# kain**e**s°

# **Cloud delivery**

Service Definition Document

G-Cloud 14

Status: Definitive Security Commercial – In Confidence Version no.1/0 THINKING BEYOND LIMITATIONS

# We're Kainos

Formed in 1986, we set about finding the best people to tackle the most difficult digital work. We fostered a culture where people truly care for each other and the world around them.

Our reputation for software engineering and problem-solving was quickly established, and our customers started to view us more as their colleagues

We're much bigger now, helping organisations across the globe to navigate change in more ways than ever. But some things never change, like our commitment to our people, delighting our customers, and our technical ability

Some say we're leading a quiet revolution in digital, but if you ask us, we're just doing our bit to make the world a little bit better.

ද්ධා	3,139 amazing people		13 consecutive years of growth
1986	38 years of innovation	£	£374m revenue (FY2023)
	23 locations globally	☆	FTSE 250 listed tech company





## Our core expertise

The digital revolution is already happening. We're leading from the front to help our clients **seize every digital opportunity** and be future-ready.

Cloud	Low Code
Several Al Data and Al	😥 Managed services
Digital advisory	Service and experience design
Engineering	
Workday services and products	
<ul><li>Deploy</li><li>Test</li><li>Optimise</li><li>Audit</li></ul>	• Extend



## Alpha

Kainos excels in delivering cost-effective, GDS-compliant Alphas that combine user research, rapid prototyping, service design, and technical excellence to prove service viability and deliver value early.

We adopt an Alpha-Beta-Live approach to delivery and have developed an underpinning Delivery Framework, to ensure a low-risk, successful Alpha.

## Features

- 1. Discovery hypotheses tested based on user, business and technical needs.
- 2. Focus on the end-user experience: usability, accessibility and assisted digital.
- 3. Agile/iterative approach to prototype development, informed by user research.
- 4. Service Design approach to ensure early and rapid service adoption.
- 5. Prove service viability and deliver value early and often.
- 6. Consideration of buy-vs-build, reuse, bespoke, COTS and low-code/no-code software.
- 7. Understand technical feasibility, nonfunctionals and integration using technical spikes.
- 8. Delivery management focussed on risk, dependency management, and integration.
- 9. Revision of service roadmap with high-level process design.
- 10. GDS Alpha service mock assessments and dry runs.

- Validates problem(s) identified by confirming business requirements, tech feasibility/user needs.
- 2. Understand threats to the service.
- 3. Understand requirements needed for the service as an end-to-end journey
- 4. Service delivery based on value, aligning to the business case.
- 5. Test riskiest assumption by delivering clickable prototypes and technical spikes.
- 6. Reuse Kainos' Delivery Framework
- 7. Cost-effective engagement and commercial models.
- 8. Openness and transparency, ensuring tangible benefits and outcomes.
- 9. Alignment with government standards and GDS Alpha service assessments.
- 10. Minimised risk through open, early and regular collaboration.



# Alpha

Kainos is a leading service provider of Digital Services to the UK Public Sector. We adopt an Alpha-Beta-Live approach to delivery and have developed a Delivery Framework that underpins this. We are experts in delivering discrete Alpha phases that are cost-effective, prove service viability, and deliver value early.

The Alpha phase tests the hypotheses from Discovery and quickly determines if the service satisfies business requirements, user needs and is technically feasible.

A citizen-facing service may require passing a GDS Alpha assessment to exit the Alpha Phase. Kainos has undertaken over ? Alpha assessments.



#### Duration

It is recommended that an Alpha should have clearly defined objectives and success criteria so that you can determine when you are done and achieved what you have set out to achieve. Typically, an Alpha lasts between 6 and 8 weeks, but some can take up to 12 weeks depending on the size, complexity and subject matter of the project.

#### Approach

Testing the proposed solutions usually takes the form of prototypes. These help the team understand:

- 1. Overall user journey
- 2. User interaction (to test the approach realises anticipated benefits)
- 3. Technical components (for more difficult areas)

Considerations at the end of Alpha should include an understanding of how the solution integrates with the existing systems and processes, manages dependencies, addresses the assisted digital channel and the nonfunctional requirements.

#### Service Iteration and Design

Typically, a clickable-prototype will be built to bring the design to life and that can be used by user researchers to test the service. The clickable-prototype would be created using a using a suitable tool or technology, e.g. Axure.

The prototypes may not be solely for the User Interface, it may be necessary to have a separate technical spikes to prove the complex or locally unproven engineering/ technical challenges.



# Alpha

By the end of Alpha, we will understand how the solution integrates into the existing processes e.g. payment and email technical integrations.

Often overlooked in Alpha, is sufficient consideration to the challenging needs of the assisted digital user and the non-functional requirements of the service, which are needed to underpin the Definition of Done, and ensure a sustainable production standard in Beta delivery.

Our Alpha will be focused on learning about the solution – not building it, as too long or too much effort on prototype quality will introduce positive bias forcing the Alpha findings to support the Discovery suggested solution – we will be open to a finding an outcome of 'not viable' if appropriate.

#### **Alpha Activities**

During Alpha the team will be involved in multiple activities; these are often conducted in parallel:

- 1. A short inception to introduce new team members and to agree the fine details of the Alpha plan. We recommend some manner of Discovery retrospective at this point to challenge the process and approach.
- 2. Prototyping Alpha is primarily about gaining user feedback on the ideas out of Discovery. Where there are multiple hypotheses from Discovery, we will start with

the highest-value or more likely ones and then move to the outliers. It is important to remember that outputs will be learning and preparation, not code; the prototype is just a means to an end – not an end in itself. The user testing on the prototype is more important than its creation.

- 3. User research each piece of feedback will add to our understanding of the situation and how appropriate our solution is. We will make continual changes to the prototype and retest it to see if we are improving the system from the users' perspective.
- 4. Solution Design and Technical Spikes a high-level solution design will be created based on the technical feasibility analysis and any technical spikes, to ensure alignment with your organisation's architectural principles and to ensure the design is fit-for-purpose and fit-for-future.
- 5. Conclusion and recommendations these activities will be focused on ensuring Alpha products are documented and the GDS Alpha assessment is completed. In parallel, the team will create an indicative Beta delivery plan, Beta backlog, roadmap, and MVP with accompanying key delivery milestones. Technical recommendations will also be made during this stage regarding test and development tooling for Beta. Finally, a resource profile will be created for the Beta phase.

kaines<sup>®</sup>



## Beta

Kainos is a leading service provider of cloud-based Digital Services across the UK Public Sector. We have developed a robust Delivery Framework that underpins our successful service deliveries. We deliver successful Beta phases that are costeffective, deliver end-to-end services, iterate based on user needs, reduce risk, and deliver value early.

### Features

- 1. Service delivery based on business value, delivered early and often.
- 2. Focused on the end-user experience, usability and accessibility. Deliver MVP.
- 3. Service is tested, validated and iteratively improved with real users.
- 4. Engineering efficiency based on optimising results with the available resources.
- 5. Uses open standards, open source and supports assisted digital needs.
- 6. Iterative approach to development resulting in continuous improvement.
- 7. Minimises risk through open, early and regular collaboration.
- 8. Automated testing of functional and nonfunctional aspects; shift-left QA approach.
- 9. Delivery approach focuses on risk reduction, dependency management and integration.
- 10. Service Design approach to ensure early and rapid service adoption.

- 1. In-depth knowledge and experience of delivering public sector Betas.
- 2. Delivery Framework reuse from private and public sector engagements.
- 3. Ability to scale team on-site, nearshore, or both.
- 4. Cost-effective engagement and commercial models.
- 5. Openness and transparency, ensuring tangible benefits and outcomes.
- 6. Alignment with government standards and GDS Beta service assessment.
- 7. Alignment to technical/architectural strategy and target operating model.
- 8. Focuses on intuitive and robust software/ infrastructure, reducing TCO (OpEx/CapEx).
- 9. Improved end-to-end service: solves a whole problem for users.
- 10. Low risk: addresses challenging integration, dependencies and legacy transformation.



## Beta

Kainos is a key provider of Digital Services across the UK Public Sector. We have developed a robust Delivery Framework that underpins our successful service deliveries. We are experts in delivering Beta phases that are cost-effective, deliver end-to-end services, iterate based on user needs, reduce risk and deliver value early.

The Beta phase incrementally builds an end-toend slice of the service and tests it frequently with users until the service is ready for use. The phase employs a rapid and structured approach to incremental build, test, release and iterates a prototype service arising from Alpha, to form a Minimum Viable Product (MVP). In addition to the end-to-end slice through the service, this MVP addresses all the non-functional requirements (performance, security, reliability, resiliency, scalability) necessary for live operational use.

#### There can be 2 steps to a Beta phase:

**Private Beta**: An MVP is tested with a subset of the users to get feedback faster, in a more controlled way, to allow scaling to happen over time. This step is not mandatory; however, it is highly recommended as it allows you to test the service in live use, under controlled conditions that ultimately enables you to deliver value early and often.

**Public Beta**: The service is opened to testing by the target end users. A service standard assessment and security assessment will control entry to Public Beta stage.

The duration of Beta depends on the size, complexity, subject matter and 3rd party dependencies of the service. However, Kainos recommends a service is released to production within a few months to avoid the build-up of technical debt, to release value early and to enable real, quantitative and qualitative data to reduce the number of iterations required.

#### **Key Activities**

During Beta, the team will be involved in multiple activities, including:

**Sprint 0**: Not always needed depending on the proximity, continuity and quality of outputs from Alpha, however a Sprint 0 is a great way to ensure that all stakeholders and team members fully understand the service, product roadmap, challenges and dependencies. This has the purpose of getting all participants 'sprint ready' for Beta.

Service iteration: establish a strong user research capability, delivery cadence and governance model. All delivery activity will be prioritised and delivered to production in line with the product roadmap. The service will be released frequently, based on the needs of the MVP.

**Private Beta**: An MVP is tested with a subset of users to get feedback faster, in a more controlled way and allow scaling to happen over time. The private Beta is a controlled production release of the service and enables you to iterate quickly and cost effectively, and to release value early in a controlled 'safe' environment.

**Public Beta**: Following a service assessment, the iterated MVP will be released to the full user base. Data analysis will enable the service to be iterated to meet the user and business needs. This will be also be verified via a full-service assessment.



# Digital Applications: Design, Build and Run

Kainos is a key provider of cloud-based Digital Services and agile transformation programmes across the UK Public Sector. Our delivery services are underpinned by our Service Design framework. We are flexible in our delivery approach and our solutions are closely aligned with Government priorities: cost-efficiency, open source, re-use, security, usability.

### Features

- 1. Design of business benefits, goals, key performance indicators.
- 2. Proficient in proprietary, open-source technologies. Expertise in open standards.
- 3. Focus on user need and end-user experience.
- 4. Re-use at the core of solution design and development.
- 5. Stakeholder collaboration and early iterations.
- 6. End-to-end Service Design delivering value early.
- 7. End-to-end Application delivery: design, development, implementation, enhancement, management.
- 8. Iterative development approach resulting in continuous improvement.
- 9. Test capability: continual user testing, automated testing, quality assurance strategy.
- 10. Experience in hosting, implementation, cloudbased solutions and application management.

- 1. Flexible approach to delivery.
- 2. Focus on quality working software leading to reduced operational costs.
- 3. Improve service experience for users.
- 4. Rapid deployment of teams: remotely, onsite, nearshore, or hybrid.
- 5. Delivery Framework: re-use from private and public sector engagements.
- 6. Openness and transparency ensures tangible benefits and outcomes.
- 7. Proficient in Government standards and service assessments.
- 8. Input into larger transformation programmes and IT strategy.
- 9. Increased innovation, customer enablement and knowledge transfer.
- 10. In-depth knowledge and experience of Agile and the public sector.



# Digital Applications: Design, Build and Run

Kainos provides highly experienced digital transformation experts to deliver user-centred, cost-efficient, secure, and usable products and services. During Discovery we capture user needs, understand business objectives, and explore technical solutions. At Alpha we test our hypotheses and prototype viable solutions before we deliver the service during Beta and Live.

#### **Application Design**

Kainos designs solutions that combine best of breed products and services with custom code to meet functional and non-functional requirements. Open source, open standards, simple frameworks and lightweight technologies will guide the creation and iterative improvement of the solution in a way that results in a service that is flexible to change and therefore reusable. This matters because many departmental processes in public sector organisations are similar, such as case management or information dashboards. In fact, we treat our various UK public sector customers as a single customer, keeping reusability, and value for taxpayer money, at the front of our minds.

## Application Development and Implementation

Kainos uses Agile methodologies because they result in digital solutions that are closely aligned with business requirements, quick to develop, and easy to use. We enable developers to adopt GenAl tools to deliver quality code quicker.

The iterative and collaborative nature of Agile means that our solutions are less risky for our customers as it gives them visibility of progress and output at every stage of the project and allows them to continuously tweak designs to ensure they get exactly what they need. In line with the open-source approach, our custom-developed solutions are owned by our customers and are available for redeployment in any public body.

#### Enablement

Developing digital services using Agile methodologies is challenging for many customers and agencies who are new to Agile. It requires new skills, new approaches and new standards. It demands close collaboration between business and technology experts. Kainos understands the detail of this new world and has hundreds of successful digital projects under its belt.

We understand complex issues such as security, cloud deployment and performance, and we know the criteria against which open source or COTS should be deployed. We are intimately familiar with the GDS digital service standards including Digital by Default and Digital First. All of this means we are well placed to provide guidance to departments that are new to Digital Service provision.

We can train or coach customers to become knowledgeable and proficient in this approach and enable them to become self-sufficient in delivering digital projects in-house.



# **Digital Workflow**

Digital transformation is more than "digitising transactions", but also about **redesigning how work gets done**.

As a leading provider of citizen services for UK Government, Kainos Digital Workflow enables Government departments to create **seamless**, **simple**, and **efficient** workflow for customers and employees, unlocking productivity and creating great experiences for both.

## Features

- 1. Specialised experience delivering GDS compliant citizen services.
- 2. Independent and impartial technology selection from leading vendors.
- 3. Low-Code focus to build, manage, and run digital workflows.
- 4. Workflow prioritisation framework which returns the highest business benefit.
- 5. Process improvement, re-engineering or retirement embedded in the approach.
- 6. Workflow creation and automation across multiple applications with unified workflow.
- 7. Delivery at speed utilising our accelerators and delivery framework.
- 8. Integrated workflows across functions, teams, and silos.
- 9. Change management services to make the change stick.
- Digital Workflow enablement services supporting Centre of Excellence development.

- 1. Transforms government processes, fast tracking citizen services.
- 2. Leverages GenAl to conduct repetitive tasks more efficiently, removing/reducing paper.
- Reduces operational costs through streamlined processes, enabling resource efficiencies.
- 4. Reduces processing time and cost of service provision.
- 5. Connects end-to-end workflows across the entire citizen journey.
- 6. Reduces high-volume, manual tasks, focusing staff on core priorities.
- 7. Become self-sufficient with your Digital Workflow Centre of Excellence.
- 8. Enables employees to create digital workflow without developers.
- 9. Increased data accuracy, reducing operational risk
- 10. Integration with Microsoft, ServiceNow.



# **Digital Workflow**

### The problem

Over 4000 government interactions still require a PDF to be downloaded, over 50 still need that to be printed and sent back by post - Research undertaken by Kainos.

### The solution

A Government Digital Service (GDS) compliant end-to-end citizen service platform hosted in the cloud that enables the effective routing of work through the Government department.

Digital transformation helps businesses unlock productivity and create great experiences for both customers and employees. All of that occurs using workflows.

In many Government services, those workflows are still manual. While the citizen experience "above the glass" may be up to GDS standards, there is a lot of friction, particularly when you try to manage workflows across functions, teams, and silos.

As a leading provider of citizen-facing services for UK Government, Kainos's Digital Workflow services enable Government departments to create seamless, simple, and efficient workflow for customers and employees by connecting the front end to an

enterprise workflow and case management capability.

#### Why?

At Kainos, digital transformation is more than "digitizing transactions". It is also about redesigning how work gets done, creating new models for work and workers, and creating intelligent experiences enabled by technology. This includes automating repetitive tasks to enable workers to focus on higher-value tasks.



## Discovery

We have successfully delivered 60+ discoveries for Government clients, aligned to the GDS guidelines and service design standards.

We will collaborate with you to define the value and business benefits that this proposed digital service/product delivers using a user-centric approach and supported by understanding the existing technologies, processes and policies.

## Features

- 1. Define a service vision and future to-be, multichannel blueprint.
- 2. User research and prototyping to really understand user needs.
- 3. Iterative investigation through research, workshops and interviews.
- 4. Identification, collaboration and engagement with all stakeholders.
- 5. Liaise with existing service providers and subject matter experts.
- 6. Analysis of existing service operations, policies and business processes.
- 7. Analysis of existing technology, using innovative approaches to overcome constraints.
- 8. Production of outputs, e.g. business case, personas, RAID, Alpha plan/hypotheses.
- 9. Final deliverable of Alpha definition, scoped to maximise delivery success.
- 10. Four to eight-week timescale, depending on product or service scope.

- 1. Clear understanding of users' service needs, using experienced people.
- 2. Gain valuable user insights through rapid prototyping and wireframes.
- 3. Exploration/surfacing of key legislation, policies, business and technical constraints.
- 4. Pragmatism and sensitivity to project impacts, constraints and challenges.
- 5. Identification of risk/opportunities through deeper understanding of the problem.
- 6. Improved service benefit realisation through clarity of success criteria.
- 7. Validation of business strategy and exploration of alternative approaches.
- 8. Greater innovation, enabling closer alignment to the Target Operating Model.
- 9. High-quality artefacts prepared to socialise findings and initiate an Alpha.
- 10. Alignment with GDS Service Standard and principles.



## Discovery

Getting started is often the hardest part of a digital project. It's sometimes difficult to identify and prioritise the problems to tackle as part of a digital transformation. Typically, there are many services and processes that are semi-manual, paper-based, inflexible, expensive and hard to change.

Often, service inefficiencies arise from separate but overlapping business functions. Many are heavily interdependent on people and systems or have become entrenched in ways that are inflexible and removed from what the users really need.

Our Discovery resolves these problems by helping organisations gain a deep understanding of business and user needs within the constraints of existing services. Once the problem is understood we help define the new digital product or service, starting initially from the users' perspective and supported by an understanding of existing technologies, processes and policies. Our approach always involves collaboration with users and active solicitation of user feedback at every stage.

One of the primary outputs from a discovery is the proposition - this is a report that describes the high-level solution that is to be developed, its business purpose and the value it will yield. We provide support for the creation of a digital transformation business case and enable a quick start for delivery by defining a service backlog.

We use mock-ups/prototypes where appropriate to test concepts with users and gather high-quality user insight. In all cases, a discovery will understand the problem to be solved and provide a recommendation and next steps. If the problem is worth solving, then a correctly scoped alpha phase with a defined team ensures the customer is ready and informed to execute.

Kainos has been leading discovery phases for over 20 years, and we have continuously evolved our approach with the experience we have gathered along the way. We strongly align ourselves with the Government Digital Service (GDS) guidelines; in particular, the service design phases as listed in the GDS design manual:

https://www.gov.uk/service-manual/Agiledelivery/how-the-discovery-phase-works



# Information and Case Management

Kainos has significant experience deploying cloud-based endto-end Information and Case Management solutions, including Microsoft Dynamics 365, Microsoft Dynamics 365 Customer Engagement, and Microsoft SharePoint Online. It increases productivity and efficiency through digitising paper processes, end-to-end systems integration and data-driven decision-making using technologies including Microsoft Azure Apps, Power Apps, and PowerBI.

## Features

- 1. Enterprise Case, Workflow and Records Management – Cloud, On-premise, Hybrid.
- 2. Integration with customer portals, services, legacy and backend applications.
- 3. Maximised value and extensibility through configuration and bespoke features.
- 4. Digitisation and optimisation of paper processes.
- 5. Unlocks platform value through workflow, case management and reporting.
- 6. Information Architecture, User Experience Design and Service Design.
- 7. Comprehensive Implementation Services including cloud migration, integration and security.
- 8. Business analysis defines service features and supports organisational transformation.
- 9. Analysis, Training and Change Management.
- 10. Al for information processing and datadriven decision making.

- 1. Cloud-based, scalable enterprise solutions allowing work from anywhere.
- 2. Enables collaboration and accelerates business processes.
- 3. Improves customer engagement; streamlines business processes and their journey.
- 4. Provides high quality solutions that are secure by design.
- 5. Streamlines communication and management of information.
- 6. Increases accuracy, reduces costs and removes wasteful processes.
- 7. Increases enterprise collaboration, performance, efficiency and insights.
- 8. Optimises user experience and drives multi and omni-channel service transformation.
- 9. Realises value from existing investment in technology.
- 10. Competitive advantage through innovation and use of emerging technology.



# Information and Case Management

Backed by over 30 years of IT and consulting experience, and over 20 years focussing specifically on Case and Information Management, we have a long-standing track record of delivering successful outcome-focused solutions, on time and within budget.

We have delivered this service to organisations ranging from the Scottish Courts and Tribunal Service and Information Commissioners Office, to local authorities and NHS Trusts.

Whether the challenge is to eliminate paper, improve case handling times, boost customer engagement or accelerate business processes, Kainos' deep knowledge and technical expertise in the following areas means we are ideally positioned to turn business strategy into a plan of action:

- 1. End-to-end service design,
- 2. Workflow and case management,
- 3. Scanning and image processing,
- 4. Digital Forms, collaboration,
- 5. Knowledge management,
- 6. Portals,
- 7. Systems integration.

We offer a complete, one-stop access to Information and Case Management services, from simple product licences to complete implementation and delivery of comprehensive end-to-end solutions. We provide change management consultancy, requirements analysis, business process design, sourcing, implementation, training and postimplementation services.

You will have access to our wider team of 3,000+ skilled staff, including specialist working groups and technical capability teams as and when specific skills are required.

Project teams for larger solution changes and enhancements can be drawn from this pool of technical talent to work alongside the support teams. We will ensure a single point of contact remains for the support and ongoing enhancement of your solution.

Knowledge capture and transition are key elements in the success of any delivery. We have proven methodologies in place to ensure the correct processes are designed and in place from project inception.

A successful implementation is designed from the start with emphasis placed on outcome and user value.

We dedicate Research and Development time to keep abreast of new products and offerings in the market particularly in relation to the Cloud.

We can evidence our experience in Information and Case Management projects by our prestigious customers including the Home Office, Her Majesty's Courts and Tribunal Service, the Public Health Authority in Northern Ireland, the Scottish Courts and Tribunal Service and over 30 NHS Trusts across the UK.



# Serverless Application Development

Kainos works in partnership with customers to develop modern web or event-based applications using function-as-a-service (also called serverless).

We developed some of the first serverless implementations across Government and in the process have helped our customers realise significant cost savings, reduced time-to-market and increased team productivity and velocity.

### Features

- 1. A focus on business logic leads to team productivity improvements.
- 2. Enables greater focus on User Experience instead of infrastructure.
- 3. Minimised infrastructure concerns translate to less infrastructure configuration.
- 4. Elastically scalable service which can react intelligently to demand.
- 5. Functionally decomposed components are easier to understand, debug, and iterate.
- 6. Fully compatible with traditional applications: websites, APIs, batch-processing etc.
- 7. Minimised traditional operational concerns such as patching and maintenance.
- 8. Cloud agnostic partner (AWS, Azure, Google Cloud Platform).

- 1. Specialist serverless expertise minimises delivery risks e.g. cold-start optimisations.
- 2. Costs incurred only during function execution; no latent charges.
- 3. Scales elastically on demand to easily meet spikes in traffic.
- 4. Support for modern programming languages: Java, NodeJS, C# and Python.
- 5. Increased serverless observability through platform logging and monitoring tools.
- 6. Integrates with other cloud services, i.e. API gateways or message-queues.
- 7. Reduced time-to-market by increasing team and development velocity.
- 8. Staff enablement through our specialist serverless expertise and experience.
- 9. Reduced operational costs as latent system capacity no longer required.
- 10. Increased speed of deployment through automated build processes.



# Serverless Application Development

Serverless is the next evolution in how software services are delivered. This is a modern way of creating web-based and event-based systems by using cloud platforms and application services, without having to provision fixed infrastructure or spend time configuring servers.

The cloud provider worries about provisioning the underlying servers to enable your functions to execute and it means you, the customer, can focus on extracting the maximum business value from the service.

Application development teams can spend their time focusing on writing the code that solves the business's specific problems and less time on managing configuration of virtual machines or application containers.

Operational telemetry and monitoring is built into the application and function execution, ensuring that while no infrastructure is managed by the team, logging, monitoring, and metrics are still included in the application and are integrated into the platform's operational services.

Serverless applications have a reduced attack surface and are inherently more secure. With no infrastructure level access and no permanent infrastructure instances, securing serverless applications focusses on tightly isolating components from each other, relying on authentication and role-based authorisation for function execution alongside encryption in transit of messages and encryption at rest of data sources. Public cloud platforms supporting serverless application development include Amazon Web Services, Microsoft Azure, and Google Cloud Platform.

Programming languages supported, depend on the provider, but include Java, C#, .Net, NodeJS, and Python so application teams can bring their existing development experience to bear on these new platforms.

Serverless applications are characterised by being composed of smaller components integrated together to provide elastic scalability on demand, paying only for usage and not by peak capacity. Increased demand means scaling up only the components necessary to handle increased load and not the whole system. This allows greatly reduced operational cost for services which have seasonal demand cycles or which, for example, see much less user load at night, as reduced utilisation means reduced cost.

# Serverless Application Development

Serverless is the next evolution in how software services are delivered. This is a modern way of creating web based and event-based systems by using cloud platforms and application services, without having to provision fixed infrastructure or spend time configuring servers.

#### **Our Unique Experience**

Kainos is already at the forefront of serverless adoption having implemented high profile services for clients such as DVSA. The MOT Reminder service is a completely serverless application based on Amazon Web Services Lambda platform. DVSA's re-usable certificate printing components – originated in the MOT Testing Service and reused across the department – has been revamped with a lower cost and more flexible serverless architecture.

We are equally as confident developing entirely new serverless applications based on your business requirements as we are in rearchitecting and re-developing existing services to leverage the benefits that a serverless architecture can bring.

For example, for the Department of Transport, we designed and delivered a digital service for registered local highway authorities in England and third parties to plan and manage street and road works. This included aggregating and making data available regarding road works to improve collaboration and reduce congestion. This service uses an Open Data solution that notifies interested parties, reliably delivering over 1.2 million notifications per day in nearreal-time about current and upcoming works and activities. Kainos delivered a number of projects in response to the COVID-19 pandemic. One such project assisted people who were unable to work for more than seven days because of coronavirus, allowing them to obtain an isolation note through an online service that we delivered for NHS England. It generated a certificate which was sent via email through the NHS website. This used a fully serverless Microsoft Azure platform that was required to scale based on daily Covid infection spikes.

While serverless is often seen as the remedy to many problems, we will perform in-depth assessments of your use case to determine if a serverless application will meet your unique requirements and ensure that the correct serverless technologies are selected and implemented to meet your success criteria.



# Urgent Digital Delivery / Critical Digital Delivery

Kainos is highly experienced in urgent digital delivery, rapidly deploying distributed multi-disciplinary teams onsite and/or remotely using Lean Agile accelerated delivery techniques. We offer a reactive and flexible service, deploying established scrum teams at short notice to support urgent/crisis responses, including EU-Exit and COVID-19 pandemic.

## Features

- 1. Rapid deployment of Agile multi-disciplinary teams onsite, nearshore, remote working.
- 2. Delivery timeframes shortened, through close collaboration and highly skilled teams.
- 3. Focus on immediate scope and short/ medium term goals.
- 4. Deliver urgent needs to support critical national infrastructure requirements.
- 5. Maximise re-use and products, repurposing existing solutions to reduce delivery.
- 6. Risk based decision making to drive a minimal feature set.
- 7. Supportability and production readiness planned and tested early.
- 8. Lean approach with constant focus on small rapid delivery releases.
- 9. Scaling up the service and user-base quickly, safely and securely.
- 10. Mature tooling and highly skilled engineers to accelerate performance testing.

- Accelerated delivery during crises; Flu, COVID-19, Coronavirus, Pandemics. EU Exit.
- 2. Meet urgent deadlines with value achieved early and frequently.
- 3. Support changing and emerging needs with all options explored.
- 4. Secure live MVP service rapidly deployed.
- 5. Uses Design sprints to rapidly test ideas and technical concepts.
- 6. Shorter time-to-market through lean product development.
- 7. Reuse of similar government services and open-source technologies.
- 8. Open and transparent ensures tangible benefits and outcomes.
- 9. Microsoft Gold Cloud Platform.
- 10. AWS Advanced Consulting partner and Public Sector partner.



# Urgent Digital Delivery / Critical Digital Delivery

In the case of urgent/critical situations; such as EU Exit or a pandemic like COVID-19; Kainos provides a highly experienced team of digital experts to deliver effective, user-centred, and secure solutions quickly.

With a keen focus on the right skills match, engaging collaboratively and closely with the business and pivoting throughout; Kainos iteratively discovers the business and user needs and then rapidly delivers the minimum valuable service. This is an approach which maximises reuse whilst ensuring the final business goal is always in focus.

#### Approach

Kainos's Urgent Digital Delivery / Critical Digital Delivery service provides product management, service design, and service implementation as part of a cohesive team, working jointly with business representatives to deliver solutions quickly.

We work closely with relevant stakeholders to identify the key needs and dates to allow a rollout plan to be supported. The Kainos team will explore the service needs to ensure focus on a lean service, reducing waste and therefore time.

User engagement is still key in these services to ultimately ensure success, but this is accelerated along with rapid prototyping to maximise success.

#### **Technology Delivery**

Quick, but effective, technology choices are key in cases of urgency. Kainos uses our GDS and GOV.UK experience and our partner network (e.g. Azure and AWS) to select the optimal solution.

Non-functional requirements e.g. scalability, resiliency and security are key. These can't be forgotten, Kainos delivers services with security included by design and uses proven techniques to ensure performance.

Using a continuous delivery approach from the outset ensures constant technical readiness for release, allowing frequent business releases and removing the risks associated with "bigbang" releases.

Kainos explores all opportunities for re-use to reduce delivery time. Viable reusable components will have been well tested (both functionally and non-functionally), proven in similar production environments and will reduce the implementation time without impacting quality.

Kainos accelerates core application development and the wider service delivery through AI and data expertise making data more readily available.





# UN International Organization for Migration

"You are indeed **trailblazers in this space** and have much to teach the rest of the UN community" Marietta Muwanga-Ssevume, CIO, UN IOM

The IOM is responsible for the orderly and humane management of migration and to **provide humanitarian assistance** to migrants in need – this **impacts 30 million people** per year

Kainos moved **700 virtual machines** based in data centres on **three continents** to a Microsoft Azure cloud-based environment

Improved the security, availability and resilience of **450 local missions** across **150 countries** including accelerated support for **Kabul and Kyiv missions** 

92% reduction in carbon emissions





## Employee Document Management (EDM)

"We can be compliant. We can meet all the functional requirements. We can increase the efficiency of our HR teams. We can empower our employees."

Zuzana Rozkosna | HR Global Project Manager at Hilti

The Hilti Group has **33,000 team members** in **120 countries**, supplying the construction and energy industries with technologically leading products and systems.

A **Workday customer since 2020**, they struggled with their document management systems – **fragmented**, **outdated**, **disconnected** and with different regions using vastly different systems.

By deploying Kainos **EDM**, the first end-to-end Workday document management solution, Hilti achieved:

- ✓ 50% of documents signed within 24 hours
- ✓ 50% reduction in document creation time
- Retired inefficient document management systems



## Innovate UK:

How the uk's innovation engine achieved business transformation with workday and kainos

"Everything is more seamless, slicker, all of our data is in one platform, all of our different departments are able to communicate and collaborate more effectively, and we have these terrific tools from Kainos that save us so much time and effort."

Graeme Petrie | Systems Finance Business Partner at Innovate UK

Innovate UK is the United Kingdom's national innovation agency. A public body with **over 500 employees**, the organisation supports business- led innovation in all sectors, technologies, and UK regions.

Innovate UK chose Kainos as its official Workday partner for a few important reasons. But as Michael sums it up succinctly, the main reason was that "Kainos was the best ever—ever, ever!"

Innovate UK selected Kainos after a selection process during which they reviewed the modules they wanted to deploy, the costs, partners' offerings, and whether each partner met the organisation's procurement framework. Through this rigorous process, Kainos emerged as the clear solution for Innovate UK's Workday needs.

- ✓ Brought many moving parts into a coordinated, centralised system
- Provided Workday expertise, support, and cost savings across multiple lines of business
- Enabled business transformation through enhanced teamwork and data utilisation





## Where we are

### **The Americas**

Toronto Atlanta Indianapolis Denver Buenos Aires

## **UK and Ireland**

London Birmingham Belfast Derry Dublin

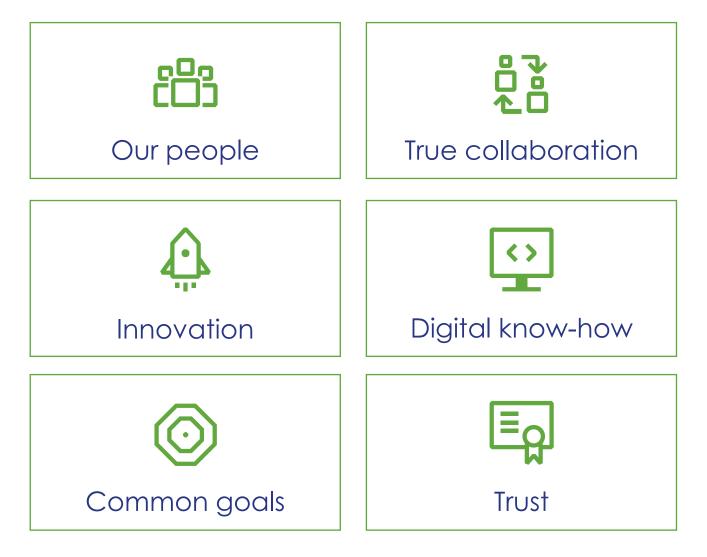
### **Central Europe**

Gdansk Amsterdam Hamburg Copenhagen Helsinki Stockholm Antwerp Frankfurt





## What makes us stand out







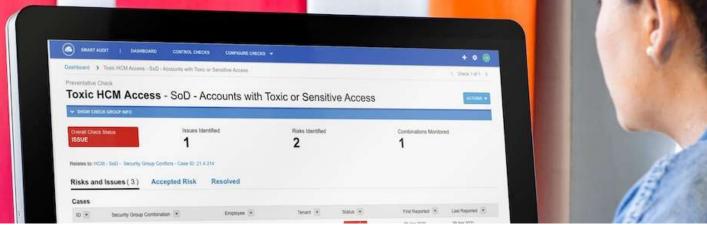
## **Digital Services**

We are **engineers**, specialists. We **overcome big challenges** for our clients, through delivery of **intelligent** digital services that use the best in **talent and technology**.









# Workday

Kainos is a Workday **phase one prime status partner** in all European and North American markets. We have worked with industry giants in over **40 countries worldwide**.





#### Partner Since 2011

We are the only certified Workday Services, Software and Extend partner globally.



#### Workday Services

Full range provider from predeployment consulting, implementation and support.

Workday Public Sector

We have implemented and

support many UK Public Sector



#### 580 Customers

We are a Workday customer and have deployed HCM, Financials, Recruitment, Planning and PSA to run our business.



#### Kainos Smart

Our product is deployed to 400+ customers globally saving them 1000s of testing hours.



#### 814 Consultants

customers.

Hold over 2100 Workday certifications covering all areas of the platform.



# Trusted to deliver the UK Governments biggest digital programmes

### 50 million citizens

use our software to apply for a driving license, renew their car tax, apply for a passport, or register to vote.

### 10 million employees

benefit from our expertise in deploying, optimising and safeguarding Workday for the world's biggest brands.

### 25 million people

GOV.UK

O Yes

Your orders

BETA This is a new service - your [codback will help us to impro

with their details rather than your own

Do you live in the UK?

If you're applying on behalf of an adult or child, answer these questions

use the NHS App, developed by us to allow patients easier and quicker access to healthcare services.

### 10 million transactions

are securely anonymised in under ten minutes by just one of our digital payment solutions.



Apply for a passport

# Our commitment to HM Government policy



#### **Building capability**

Delivering a cross-government strategy to help departments recruit, develop and retain the right people and skills needed to transform public services.

#### **Diversity**

Maximising service experience for citizens and civil servants by delivering projects with diverse teams, underpinned by our BAME, LGBTQIA+ and female communities.

### COVID-19 recovery

Leading the way by applying our expertise in Healthcare and technology to tackle the pandemic and inform critical decision-making.

#### Accessibility

Ensuring equal access, experiences and outcomes for users with access needs and ensuring compliance with legislation, through our unique Inclusive Design practice.

### Sustainability

With a comprehensive sustainability strategy underway, we will be a Carbon Net Zero company by 2030.

### Social responsibility

Tackling workforce inequality and ensuring equal access to technical and vocational education, through our Academies, Camps and Earn as you Learn schemes.





# The Code of Ethics

We are guided by our 6 ethical principles.



### Wellbeing

We protect the wellbeing of our staff, customers and communities.



### Equality

We improve access and inclusion and minimise bias.



#### Transparency Our decisions are traceable and accountable.



#### **Environment** We act responsibly towards the Earth and its resources.



### Integrity We hold ourselves and others to

ethical standards.



## Initiative

We take initiative to deliver social value and positive impacts.





# **Social Values**

### Climate action

We are committed to act responsibly to protect the natural world around us. Our near-term aim is to be Carbon Net Zero by 2025 whilst helping our people, customers, partners and suppliers to achieve their own low carbon futures.

### Good health & wellbeing

Supporting colleagues to bring their best selves to work through initiatives, learning and guidance to safeguard social, emotional, financial, physical and career wellbeing.

## Reduced inequalities

Delivering value and innovation, supported by network groups led by LGBTQIA+, neurodiverse, disabled and ethnic diversity colleagues.

XPRESSION



embrace



## Gender equality

Improving the gender diversity in Kainos and the tech sector through activities that inspire women to build their careers with us.

### INSPIRE

### Quality education

Empowering our people through best practice behavioural and technical learning courses and programs and inspiring the next generation of technology leaders through our award-winning Tech Outreach projects and learning Academies.







# Our Artificial Intelligence Projects

### The Journey

#### 2016

Machine Learning and AI identified as an innovation research topic

#### 2017

Dedicated AI Team formed to explore interest with clients

#### 2019

Data & AI practice launched to support our clients

#### 2023

Over 190 professionals delivering significant, leading-edge projects

**£10m investment** to embed AI skills across all development teams

Supporting 25 clients with GenAI and projects moving to deployment

## **Example Projects**



Applied advanced NLP to automate the redaction of witness statements for a large UK policing constabulary



Used LLMs to covert over 10m complex Local Authority unstructured data points to help digitise a critical legacy service



GenAl pilot to support rigorous inlocation inspection of machinery and NLP to summarise and standardise generated reports



Enabled a large-scale maritime and beach-landing data collection exercise to help develop cutting edge Al products



## BCDR and Exit Plan

#### **Business Continuity and Disaster Recovery (BCDR)**

A Business Continuity Plan can be provided if required. This shall set out the arrangements to be invoked in the event of an actual or perceived threat to business continuity, to ensure continued operation of the system and continuity of the services provided by Kainos pursuant to the Prime Agreement and shall include: the alternative processes, options and responsibilities that may be adopted in the event of a failure or disruption to the system and/or services provided by Kainos pursuant to the Prime Agreement; and the steps to be taken by Kainos upon resumption of the system and services provided by Kainos pursuant to the Prime Agreement in order to address any prevailing effect of the failure or disruption including a root cause analysis of the failure or disruption.

#### **Exit Plan**

An Exit Plan can be provided if required to detail the steps that would be carried out to ensure smooth transition of Kainos services to a new supplier. The steps outlined in the Exit Plan will help mitigate against any disruption to the service during the transition period. It is assumed that any new supplier will themselves have a procedure they wish to follow during the transition period, and as such the steps in this Exit Plan will serve as a checklist for the new supplier to ensure all key areas of the transition have been covered. The Exit Plan will therefore be subject to refinement should it be exercised.



# **Commercial Statement**

#### **Confidentiality and Copyright**

© Kainos Software Limited 2024 ("Kainos")

The contents of this document are commercial and confidential in nature and the copyright of Kainos. This document must not be reproduced (in whole or in part) save in connection with the purpose for which it was issued.

#### **Trademarks**

Kainos® is a registered trademark of Kainos Software Limited. All rights reserved. You may not delete or change or modify any copyright or trademark notice.

#### Caveats

Kainos has used all reasonable endeavours to ensure that the contents of this document are accurate but is not responsible for any errors or omissions.

All information provided prior to execution of a contract is provided 'as is' and 'subject to contract' without warranty of any kind.

This document does not constitute an offer from Kainos. In the event that the parties elect to work together, they will only be contractually bound to each other upon signature of a contract.

