

Advanced Systems Understanding Ltd (ASU)

About Us

ASU is an 'Enterprise and Business Architecture' company providing professional review, advice and guidance in the creation, maintenance and exploitation of combined architecture supporting Cloud development. ASU can support your in-house architecture activities, working alongside your architects or instituting architectural governance. We are equally experienced in creating architecture for you as a specialist architecture service.

ASU supports executive management in developing strong business strategies, to realise key business motivations and drivers. Utilising a 'Systems of Systems Approach' to understand complex issues in a holistic manner, managing complexity through the application of specialist tools and techniques including but not limited to:

Standards/Methods	Modelling Languages	Tools
<ul style="list-style-type: none">❖ TOGAF❖ MODAF❖ NAF❖ DODAF	<ul style="list-style-type: none">❖ Archimate❖ UML❖ BPMN	<ul style="list-style-type: none">❖ SparX EA❖ MooD❖ Archi❖ ARIS❖ BizzDesign

ASU are experienced in linking long-term business strategies to an underpinning technical strategy, ensuring the technical roadmap fully supports the business goals and informs detailed decision support for technology adoption. Furthermore, we have deep technical Solution Architecture skills to support the design of detailed, incremental technical Cloud solutions. These designs are achievable through your projects and programmes and if managed as part of a larger architectural strategy, will incrementally evolve your enterprise to a much more effective state better suited to meet your defined goals.

We deliver an understanding of existing information services and system solutions, to empower companies to help them utilise what they have and to plan for effective change. We offer support, guidance and delivery every step of the way to empower your application of evidence based decision making.

ASU uses a combination of:

- Enterprise Architecture, to govern the whole architectural approach
- Business Architecture, to help define strong motivations and strategies
- Solution Architecture, to give form to incremental steps towards a better tomorrow

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- Specialist Architectures, such as Cloud, Security, Network and Cyber Architecture
- Systems Engineering, to ensure the ‘devil in the technical detail’ all fits correctly
- Artificial Intelligence design principles

The intent is to aid your understanding of the complex system of systems that constitutes the modern business environment. ASU helps you articulate the strategic business outcomes and goals that represent your vision of an effective enterprise. We demonstrate the change required to bring the business in line with high level goals and communicate these to you in a simple, concise, and substantiated manner. Finally, we can support the change activities required to step towards your strategic goals in a controlled and measurable process.

How We Work

No single skill set can resolve or even understand the entire range of challenges faced by modern organisations, therefore ASU employs a team approach that can integrate with the enterprise at any level. We will deliver directed projects, staffed by people with the skills required to address specific problem areas including:

- Cloud Technologies
- Microsoft Certified Professionals including Azure technologies and O365
- Amazon Web Services (AWS)
- Cisco, Oracle, HP
- VMWare
- CISSP, CISM, CRISC, CMMI
- ITIL, Scrum, Agile, Six Sigma, SAFe
- PRINCE2, APMP, MSP, MoR

Our professionals are experienced in delivering results in high profile and high-risk organisations providing modelled solutions to organisational restructuring and acquisition of business solutions.

- Enterprise, Solution, Systems, Information Architects
- Business, Cyber, Doctrine analysts
- Application Characterisation
- Network, Cyber, Security Engineers
- Infrastructure & Storage Specialists
- Scrum, Agile, Change, Delivery Management
- P3M

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The ASU approach is well-developed yet malleable allowing an enterprise to warrant a bespoke, tailored application that remains aligned to all industry standards and best practises, e.g. TOGAF, NAF, ArchiMate, UML, BPMN, AGILE etc. We have a track record of tailoring our bespoke approach to every organisation we work with.

The ASU modelling approach will support organisational understanding contributing to the development of corporate governance, capability requirements, training and safety/security analysis. Getting people who can move into the solution space quickly to deliver results requires political adeptness, coupled with the interpersonal skills to help those with less experience achieve a solution to withstand the test of time.

ASU have experience with Cloud Architectures to create effective cloud strategies. Furthermore, we have highly trained Cloud Architects capable of understanding your larger business goals to design the best cloud solution based on the most effective cutting-edge technologies. We have experience working in both AWS and MS Azure without commitment to any technology provider, giving you peace of mind that we have your interests first and foremost in mind.

As a specialist service provider of Cloud strategy, implementation and management, ASU's services are not covered by Business Impact Level (BIL) accreditation. However, our consultants can assist clients in understanding BIL requirement and accreditation.

ASU is based at F11, Business Cyber Centre, Unit 7 Greenways Business Park, Chippenham, Wiltshire with the ability support clients throughout the UK and NATO. We are Cyber Essentials accredited, have SC and DV cleared personnel with the ability to ensure anyone allocated to a contract is appropriately vetted to a minimum of SC.

Enterprise Architecture Service

Enterprise Architecture is the translation of business vision into effective ‘enterprise change’ by capturing, communicating, and improving key requirements and principles. This is conducted through capturing the enterprise's future state and its evolution; enabling long term goals to be linked to incremental project change, detailed designs and effective management overviews. ASU treats its practise of Enterprise Architecture (EA) as the overarching discipline of supporting effectiveness for the whole enterprise; be that a project, programme, organisation or even a multinational collaboration.

ASU has a tried and tested architecture methodology (Model Driven Systems Engineering and Architecture) which takes industry best practise (TOGAF, SOSA), your stated aims and objectives, existing work and creates a tailored architectural approach for you based on engineering principles but uniquely focussed on your challenges. This overarching approach can use your existing tooling, frameworks and languages or suggest the most appropriate combination to underpin your strategy. Likewise, it is as capable of defining/supporting large scale strategic change, as it is of supporting detailed solution designs required by your specialist technical personnel.

The ‘Baseline Architecture’ describes where we are today. Reference Architectures inform us of policy and best practise and should be fully considered often for legal or safety critical assurance. The Enterprise goals can be mapped to demonstrate where a ‘Target Architecture’ should take the enterprise. Finally, we conduct ‘Gap and Overlap’ analysis to understand the changes required to realise our more effective target state. The journey between the baseline and the target architecture can be described in terms of stepped changes or plateaus and is realised by ensuring change programmes deliver solutions that take you towards are target state.

All these architectural activities are underpinned through the creation of models in specialist architecture tools; the databases of which make evidence generation far simpler. However, the articulation of this detail must be in a form which is informative and easy to consume for each different stakeholder group. This is how ASU enables ‘Evidence Based Decision Making’.

This holistic and modular approach to architecture has been utilised to good effect in many organisations and projects. It is effective regardless of team size and composition, with the more specialist architects falling under the Enterprise Architecture umbrella, improving the overall results for all stakeholders.

In short, Enterprise Architecture is the holistic approach, encompassing the whole enterprise and all architectural layers, specialisations and all levels of detail.

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Business Architecture Service

ASU provides the means to capture an enterprises' 'High Level Operating Model', its main drivers and its goals. These can then be linked to the current ways of working to form a baseline representation of the whole enterprise. 'Target Architecture' then demonstrates improved ways of working and outcomes.

Business Architecture is a specialism of ASU's overall Enterprise Architecture approach. At the strategic layer, the Business Architect supports identification of enterprise goals and outcomes, to support your leadership in creating effective strategies.⁴

The Business Architect can help to demonstrate useful evidence linking further detailed models to the enterprise 'so what'.

ASU's Business Architects are well versed in supporting your large-scale change strategies. They can link in with other architects to take the detail and distil this into actionable business intelligence that you understand and can use.

In practise this means your dedicated Business Architect can supply useful management information on the state of the business, areas of underperformance, the stage of change initiatives and any key SWOT areas.

Business Analysis Service

ASU provides a comprehensive service designed to identify the overarching business needs of your processes, capture the existing ways they are implemented and where appropriate design quicker, more efficient and more effective processes. This service revolves around Process & Procedure Mapping in specialist tools, presented in a simplified format to all stakeholders.

ASU has extensive experience of conducting Business Analysis, for both office-based enterprises and those from a more specialist sector, such NATO military activities.

Appropriate business analysis utilises 'reference' documents and personnel interviews to create detailed Use Case models. These Use Cases are agnostic in nature showing need rather than the actual solutions that will eventually support the activity. The GDS best practise refers to the benefit of capturing User Stories inside larger User Epics and this is something we have delivered for years with excellent effect.

This Model Driven Systems Engineering and Architecture approach helps to elicit excellent user requirements with genuine provenance. It underpins solution selection and design and eventually service assurance testing and acceptance.

Process models are also excellent places to investigate:

- business effectiveness and efficiencies
- information flow analysis, especially as it pertains to information security and bandwidth
- information/data schemas to enable big data exploitation
- and training needs analysis, job specification and recruitment

ASU created a bespoke approach to the capture and assessment of military business activities, The Mission Thread Approach which was later mandated for the capture of all military business activities.

Technical Architecture Service

ASU provides the means to understand key Business Strategy and outcomes, which when linked to prevailing trends in technology can produce an enterprise Technical Strategy. It is this technical strategy that will empower consistent long-term technical goals that effectively support the enterprise and can be evolved through incremental delivery.

ASU offers a variety of layers to their architectural support service. One layer is longer-term technical strategy. This is a skillset which requires extremely competent architects, they must be capable of working with long term strategic goals mapping these to shorter term solution designs and the trends of cutting-edge technology.

Technical Architects must be able to provide a technical strategy to support a CTO in ensuring the best technology is available to all areas of the business; it must make the enterprise effective. Their artefacts must work for both deep technical design and for executive management considering macro level changes. However, other factors also have an influence:

- Trends in cutting edge technological advancement
- Costs up front and in continued support
- The right time to move from legacy solutions to new
- Supporting technology, such as networks and storage
- Security minded design
- Setting the stage for long term technology changes, such as Cloud or 5G

Solution Architecture Service

ASU provide detailed architectural support, translating overarching Enterprise and Technical strategies into a deliverable and effective solution design. This includes support to create user stories/epics, strategic assessment, solution assessment, design, documentation, testing and assurance. Solution architects work hand in hand with deep technical experts, P3M, users and strategic leadership.

ASU has a plethora of experience working with experts in IT. All our Solution Architects are experienced in creating architecture that will enable strategy to meet solution design. Our specialists are equally well versed in modelling, architecture, and system engineering as they are with cutting edge technology. This helps to ensure they can make an immediate impact as either stand alone support or as part of a large Architecture team.

Solution Architects work on Solution Building Blocks (modular designs of technology to be delivered), taking 'Architectural Building Blocks' (denoting need) and ensuring the best solution is implemented, for your circumstances.

ASU Solution Architects:

- Work to take Technical Strategies and ensure P3M can support a move towards a desired 'Target Architecture'
- Are expert at the creation of both 'High Level Designs' and more detailed 'Low Level Designs'
- Work with different languages, utilising ArchiMate to tie solutions towards larger strategic goals and utilising UML/SySML for more detailed design work

An ASU Solution Architecture Team is an excellent first step towards embracing a full architectural approach such as TOGAF, they can deliver a positive impact in the least amount of time.

Specialist Solution Architecture Service

Deep architectural support into specialist areas of solution design, as either stand-alone architects with a particular focus or as specialist members of larger teams. ASU's architects have extensive skills/qualifications/experience and the holistic understanding to work in a mutually supportive manner with other engineers. Specialisms include, Cloud, Security, Cyber, Networks and Applications.

In addition to Technical Architects and Solution Architects, ASU's technology aware consultants include Specialist Solution Architects. These are deep experts in their field, who have an excellent knowledge of architectural techniques and general IT but have advanced capabilities in one field. These consultants include:

- Cloud Architects, (including AWS Architects and Azure Architects)
- Security Architects
- Network Architects
- Infrastructure Architects
- Virtualisation Architects
- Applications Architects
- Military Deployed Systems Architects

Through having deep specialists, we can extend the capability of your enterprise in several key areas. These architects can be useful as stand-alone consultants and effective as part of a larger architectural effort.

All our Specialist Solution Architects are experienced, qualified, and prepared to help you overcome tricky technical issues immediately.

Information Modelling Service

ASU offers modelling and specialist tool support for your enterprise, to strengthen, underpin and grow your own organic architectural capabilities. Our Information Modellers are critical thinkers with excellent understanding and experience of many of the leading specialist tools including BIZZDesign, Mood, Archi, Visio, Sparx EA and ARIS.

ASU's core team relies upon its in house Information Modellers. As such, they are well experienced with the full Model Driven Systems Engineering and Architecture Approach utilised by the company.

One of the core areas of the capability is in managing our specialist tools and repositories. Our teams use their skills and expertise continuously but often customers require this support in house too.

If your Enterprise has architects that require specialist tool support or the ability to follow direction to continue model creation, the ASU Information Modelling Service is an excellent addition.

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Management Information Service

ASU offer enterprises a range of specialist engineers fully skilled in transforming data and models into actionable business intelligence. ASU will remove unnecessary information constructing the best fit informatics for your enterprise, be it diagrams or regular reports. ASU empowers your 'Evidence Based Decision Making' potential.

ASU offers a mix of architectural consultants and modellers to take your information and arrange it into a form for decision making at the level you require, to the schedule you need. One of the first steps is working with your executive decision makers to identify their goals and thus the actual vital information needed to manage the evolution towards these goals.

ASU's architectural tool specialists then ensure this information is presented in the most consumable format at the right time be that routinely or on an exception basis.

Management Information Systems enable you to utilise advanced business intelligence to make Evidence Based Decision Making.

This can be delivered on your behalf but is usually the culmination of running architectural approaches to identify and gather the raw information prior to it being collated into what you require to make the enterprise successful.

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Architectural Governance Service

ASU provides leadership and management in adopting improved architectural working practices in line with TOGAF standards. Our Chief Enterprise Architects have decades of experience implementing change and supporting client's internal efforts. Governance is linked to architectural tools, views, documentation, and policies ensuring the entire architectural approach is joined up.

ASU has a number highly skilled Chief Enterprise Architects, with decades of engineering and architecture experience to draw upon. They are well versed at supporting your enterprise through the assessment and tailored adoption of architectural approaches. Key to that adoption is a sound foundation of governance and for this we utilise the industry best practise of TOGAF (The Open Group Architecture Framework).

Our consultants routinely work at a senior level and often lead whole teams of other architects in support to an enterprise. However, they are fully capable of supporting internal architectural efforts, helping to ensure growth and develop your in-house architectural capability.

Change Management Service

ASU delivers a holistic approach to the management of change across an enterprise, understanding goals, constraints and the baseline of an enterprise to conduct metricised 'gap and overlap' analyses. We create meaningful roadmaps of near and long term 'Target Architectures', these are assigned to P3M delivery.

The heart of Enterprise Architecture is identification of where you want the enterprise to be. First is an assessment of where the enterprise is now. Then ASU perform a gap and overlap assessment to deduce the areas of weakness and then we help you create a strategic plan to reach that goal through effective change management.

This high-level strategic plan will link your goals, a business strategy, technical strategy and then the projects, programmes and portfolios that will develop these changes over the coming years.

ASU's Change Managers are highly trained consultants, expert in the use of industry best practise such as 'Managing Successful Programmes' (MSP) with a clear and practised ability to exploit architectural methods and artefacts to give your plans the evidence they need to ensure effectiveness, oversight and accuracy.

P3M Support Service

ASU provides P3M architects with expertise in management and architecture. Their role supports understanding and effective utilisation of architectural products throughout change initiatives, acting as a pivotal role in bringing technical, managerial, end users, governance, commercial and financial staff together. Especially useful when transitioning from architectural design to Agile delivery.

The heart of Enterprise Architecture is identification of where you want the enterprise to be. ASU can support you in the creation of strategic change initiatives but when plans need to be realised it is our P3M Support Service that will underpin the execution of plans via change projects, programmes, and portfolios.

This service helps you ensure projects, programmes and portfolios will develop effectively in a holistic way to realise your longer-term goals as an enterprise.

ASU's P3M Architects are highly trained consultants, expert in the use of industry best practise such as:

- Managing Successful Programmes (MSP)
- PRINCE2
- Management of Risk (MoR)
- ITIL
- Agile & SCRUM certifications
- TOGAF

ASU's P3M Architects exploit architectural methods and artefacts to enact your strategic change initiatives at the project, programme, and portfolio management level. They are expert at linking architectural plans, formal strategy, commercial, programmatic, and financial aspects of your P3M teams.

Technical Design Service

ASU offers specialist technical staff expert in the creation of High Level Designs, Low Level Designs, Design Blueprints and Service Design Packs (SDP's). These documents follow client policies or can deliver to existing best practise formats. ASU are capable of engaging with stakeholders, collaborative working and managing highly effective technical teams.

ASU offers a 'Technical Design Service' to support your enterprise in developing an effective method for the formal creation of technical designs. Many enterprises suffer from a lack of clarity when moving from strategy to execution regarding the technical underpinnings of solutions.

ASU's support helps to ensure a formal approach is created and fostered throughout the enterprise. It aids you in stating project technical strategy in a well structured yet easy to assess format as a High-Level Design (HLD).

This HLD helps all staff by clearly stating the intended outcomes required by a solution, often as they play into an overarching technical strategy. It will also declare all requirements, principles, and constraints pertinent to successful delivery. This is the purview of a Technical Architect, understanding the larger picture to focus change in the most effective manner.

Low Level-Designs (LLD) take the HLD and create a much richer picture of the core components of a solution, whilst maintaining an agnostic approach to vendor/tool selection. These are the purview of the Solution Architect, linking strategy to delivery.

A Design Blueprint is the final design for implementation of the solution and is in the language and format most beneficial for all specialist engineers to work with.

The Service Design Pack (SDP) is an architectural artefact that is often utilised to capture and convey these designs in a formal manner. The SDP's evolve over the course of a project/programme to house the evolution of the solution from abstract, to agnostic and to specific.

ASU has a strong track record of working with these artefacts to ensure effective solution delivery, including complex multinational environments.

Strategic Problem-Solving Service

ASU delivers dynamic and dependable support to clients regardless of the challenge. We utilise a 'System of Systems Approach (SOSA)' to holistically assess problems, situations, outcomes and the potential to overcome even the most comprehensive problem. Our architects are critical thinkers who are experienced at supporting enterprises at its most challenging times.

Enterprise Architecture is a structured and tested approach to dealing with large amounts of information in complex situations. With all planning, the more resource devoted to it, the better the outcome, yet an enterprise is often working at a deficit in time and money when it comes to tackling complex problems.

ASU's consultants are all well versed in the application of industry best practise and architectural approaches. However, it is in tailoring these to a specific enterprise that they really excel. This takes critical problem-solving skills and strengthens them through providing techniques to assess the situation, desired outcome and options.

ASU's architects are often called upon when an enterprise is mired in complexity and we can help to provide clarity quickly and for longer term accuracy.

Military Doctrine Architecture Service

ASU developed a proven method for capturing and rationalising doctrine, that forms the basis for the NATO Mission Thread Approach. Taking the doctrinal written word and interviews from military experts to capture detailed models with real provenance. These subsequently act as foundational information for interoperability, procurement, assurance and training needs analysis.

ASU has a strong focus on defence, with an enviable track record working with the military. We comprehensively understand this unique environment and the challenges of effectively delivering in this sector. ASU's architects have a significant amount of operational experience.

It is this industry experience coupled with cutting-edge architectural practise that enables us to succeed when supporting the military.

ASU's 'Military Doctrine Architecture Service' taps into this experience and expertise, to create the best capture, assessment, and exploitation of doctrine available on the market today.

ASU is extremely successful in this arena, having created the Joint Expeditionary Force Operational Design Model, containing over 1200 operational activities. This formed the core of the mandated NATO FMN Mission Thread Approach (Federated Mission Network) being utilised today.

Military Enterprise Architecture Service

Overarching architecture intended to holistically link organisational design and services into one enterprise change plan; achieved by linking detailed architectural specialisations. Military/business processes, military/business strategic goals, technical strategies and P3M change initiatives to ensure ultimate goals are well described and achievable, resulting in Evidence Based Decision Making (EBDM) on a macro to micro scale.

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ASU's 'Military Enterprise Architecture Service' taps into this experience and expertise, to create the best military focussed architecture available on the market today. ASU have a huge amount of experience in the development of architecture that maintains the focus on military capability as the overarching concern. This architecture enables military planners to assess their options, their current support envelope, multinational coalition concerns and a SWOT analysis; assessing deep technical detail whilst never being swamped and losing focus on the operational outcomes.

Military Solution Architecture Service

ASU employs a wide spectrum of modelling techniques ensuring solution design meets the military requirement, can interoperate with all other national systems, interoperates across coalitions, and has a clear roadmap for evolution across its lifecycle. Covering production of High-Level Designs, Low Level Designs, Technical Blueprints, Project Plans that relate to overarching technical roadmaps.

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Our Clients

ASU works with a wide range of clients across the public and private sector, from central government departments including the Ministry of Defence, NATO and UK Government. We also offer services for major service companies to help them better understand their client needs and improve delivery.