Application Modernisation

Service Definition Document

Sopra Steria

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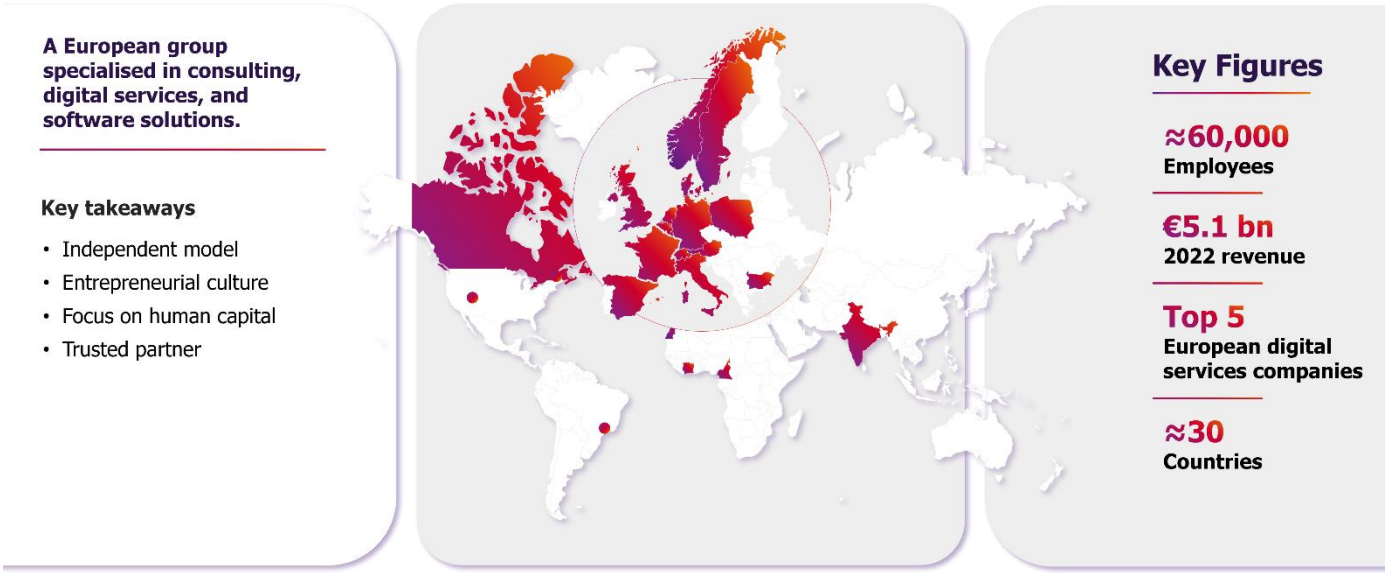
1 About Sopra Steria

1.1 Overview

Sopra Steria is a European tech leader recognised for consulting, digital services, and software development, helping our clients drive digital transformation to obtain tangible and sustainable benefits. We provide end-to-end solutions to make organisations more competitive by combining in-depth knowledge of a wide range of business sectors and innovative technologies with a fully collaborative approach. Sopra Steria places people at the heart of everything we do and is committed to making the most of digital technology to build a positive future for our clients. Our reach is illustrated below:

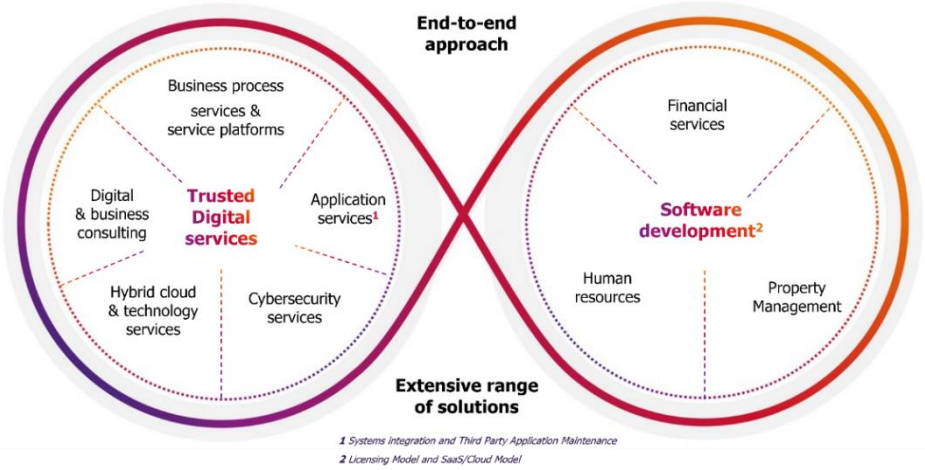


Making a difference is central to what we do and how we support our clients, and in turn, citizens. We reshape public services, making them more efficient to deliver and more accessible for the people that need them, across central and local government, devolved governments, and the wider public sector.

1.2 Our Cloud Capability

Our Cloud Centre of Excellence and cloud-enabled Practices serve clients across the public sector, delivered by a global team of cloud practitioners, with certified resources in AWS, Microsoft Azure, Google Cloud, and Oracle Cloud.

Sopra Steria offers a comprehensive end-to-end offering, comprising trusted digital services and software development:



1.3 Our Credentials

Cybersecurity

Leader "Cyber resiliency services" (NelsonHall)

Cloud

Large account (best category>$250m) in the "Public Sector Industry Cloud Landscape" (Forrester)

Leader "Cloud public in Europe" (ISG)

Leader "Cloud Native Application" & "Application Transformation Services" (Quadrant)

IA

Leader "Intelligence Process Automation" (Quadrant)

Major player "European Professional Services for Data-Drive" (IDC)

Major contenders "AI services" & "Intelligent Process Automation services" (Everest)

Digital twins

Industrial metaverse

Partnership with Nvidia & SkyReal

Major Contender "Digital twin Services" (Everest)

IT for Green

Best in class "consulting and digital services for sustainable development" (PAC Innovation Radar)

Major Contender "NetZero Consulting Services" (Everest)

PAC IDC ISG Quadrant

Everest Group PEAK MATRIX NelsonHall FORRESTER

2 Service Overview

2.1 Service Description

Our Cloud Agnostic Application Modernisation Services empower organisations to transform their legacy applications into modern, scalable and efficient solutions. By embracing cloud native principles, we can help to reduce technical debt, enhance availability, empower users, and improve the overall user experience.

2.2 Features

- Implementation of modern data platforms
- Cloud enterprise data warehouses and data lakes
- Orchestration and automation
- Empowering Business users through use of cloud native Low Code/No Code solutions
- Acceleration of innovation through adoption of Low Code/No Code tools in development
- Refactoring of monolithic applications to fit better with cloud application run time models such as serverless
- Reduction of technical debt
- Planning and governance
- Training and knowledge transfer

2.3 Benefits

- Improved data accessibility, scalability, and cost efficiency
- Enhanced data analytics capabilities, improved query performance, and simplified data management
- Streamlined workflows, reduced manual intervention, and improved reliability
- Clear project direction, risk mitigation, and compliance with industry standards
- Upskilled workforce, reduced dependency on external resources, and faster adoption
- Digital agility and scalability
- Reduced time to market
- Improved cost efficiencies
- Improved portability across cloud platforms and avoidance of vendor lock in

2.4 Our Approach

Assessment and Discovery

- **Understanding Your Current State:** We comprehensively assess your existing applications, architecture, and business requirements to identify legacy components, technical debt, and areas for improvement
- **Cloud Readiness Assessment:** Evaluate the suitability of your applications for cloud migration and determine which applications are prime candidates for modernisation
- **Business and Technical Goals Alignment:** Collaborate with your teams to align modernisation goals with business objectives and define success criteria and KPIs

Design and Architecture:

- **Cloud-Agnostic Design Principles:** Leverage cloud agnostic design patterns to ensure portability

across multiple cloud platforms

- **Microservices and Containerization:** Decompose monolithic applications into microservices and containerise components using widely used containerisation technologies such as Kubernetes and cloud provider equivalents, enabling independent scaling and deployment as part of the solution

Application Modernisation:

- **Front-End Modernisation:** Assess existing application user interfaces(UI) and user experience(UX) and utilise low-code/no-code platforms for rapid front-end development and incrementally enhance UI elements while minimising disruption
- **Back-End Refactoring:** Optimize back-end services for cloud-native architectures, migrate databases to managed services in cloud and implement serverless components where possible
- **Data Modernisation:** Migrate data workloads to cloud data warehouses and implement ETL pipelines for seamless data movement, ensuring data consistency and security

Implementation and Migration:

- **Container Orchestration:** Deploy microservices using Kubernetes or cloud native equivalents.
  - Ensure a consistent run time platform for container work loads
  - Promotes portability and reusability of container images
  - Ensure consistent performance across cloud providers
- **Multi-Cloud Deployment:**
  - Architect applications to run on multiple clouds
  - Use of Kubernetes or cloud native equivalents as a standard management layer
- **Gradual Migration:**
  - Adopt a phased approach to minimise risk
  - Migrate data and workloads incrementally
  - Monitor performance and user experience during migration

Testing and Quality Assurance:

- **Functional Testing:**
  - Validate application functionality across cloud platforms
  - Ensure consistent behaviour
- **Performance Testing:**
  - Assess scalability, response times, and resource utilisation
  - Optimise as needed
- **Security Testing:**
  - Address security vulnerabilities
  - Implement identity and access management (IAM) controls

Knowledge Transfer:

- **Empower Your Team:**

- Transfer knowledge to developers, operations, and support teams
- Foster cloud-native practices
- Encourage continuous learning and development

2.5 Inputs

After completing the assessment and discovery, which is documented in a separately, for application modernisation to proceed, the key inputs required to execute the modernisation will include:

- Application Details to include:
  - Operating System platforms currently in use
  - Programming languages used to develop applications
  - The type of applications currently deployed to include information to identify bespoke, commercial of the shelf and software as a service
  - Identification of mission critical and non-mission critical applications
- Modernisation preferences:
  - Code refactoring to improve efficiency, maintainability and scalability
  - Containerisation suitability evaluation
  - Lift and shift migration to cloud
  - As is application re-platforming for applications that do not need significant changes
- Balance of Control and Productivity:
  - Most control by re-platforming and running on cloud container services
  - Balanced control and productivity by modernizing to use cloud application PaaS services
  - Refactoring to cloud Low Code/No Code services
- Resource Allocation:
  - Identification and allocation of the necessary resources for the application migration, to include development and application support resources and application SME's
- Application Architectural Designs:
  - This is necessary to gain an understanding of software modules, and the requirements for interfacing, integration, functional elements, non-functional elements, scalability and performance, availability, security, maintainability and extensibility
- Application Migration Plan:
  - A migration plan for each application identified in the assessment, specifying the migration approach, sequence, dependencies, and any required modifications or updates to ensure compatibility with the cloud environment
- Data Migration Plan:
  - Develop a data migration plan outlining how data will be transferred from on-premises systems or other clouds to the target cloud. Considerations include minimizing downtime, ensuring data integrity, and implementing efficient transfer methods

- Security and Compliance Measures:
    - Implement security controls and compliance measures identified during the assessment to ensure the security and compliance of data and applications in the cloud environment. This may include configuring access controls, encryption, and compliance monitoring
- Change Management Plan:
    - Develop a change management plan to manage organizational changes and stakeholder communications throughout the modernisation process. This includes providing training and support for end-users and stakeholders affected by the application modernisation.
- Testing and Validation:
    - Conduct thorough testing and validation of migrated or modernised applications in the cloud environment to ensure functionality, performance, and reliability. This may involve testing for compatibility, performance benchmarks, and user acceptance testing.

This is a high-level list and is not exhaustive. If you cannot provide all of these inputs, then we can discuss altering our approach to accommodate your situation.

2.6 Outputs & Deliverables

Some of the outputs and deliverables generated from the service are identified below:

After the Application Modernisation has been successfully executed, the supplier should provide the customer with key outputs and deliverables to ensure a smooth transition and ongoing support. These deliverables may include:

- Application Modernisation Completion Report: A comprehensive report detailing the successful completion of the Application Modernisation project. This report should include an overview of the Application Modernisation process, milestones achieved, and any challenges encountered and resolved during the migration.
- Post-Completion Assessment: An assessment of the modernised environment to validate that all in-scope applications, data, infrastructure and databases have been successfully modernised and re-platformed in the cloud. This assessment should verify data integrity, application functionality, and performance benchmarks.
- Documentation: Comprehensive documentation detailing the modernised applications and the environments they are running on, including topology's, configurations, network diagrams, security settings, and any customizations or modifications made during the Application Modernisation process. This documentation serves as a reference for ongoing management and troubleshooting.
- Training/Knowledge Transfer Materials: Materials and resources to help end-users and stakeholders familiarize themselves with the new modernised applications running in cloud environments. This may include user guides, tutorials, and training sessions to ensure a smooth transition and maximize productivity.
- Handover of Application Implementation Materials: Provisioning of materials that would be required by the customer to support and maintain their modernised applications to include source code, packages, configuration scripts and build and deployment scripts.
- Support and Maintenance Plan: A support and maintenance plan outlining the supplier's responsibilities for ongoing support, maintenance, and monitoring of the Modernised applications as well as the cloud environments on which they are hosted. This plan should specify service level agreements (SLAs), escalation procedures, and contact information for support requests.

- Optimization Recommendations: Recommendations for optimizing the cloud environment to improve performance, efficiency, and cost-effectiveness. This may include suggestions for rightsizing resources, implementing cost-saving measures, and optimizing configurations based on usage patterns and best practices.
- Security and Compliance Documentation: Documentation outlining security controls, compliance measures, and regulatory requirements implemented in the cloud environment. This may include compliance reports, audit logs, and documentation of security policies and procedures.
- Feedback and Review Session: A feedback and review session with the customer to gather feedback on the application modernisation and migration process, address any remaining concerns or issues, and identify opportunities for improvement. This session provides an opportunity to ensure customer satisfaction and identify areas for future collaboration.

This is a high-level list and is not exhaustive.

2.7 Certifications & Skills

Some of our certifications and skills related to this service are identified below:

- Cloud Architecture
- Cloud Solution Engineering
- Application Architecture
- Application Development
- DevSecOps

This is a high-level list and is not exhaustive.

3 Pricing

Please refer to the Pricing Document for this Service.

4 Next Steps

4.1 Contact

Please contact us if you would like to know more about this service or any of our listings on G-Cloud.

Email: soprasteria-gcloud@soprasteria.com

As all of our G-Cloud enquiries initially come into a single contact, please remember to tell us:

- Your name, your organisation name and contact details
- Which service you are enquiring about
- A brief summary of your requirements or problem statements that you would like support to address

4.2 More Information

More information about our services and capabilities can be found on our website here.