axure interactive wireframe prototype with users from the two groups. A comprehensive set of over 100 user stories was then created to form the Product Backlog, which we prioritised using Jira.

Our Agile team developed and tested the user stories in a series of Sprints. The output from each Sprint was reviewed with the Commission and then deployed to their staging environment for wider user testing.

The new site offers a more intuitive design, improved performance, support for mobile devices and social media friendly URLs.

6.2 Customers

Triad has delivered digital cloud services across the public sector for many customers including those shown below.

6.3 Contact Details

If you would like to discuss this service, or any of the other services offered by Triad in the Digital Marketplace, please do not hesitate to contact us for an informal conversation:

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