Applied Informatics

G-Cloud Service Definition

Integration Architecture & Design

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1 Service description

Our Integration Architecture & Design service helps organisations create seamless business processes and user-facing digital services capable of utilising information and services distributed across internal and partner systems. In doing so, the service aims to help organisations create new services and improve quality, efficiency and productivity of existing services through process automation and integration, and expand self-service provision by facilitating API access to mobile and web applications.

The service is applicable to integrating data within and between organisations, and between procured COTS, bespoke and legacy systems running in the cloud or within hybrid environments and managing their own data.

The service deliverables are tailored to meet the specific requirements of each project and together provide the architecture and design inputs needed to specify, select and implement an end-to-end integration solution.

Our Integration Architecture & Design service includes:

- End-to-end integration design describing:
    - data flows and volumes;
    - capabilities and components needed to deliver functional and data requirements; and
    - capabilities and components needed to support cross-functional needs such as system management, performance, security, audit, directory services and hosting.
- Data transformation and interoperability; and process orchestration and workflow.
- Data governance to manage compliance, privacy and data quality.
- Integration styles, including API platforms, ESBs, message brokers, event driven architectures and data hubs.
- Process and data focused integration; integration of structured and unstructured data; and bulk data integration.

1.1 Service features

- Integrate business processes and information with new and existing system and services.
- Integrate business processes and information with partner systems.
- Facilitate self-service user access to services and information.
- Support loosely coupled integration to manage dependencies and promote agility.
- Enable physical and virtual data consolidation.
- Implement extensible architecture that supports:
    - long term maintainability to enable the system to adapt and evolve; and
    - system interoperability, by adopting or adapting international, industry or de facto standards where applicable.

1.2 Service benefits

- Align information systems architecture to business needs to deliver new services and improve quality, efficiency and productivity of existing services.
- Reduce complexity and cost of integration by using vendor-neutral standards to standardise data and connectivity, ensure systems interoperate and prevent vendor lock-in.
- Reduce complexity and cost of integration using shared platform and infrastructure (e.g. shared directories, repositories and APIs).
- Proven methods (including. use of architecture patterns) and tools used to accelerate delivery, reducing time and cost while guaranteeing quality.

1.3 Related services

- Business Analysis & Process Design: to elaborate functional and data requirements.
- Solution Architecture & Design: to elaborate system requirements.
- Data Architecture: describing data sources, structures, relationships, usage, processing, management and flows.
- Data Modelling & Design: describing detailed data requirements needed for interface, data interoperability and data transformation design.
- Requirements Management: to catalogue and manage integration requirements.

2 Service provision

2.1 Requesting the service

Following a request from the client, we will arrange a meeting to gain an overview of the client's project (including objectives, timelines, budget, etc.) and understand the client's needs and types of data modelling deliverables that need to be produced.

We will assign a team of one or more specialists, including an Integration Architect, based on the size and complexity of the project.

2.2 Required inputs

- Project plan (or similar documentation) describing scope, objectives, stakeholders, deliverables, approach, governance processes and timelines.
- Project team roles and responsibilities.
- Any additional background information regarding the project.
- Relevant business and technical documentation, e.g. IT strategy, migration plan, business, data and system requirements, business process / data flows, use cases, existing interface specifications, data standards, models and schemas and system architecture documentation.
- Integration Architecture statement(s) of work.

2.3 Providing the service

We will determine the approach, order of steps and required level of detail, in consultation with the project team based on the project objectives and scope.

1. We will review the project, business and system documentation.
2. We will identify and engage with:
    - business stakeholders to understand organisation and business needs; and
    - technical stakeholders to understand existing data flows, interfaces and services.

    This will be repeated as needed throughout the course of the project and may lead to our updating existing, or gathering additional, requirements.
3. We will agree integration architecture and design deliverables with the project team and stakeholders, including models, viewpoints, catalogues, mappings, roadmaps and reports. Following this, we will set up architecture modelling toolset and repository, and select which standards, reference models, patterns, etc. to adopt.

4. Next, we will define and document the Integration Architecture/Design and Requirements. Depending on the level of detail required this deliverable will comprise:
    - list of business requirements (e.g. use cases or user stories) to be addressed;
    - integration architecture principles and design rationale;
    - conceptual or logical model describing:
        - required capabilities, systems and data flows, taking into consideration the existing capabilities, data flows and interfaces to be migrated as-is or migrated and adapted;
        - functional services, orchestration logic and interactions needed to facilitate data flows; and
        - architecture patterns and supporting cross-functional services;
    - resulting integration requirements; and
    - risks, assumptions, issues and dependencies.
5. We will create an Interface Catalogue listing all of the interfaces required to deliver the integration solution and the capabilities/components to which they map.
6. We will create an Implementation Roadmap (as required) showing key activities, milestones and estimated timelines required to transition target integration architecture.
7. To support implementation, we will create detailed interface specifications, defining interaction protocols and message structures for all interfaces requiring further implementation guidance. For standard or pre-existing interfaces, we will direct suppliers to where the existing specifications can be found.
8. Finally, we will arrange for stakeholder review(s) of deliverables for project sign-off. Depending on the project approach this may be undertaken as each individual deliverable is completed or after all deliverables have been completed.

2.4 Service deliverables

- Integration Architecture/Design and Requirements document describing end-to-end integration architecture/design and resulting requirements, together with risks, assumptions, issues and dependencies.
- Interface Catalogue listing all interfaces required for integration together with the capabilities/components to which they map.
- Integration Roadmap (as required) showing key activities, milestones and estimated timelines.
- Interface Specifications (as required) to support implementation.

3 Service operation

3.1 On-boarding process

Unless stated otherwise in the PO, we will aim to on-board the necessary specialist(s) and initiate the service within 7 working days of receiving the PO. To facilitate this, Applied Informatics will assist the client with completing the PO (if requested).

3.2 Service levels

3.2.1 Service availability

- Office hours: 09:00 – 17:00 Monday to Friday excluding national holidays.
- Specialist hours:
    - Working day: 8 hours exclusive of travel and lunch.
    - Working week: Monday to Friday excluding national holidays.

3.2.2 Service performance

- Service Account Manager will respond to all service enquiries and requests within 24 hours.
- Service Account Manager will arrange regular meetings throughout the duration of the project to monitor performance, ensure the client's needs are being met and resolve any issues.
- In the unlikely event that any part of the performance of the service is deemed unsatisfactory, Applied Informatics will:
    - agree with the client a timeframe of not more than 72 hours to resolve the issue;
    - not charge the client for the part of the service deemed unsatisfactory from the time of notification until the issue is resolved to the client's satisfaction.
- Applied Informatics will provide laptops needed for specialists to undertake their work unless use of the client's own equipment is mandated for reasons of security or because of constraints on being able to access the client's data externally.

3.2.3 Assumptions

Providing and operating this service to the client's full satisfaction is based on the following assumptions.

- Client provides a full and clear description of the required service(s) required.
- Client and Applied Informatics agree delivery timelines of requested services.
- Client responds promptly to any requests for clarification or further information.
- Service Account Manager is notified immediately the client becomes aware of any issues concerning service performance that the specialist has not been able to resolve.

3.3 Knowledge transfer

We are keen to assist clients in developing their own technical capabilities by upskilling their own staff and in-house teams where they have the capacity to do so. We will therefore be pleased to include knowledge transfer in the PO as part of the services that the specialist will provide.

If required, the Service Account Manager will work with the client to agree a knowledge transfer plan. This may range from a hand-over workshop prior to off-boarding to more comprehensive knowledge transfer such as mentoring staff throughout the specialist's period of the engagement; on-the-job training (OJT) or coaching; or assessed competency based training (CBT).

3.4 Off-boarding process

Off-boarding requirements, such as hand-over or ongoing support, may be included within the PO as part of the specified services to be provided by the specialist. If required, the Service Account Manager will work with the client to agree an exit plan, setting out the scope of the off-board requirements and timescale for meeting them in more detail.

4 Service pricing, ordering and invoicing

4.1 Service pricing

The service can be provided on time and materials basis or delivered as a fixed price package of work. See pricing document for indicative day rates of specialists.

4.2 Service ordering

Service ordering follows the G-Cloud framework contract process. The service and specialists we will provide will be detailed in the PO included within the Call-Off contract both parties will sign.

The PO will also provide the opportunity for the client to tailor the service to their specific needs and project approach, such as requesting provision of specified deliverables or additional specialist resources to support delivery.

4.3 Service invoicing

We will accurately record the time and activities undertaken by our technical specialists.

Subject to any variations of payment terms set out in the PO, clients are required to review and approve timesheets at the end of each calendar month. We will invoice and seek payment according to the terms of the call-off contract.

We can issue invoices by email, via any suitable online payments system or by post. We request payment by BACS within 30 days of the date of the invoice.

5 Service termination

Our terms and conditions provide termination by either party. Please see a copy of our Additional G-Cloud Terms and Conditions for full details.

6 Further information

For more information about this or any of our G-Cloud services, please email: enquiries@applied-informatics.com and include the following information:

- Name of service(s) in which you are interested.
- Your name, position and contact details.
- Name of your organisation.
- Brief description of your business needs.
- Indicative timescales for delivery the work.