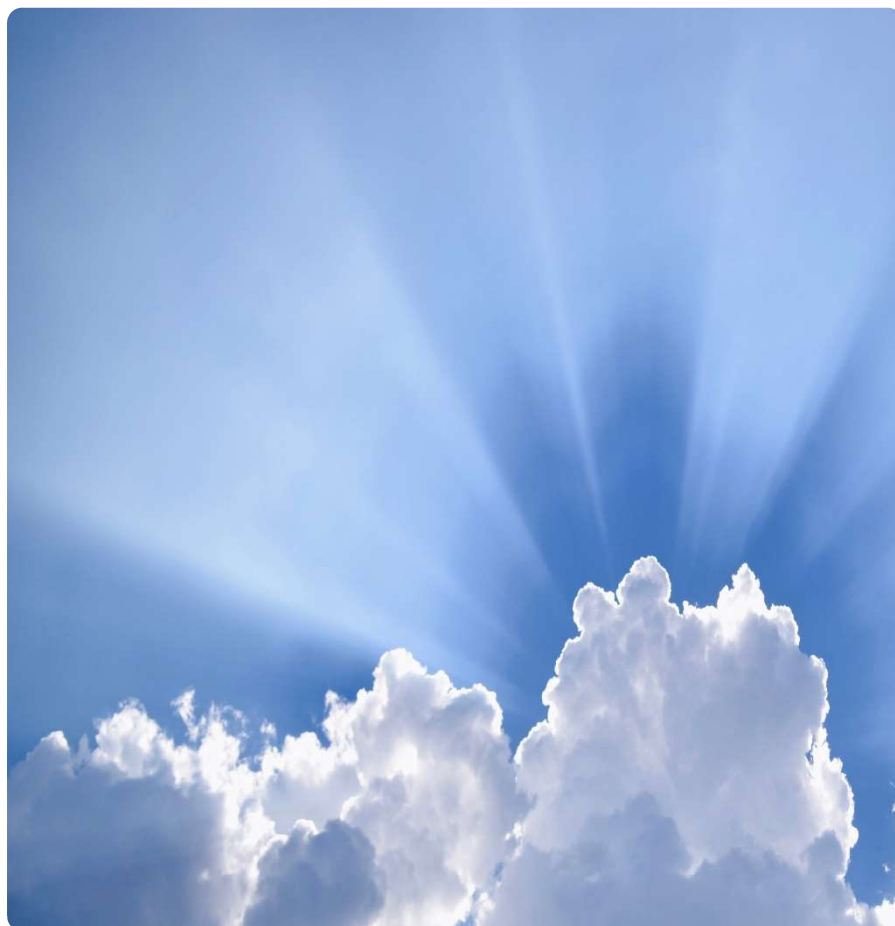# Designing and Developing Cloud Architecture - IT Target Operating Model (TOM)

GCloud Service Description

Bringing Ingenuity to Life.
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Reference: PA RM1557.14
Version: 1.0

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1 DESIGNING AND DEVELOPING CLOUD ARCHITECTURE - IT TARGET OPERATING MODEL (TOM)

1.1 Short Service Description

Optimised use of cloud can revolutionise business agility and reduce costs, but this relies upon utilising a different Target Operating Model. PA delivers a proven approach for hybrid/cloud solutions including AWS, Azure or GCP services. This enables DevOps agile delivery, harnesses leading edge serverless cloud services whilst ensuring architectural coherence.

1.2 Key Service Features

1. Assessing your existing IT TOM for suitability to cloud
2. Customer model: defining and delivering cloud/or hybrid value propositions
3. Capability mapping: understanding requirements for cloud or hybrid delivery
4. Design principles: shaping a cloud-inclusive IT Target Operating Model
5. Capability model: structuring and sizing resources/skills for cloud technology
6. Financial model: creating structures to realise value through cloud
7. Business architecture: process mapping to understand your IT function
8. Architecture capability model: assessing maturity and an improvement plan
9. Integration: defining IT organisations to span multiple platforms/vendors
10. Governance: establishing effective control across heterogeneous IT estates

1.3 Key Service Benefits

1. Proven IT TOM methodology: using PA's Cloud Governance framework
2. Customer insight: enabling clients to deliver value through cloud
3. Capabilities: planning/structuring resources for cloud and on premise services
4. Integrate cloud, on premise, COTS and bespoke services
5. Risk: identifying and avoiding pitfalls associated with cloud adoption
6. Governance: monitoring and control of suppliers and providing assurance
7. IT roadmap: helping define and manage your project portfolio
8. Run: establishing, managing, and supporting the new IT operation
9. Expertise: drawing on a 300+ pool of Architecture professionals
10. Experience: building on an awarding-winning cloud delivery portfolio across industries

1.4 Service Definition

As the capabilities of cloud technology increasingly become the new normal, cloud proficiency is becoming indispensable for many organisations to remain competitive or realise cost efficiencies in the face of constrained budgets. However, the well-established skills, structures and governance models for on-premise IT services cannot simply be transplanted into a cloud-based or hybrid IT environment: a different approach is needed to manage the increasing diversity of vendors and service types, and the complex organisational and technical integration challenges associated with cloud adoption. Drawing on PA's broader Cloud Governance Framework, our Designing and Developing Cloud Architecture – IT Target Operating Model (TOM) service will help you understand not only how the technology can add value for your business, but also how to organise your IT organisation to operate it effectively.

PA's framework for designing IT Target Operation Models (TOMs) addresses 3 layers of activity:

1. **Lead** - Setting the direction for the IT Organisation
2. **Deliver** - delivery of the IT Services
3. **Enable** - resources to support Lead and Deliver
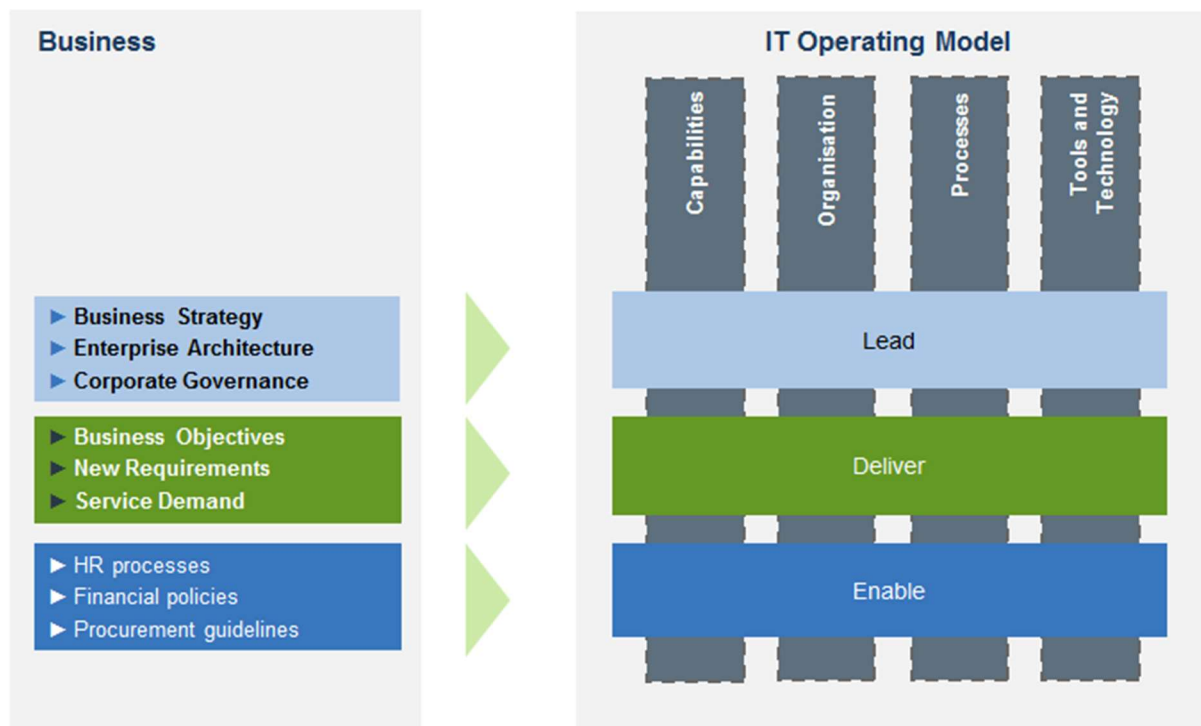
The framework outlines the following attributes across the Operating Model layers:

- **Capabilities**: the competencies required by an IT organisation to meet its business requirements sustainably, efficiently and effectively
- **Organisation and Roles**: the roles required to deliver the IT capabilities, an organisational structure that these roles will fit into and a description of the working practices and behaviours that will be displayed by individuals filling these roles. A clear RACI model that outlines the role of business and technology stakeholders to deliver and drive the effective use of optimised cloud services.
- **Governance**; Definition of the governance boards and associated Terms of Reference required.
- Processes: the structured and repeatable set of tasks that describe how specific activities will be carried out by taking one or more defined inputs and turns them into defined outputs (including the roles required to support this)
- **Deliverables**: A clear definition of the expected outputs products and artefacts.
- Tools and Technology: a variety of techniques, systems and machines that underpin IT organisation in getting the most out of its capabilities and processes, thus achieving specific functions and / or tasks with the greatest benefit
- **Services**: a collection of related components fulfilled in support of the organisational processes to deliver the outcome to the customers. Although it comprises a multitude of processes, it is perceived as a single entity

Our experienced cloud architects will start by understanding customers inside and outside your organisation, to determine whether cloud technology can enhance the existing value proposition or enable new ones. We can baseline your current operating model and undertake an architectural capability model assessment. We will define the capabilities needed to support the organisation, identify an IT change roadmap and investigate options including sourcing. Our architects will work with you to establish design principles for your IT organisation, aimed at allowing you to realise the optimum portfolio of cloud and on-premise capabilities and services, also considering the financial model for running an IT function making extensive use of consumption-based pricing. Key to our design for your new IT organisation will be governance – effective monitoring and control – for a more distributed operation with a diverse range of providers and service types.

Having defined and designed your IT TOM for cloud and determined a roadmap for change, our architects will work with you through change planning and delivery of the new TOM and establishment of the new run, drawing on our deep cloud experience to help you and your suppliers avoid the risks and pitfalls often associated with cloud adoption.

1.5 Why PA?

PA Consulting Group (PA) is a leading IT consultancy and one of the largest advisors to the UK government. We work as a trusted partner to help the UK Government apply an assured cloud delivery approach when developing their most complex information systems and cloud solutions.
PA is well placed to work with clients to help assess readiness, design, build, deliver, and test, to take advantage of cloud solutions. We will bring:

- Leading experience in identifying the costs and complexity drivers for moving existing or new IT services to cloud environments.
- Experience and knowledge to challenge the client organisation to ensure the key stakeholders are aligned ahead of the move to a Cloud solution.
- Access to the latest cloud vendor migration developments, ensuring a best-in-class approach, based on our work with major clients in both the public and private sector in the UK and overseas.
- Experience supporting cloud, in-house and hybrid systems side-by-side

More specifically we will bring:

Ideation & Strategy:
- Cloud strategy and advisory services
- Assessment of cloud readiness
- Cost-benefit analysis and ROI modelling
- Security and compliance assessment

Design & Architecture:
- Custom cloud architecture design
- Integration with existing IT infrastructure
- Multi-cloud and hybrid cloud solutions
- Disaster recovery and business continuity planning
- Robust solution delivery meeting GDS best practice and ISO27001

Development & Deployment:
- Cloud-native application development
- Containerization and microservices & serverless architecture
- DevOps practices and CI/CD pipeline setup
- Automated testing and quality assurance

Implementation & Migration:
- Data migration to the cloud
- Legacy application modernization
- Cloud service provider selection and management
- Implementation of Infrastructure as Code (IaC)

Operations & Management:
- Continuous monitoring and incident management
- Performance optimization and cost management
- Backup and restore operations.
- User training and change management.

Innovation & Scaling:
- Scalable infrastructure to support growth.
- Implementation of AI and machine learning capabilities
- Internet of Things (IoT) integration
- Ongoing innovation workshops and R&D

1.5.1 Social Value

Building a positive human future is at the core of PA's organisational purpose and we live this value as a key advisor and partner to the UK public sector and by delivering tangible benefits to communities and society.

We are passionate about the positive impact PA can have on wider society, making a significant contribution to efforts in tackling inequality, wellbeing, online safety and ensuring effective stewardship of the environment and fighting climate change.

We are committed to maximising Social Value by using our specialist knowledge and skills to develop firm-wide health, well-being and, diversity and inclusion initiatives for our own people, project-specific initiatives with our clients and wider community benefits. We can work with you to deliver measurable improvements across your key social value initiatives.

1.5.2 Security Clearance

PA are a government List X accredited company who have a dedicated Security Vetting team. This allows PA to achieve security vetting of its employees in a time effective manner ensuring the correct processes are always followed (In accordance with the Security Policy Framework). As a matter of standard process, PA puts all its eligible employees through the Baseline Personnel Security Standard (BPSS), set out by the Cabinet Office. Those employees working on, or planning to work on, government projects are automatically put forward for SC clearance which are processed via UK-SV (formally the Defence Business Services – National Security Vetting). PA also process DV vetting through the UK-SV and other agencies, these are generally client sponsored.

PA currently have a large pool of cleared individuals (80% of UK Staff). Should a resource be identified where clearance is needed, the PA Security Vetting team will then process the individual through the relevant clearance procedure. The team will also be able to validate all existing clearances held by PA employees when requested.

1.5.3 Next Steps

This service is intended to help customers develop and deliver successful outcomes regardless of the life cycle stage they are at. PA prides itself on working with clients and helping them to deliver outcomes whilst also providing them the ability to 'stand on their own' so that they can move their solutions forward without future involvement. Please contact us on GCloudFramework@paconsulting.com to discuss your needs further.

About PA.

We believe in the power of ingenuity to build a positive human future.

As strategies, technologies, and innovation collide, we create opportunity from complexity.

Our diverse teams of experts combine innovative thinking and breakthrough technologies to progress further, faster. Our clients adapt and transform, and together we achieve enduring results.

We are over 4,000 strategists, innovators, designers, consultants, digital experts, scientists, engineers, and technologists. And we have deep expertise in consumer and manufacturing, defence and security, energy and utilities, financial services, government and public services, health and life sciences, and transport.

Our teams operate globally from offices across the UK, Ireland, US, Nordics, and Netherlands.

PA. Bringing Ingenuity to Life.

Discover more at paconsulting.com and connect with PA on LinkedIn and Twitter.