lasa EA Practice skills maturity assessment model

The Iasa EA practice skills assessment is based on the Iasa skills taxonomy that looks at architectural proficiency across the Iasa foundational pillars and recognized architectural specializations.

lasa recognizes 5 core pillars of competence that all architects must gain proficiency in in order to practice the role of architect successfully. In addition lasa recognizes 4 specializations that relate to the core IT domains within which an architect may have practiced and therefore is expected to have a deeper understanding of. It is important to note, that these are base specializations, based on the background and experiences of the individual and are not necessarily mutually exclusive. Furthermore, it is important to view these as being a container for relevant skills and that they do not specifically relate to role titles under which an architect may perform.

lasa skills taxonomy:



lasa EA Practice skills Maturity Model:

The Iasa EA practice skills maturity model is based on a reduced 5 point version of the Iasa individual skills model that is used for certification as maturity above this is really starting to measure excellence that is beyond the requirement of most practices.

Maturity	Maturity	
Level	Name	Description of Level
1	Awareness	Having or showing realization or perception of the subject matter
2	Basic	Cognizant of or having special or certain knowledge as from firsthand resources
		Distinctive familiarity gained through study, investigation, observation,
3	Individualized	experience, association, or understanding of specific techniques
		To do or perform often or customarily so as to make habitual or standard
4	Practice	procedure
		Mature so as to be able to hand over or provide to the intended target,
5	Delivery	destination, or audience

Foundation Capability descriptions:

Pillar/Capability	Examples of what this would look like
Foundation Pillar -	Success
Business Technology	 How did they/the project create competitive advantage
Strategy	 Use IT skills to have significant impact on the bottom line
Strategy	 Able to describe in cost saving or new revenue stream Describe what each business does
	 Describe white each business does Risk, risk mitigation, ROI, prioritization, how did they get through start to finish of project
	Below
	• Cannot describe how they created a competitive advantage, never tried to participate in company
	strategy process, like SLDC applied overall cost
Business	Can describe the makeup and structure of their business
Fundamentals	Can describe their company's business plan
	Has worked with non-IT business owners
	Has researched business trends and changes
Strategy Development	Can define a business objective
	Can match technology to the business objectives of a project
	 Identified a technology strategy that impacts entire enterprise
	Leading business in defining IT strategy
Industry Analysis	Can identify top news sources for their company's
	 Know how to investigate the ton trends in the industry they will operate in
	Has run a project to increase competitive canability
Business Valuation	Has defined (in numbers) a technology decision
	 Has identified and delivered a technology which saved or made the company money
	Has some idea of how much their company spend on maintenance
Investment	Leverages multiple resources for technology trending
Prioritization and	Can map their current IT spend and capability map to the trending
Planning	Could lead an initiative to increase capability mapping
Requirements	Knows what a requirement is
Discovery and	Knows what a constraints is
Constraints Analysis	Can leverage architecture framework and is able to deliver against one
Comuliance	Can create a successful strategy from poor requirements
Compliance	Knows what compliance issues impact their company
	Have identified compliance issues
	Have worked with individuale to understand their compliance regnoneibility
	Have worked with individuals to understand their compliance responsibility
Business Architecture	Familiar with various Industry Architecture Methodologies
Methods & Tools	• Can compare a methodology (like TOGAF) to a framework (like Zachman)
	Championed the use of an architecture framework or methodology
Decision Support	Can describe the technical basis for decision management
	Identified and delivered a technology which saved or made the company money
	Has insight into how much does your company spend on maintenance
Knowledge	Is familiar with different levels and tools for managing knowledge bases
Management	Has implemented, effectively utilized their corporate knowledge base
management	Works to increase the knowledge management capabilities of the organization

Pillar/Capability	
Foundation Pillar -	• Success
Foundation Pillar - IT Environment	 Success Work at a cross IT environment Formed relationship (engaged with) leaders of different disciplines of the IT space: e.g. QA, Change or Project Management, PMO, Product Management, Operations, Software, Infrastructure, Enterprise Architecture, etc. Indicated by technical breadth – aware of what current status is of different areas; should have pockets of depth knowledge Good understanding of inherent conflict (test/dev; infra or ops/new capability) Accepted in different spaces of the IT environment Good understanding of more than 1 SDLC and ability to select appropriate for a project and map it to a given organization Understanding methodologies, methods and principles of QA. Understanding purpose and principles of Enterprise governance Knows how to document architecture and how to audit it Understanding value of frameworks and platforms for IT, and ability to formulate requirements specific to a given product or solution Below Leverages dislike for space to be ignorant of space Not willing to grow knowledge in disliked spaces
	• Not able to design/deliver for operations
Technical Project	Understands major project management concepts
Management	Has training as a project manager
Capabilities	
Asset Management	Understands primary concepts in asset management
	Has studied asset management technologies
	Has delivered an asset management solution
Change Management	Has reviewed the ITIL (or other standard) CM concepts
	Has worked with CM products (beyond versioning)
	Leverages or drives CM adoption or upgrade process
Application	Has studied the major aspects of application development
Development	Has studied application development in detail
	Has participated in application development in their organization
Infrastructure	Has studied ITIL concepts and frameworks
	Has studied detailed ops processes & can relate them
	 Has insight into the operations and deployment components of a project
	Is familiar with their organization's operations strategy
Governance	Understands how governance helps ensure delivery against plan
	Knows the governance mechanisms for their organization
Testice Marthaule	Monitors/enforces governance standards in their organization
Testing Methods,	Has knowledge of primary testing methods
roois, and rechniques	Ensures projects are tested properly
Platforms and	Aware of the categories of IT frameworks
Frameworks	Monitors trends/changes to major frameworks

Pillar/Capability	Examples of what this would look like
Foundation Pillar -	• Success
Design Skills	 Able to create artifacts that are understandable by peers
	 Has a framework that they use regularly and can be applied broadly
	 Don't care what tools are used so long as description is understandable
	 Understands various requirement gathering and specification methodologies and can
	recommend one appropriate to a project
	 Understands process of defining architectures, main architectural deliverables and can describe their architecture from multiple viewpoints.
	 Inderstands value of design patterns: knows at least several and applies in practice
	 Can use one of the standard design languages such as LIMI
	 Understands and practices POCs to prove a design
	 Considers and documents architecture alternatives and can articulate their trade-offs
	Below
	 Loses focus on the business goal
	 Designing to design (rather than keeping design focused on big picture)
	 not able to create architectural descriptions
Requirements Modeling	Can show examples of requirements modeling artifacts they have created
	Can describe the different audiences they target for requirements modeling output
	Can describe the type of requirements modeling tools they use
Architecture Description	Can describe the artifacts they typically create
	Can describe tools they use
	Can describe the intent and value of creating descriptions
Decomposition and Reuse	 Can highlight examples of reuse over build/buy in a project
	Can describe how the approach decomposition
	Can describe how they support decomposition and reuse in their work environments
Design Methodologies and	Can describe the tools and processes they use
Processes	Can describe how they adapt their tools or adopt to other tools to customize for each project
	Can describe the process they used on the projects they presented
Design Patterns and Styles	Can describe their application/delivery of metaphors and patterns on projects they have participated in
	Know the difference between a style, architecture pattern, and design pattern and how they leverage
	each in projects they participate in
Design Analysis and Testing	Has participated in design analysis
	Has identified and mitigated poor design early
	Validates architecture that solves the intended business problem
Traceability Throughout the	Can describe how they manage traceability through a project
Lifecycle	Can describe how they track business value of project deliverables
	Can describe how they try priority tradeoffs to business impact
Views & Viewpoints	Can articulate the difference between a view and a viewpoint
	Can describe 2-3 views they use regularly
	Can create views that provide value
Whole Systems Design	Can provide broader vision of environment their projects operate in
	Can discuss how they have leveraged existing services
	Can discuss how knowing about the whole environment has impacted their project

Pillar/Capability	Examples of what this would look like
Foundation Pillar -	• Success
Human Dynamics	 Comfortable, charismatic enough to deliver a presentation to an audience or able to find a
rianian Dynamics	resource that is
	 Can impose leadership from front of from behind the curtains (exercise informal leadership) Cat as the substant shifts
	Conesive writing skills Can lead nearly ar sulture towards delivery of their vision
	 Call lead people of culture towards delivery of their vision Understands how to tailor message to audience
	 Understands how to lead change
	 Understands organizational dynamics, main decision making org bodies
	• Can map stakeholders and influencers, explain their motivation, demonstrate ability to manage
	negative stakeholders
	 Practices win-win rather than win-lose, stays firm, positive but flexible
	• Uses standard unambiguous and clear language appropriate to the audience in architecture and
	other written documents
	Below
	 Unaware of their personal constraints in human dynamics
	Haven't mitigated weaknesses
	 Practices win-lose or lose-win Demonstrates fructration or pagativity with respect to converkers
	 Demonstrates trustration of negativity with respect to coworkers Engages in political battles that do now advance project success
	 Lingages in pointer battles that do now advance project success Unaware of personal HD challenges
Managing the Culture	Can describe how they determine what the culture is
Mundging the culture	 Can describe how the mitigate or leverage internal culture to deliver on a project
	Can describe the tools they employed in challenging cultural situations
Customer Relations	Can describe their approach to building customer relationships on a project
	• Can describe how they would manage a situation the review board offers (upset customer, two
	competing stakeholders, contractual negotiations, etc)
	Can describe the highest risk project they successfully delivered
Leadership and	Can articulate the difference between leadership and management
Management	 Can describe their approach to leading or managing during projects they documented
5	Can describe a leadership or management book or class they have read or taken
Peer Interaction	Can describe how they manage stakeholder interactions
	Can describe how they manage interactions with technologists
Collaboration and	Can describe how they manage difficult peer interactions
Negotiation	Can describe how they manage collaborative environments
	Can describe successful approaches they have used for negotiating
Presentation Skills	• Can show presentations they have delivered for different audiences on the projects they documented
	Can describe how they manage written and verbal presentations on the projects the documented
vvriting Skills	Can show examples of documents they have produced
	Can show examples of templates they use on projects
	Has a stance of value of maintaining documentation

Pillar/Capability	Examples of what this would look like
Foundation Pillar - Quality Attributes	 Success Thinking beyond the project and current deliverables Delivery of strategy beyond the project Maps to broader architecture/constraints Able to describe how they have made tradeoff; understanding ying/yang Understand reasonable measurements used for this space and SLAs Has a habit extracting and defining major Quality Attributes (performance, scalability, availability, security); Know who and how to extract the requirements for those Knows other QuAttrs and understands when they are important to define Understands typical trade-offs between the major QuAttrs. Knows trade-off methodologies such as ATAM, CBAM etc. Below Design into quality corners that do not allow for future state expansion/change Overdo in certain areas like test, performance, scalability Too many absolutes rather than guidance
Balancing and Optimizing Quality Attributes Manageability, Maintainability, Supportability, Extensibility, and Flexibility	 Can describe the approach they used to making tradeoffs between quality attributes Can describe how they justify their tradeoff decisions Can describe differences between tuning an individual application and a product family Can describe how they manage supporting, detracting pairs of quality attributes to determine impact of tradeoffs
Monitoring and Management Performance, Reliability, Availability, Scalability	 Can describe how they integrate into existing environment Can describe their approach to introducing techniques where no techniques are used Can describe how they manage supporting, detracting pairs of quality attributes to determine impact of tradeoffs
Security Usability, Localization, Accessibility, Personalization/Customizab ility	 Can describe how they maintain their knowledge of current security trends Can describe how they ensure security for their projects Can describe how they manage supporting, detracting pairs of quality attributes to determine impact of tradeoffs
Packaging, Delivery, Post Deployment	 Can describe their approach to packaging and delivery Can describe how they modify the approaches they use to meet the needs of specific projects Can describe how the reach operating status for a project and what support they typically provide for end users training, helpdesk, operations organization

Pillar/Capability	Examples of what this would look like
Specialization Pillar -	Success
Software Architecture	 Has deep understanding of main SDLC methodologies and boundaries of their applicability
	 Routinely defines multiple view of the architecture. Can describe each of them using
	appropriate language and notation.
	 Possesses advanced design skills using formal design languages.
	 Knows many design patterns and can discuss their applicability. Can demonstrate their usage
	Orientation: can articulate domains of applicability and interplay. Knows main patterns within
	each architectural style
	• Knows application Integration patterns, various integration and middleware technologies,
	and can discuss their trade offs
	and other development environment QuAttrs and knows main patterns of their
	improvements
	 Solid understanding of data persistence technologies and can discuss trade-off between
	various data access patterns
	• Can effectively communicate with Infrastructure. Information and Business architects
	 Can effectively communicate with developers
	• Knows main software development platforms, their pros and cons (technology breadth)
	 Is competent at least in one of the technology stack (technology depth)
	 Does not recognize when patterns should not be used
	 Cannot recognize a bad pattern
Software Architecture	Understanding the common characteristics of different SDLCs
Development	Knows how to customize, collate various SDLCs Given an SDLC they are not familiar with lable to quickly decide if the SDLC is applicable for that project
Methodologies and	Speak knowledgably to more than 1 SDLC
Processes	Impact scope and context of SDLC on the project, people
	Understand underlying reason for an SDLC
Cofficience Aughisto strong To als	(Below) - "Bigoted" towards a single SDLC
Software Architecture Tools	Can create artifacts appropriate for the audience
Software Engineering for	Able to write code or pseudo code for POCs
Architects	Be credible with coders and knows what living with a decision would be like
	Can relate/crossover to developer as opposed to developer relating/crossing over to architect
	developer skills
	(Below) - Cannot support their decisions on approach with developers
	(Below) - Has not coded in the past
	(Below) - Doesn't understand common architectural technical details (garbage collection in C++, .net background in a ruby project etc.)
Services. Workflow and	Can describe the purpose of a service oriented architecture
Messaging	Can describe the pros and cons of synchronous vs asynchronous messaging and understands when to
	choose each option
	book on this tonic and clearly list the common natterns: Enterprise Integration Patterns)
	Understands how workflow and handoffs can be modeled and why this is important
Advanced Quality Attributes	Can relate quality attribute tradeoffs and priorities to both tangible and intangible costs and benefits in a
	way that enables clear actionable decision making
Aavancea Stakeholder	in a way that yields a valuable software architecture
	Can describe how they have successfully used common architecture nations
Dattorns	can account how they have successiony used common architecture patterns
Technologies Distforms	
Frameworks	
Data/Information/Knowledge	Understands modern data modeling theory and application
Management	Understands how to translate business requirements into logical and physical entity relationship
wanagement	Understands the pros and cons of different data modeling strategies (i.e. high vs low degrees of
	normalization and how that impacts response time)

Pillar/Capability	Examples of what this would look like
Specialization Pillar - Infrastructure Architecture	 Success Will work with various project teams to identify and understand requirements for a project and help to design and recommend the appropriate infrastructure solution for that project Have a consistent process for collecting the requirements and designing a solution with standard inputs and deliverables throughout the process. The process or method chosen is not as important as the fact that the architect has developed a consistent way to perform this role within his/her environment. Might have created a process which integrates with the SDLC called the infrastructure specification
Access and Identity Management	 Must continue to be aware of trends and their impact on security Know how to define solution that securely communicate across multiple domains, companies, and security platforms within a single sign on Be prepared to understand and work with enterprise and solutions architecture as well as security and risk management to determine the appropriate solutions by extracting needed input.
Capacity Planning	 Understand demand and plan resources to meet that demand in a heterogeneous infrastructure environment For network, storage, and servers (formerly in silos) works into tightly integrated ecosystem Management and administration of the equipment must also be scaled to meet growing demand
Common Application Services	 Able to translate that data to project team members with different specialties as well as add experiential data to the conversation in order to enable that project team member to understand and potentially make decisions on that use of that service
Device Management	 Lead the design and implementation of mass migrations to virtualization technology Lead the design and implementation for patch and update management for storage devices, windows operating system, hardware drivers, and Bios updates
Infrastructure RAS	 Involved in migrations to newer SSL based remote access which is clientless and has a wider breadth of platform support Understands newest trends to extend applications securely to our users at the application level Can create an environment that allows the extension of business critical services to mobile devices more seamlessly
Network Design	 Works closely with the networking team to understand capacity and trends in the network environment Ensures network can support upcoming projects Can describe the network environment for projects they documented and any architectural decisions impacted by network constraints
Operations	 Understands the technology and concepts supporting systems administration Can describe the methodologies/frameworks used in the projects they documented Can describe the impact to their architecture of the operations environment the project was delivered to
System Management and Services	 Can describe the services their solution introduced/modified and how they were provisioned for monitoring and trending Can describe how they participated in setting service level for the solutions they provided
Data Center Design	 Can describe how data center design impacted the project from an availability, cost, and security perspective Can describe how their solutions impacted or changed the existing data center
Provisioning	 Can describe how they integrated their solution into the existing provisioning environment Can describe how they created and provisioning solution
Disaster Recovery and Backup	 Can describe if/why disaster recovery and backup impacted the projects the documented Can describe how they ensured disaster recovery and backup requirements were implemented for the projects they documented
High Availability Computing Environment	 Can describe what high availability is Can describe how to create a solution for a high availability computing environment Can discuss current trends in high availability computing environments

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Pillar/Capability	Examples of what this would look like
Specialization Pillar -	Success
Business Architecture	 Will have worked with business teams leading business change Have delivered technology strategy across an entire line of business or capability. May own the budgeting and portfolio planning element of a LOB or Capability Have consistent process for extracting and understanding current state business structures and functions. The process will include mechanisms for setting target state business models to grow business capability. Might have developed a financial or business reference model for technology value and
	roadmapping
Business Management	 Must understand current trends in business structures and capabilities Know how to work at a strategic level with representatives from multiple business backgrounds Provide new processes and business capabilities and identify opportunities for business growth. Keep in mind the entire business context including partners, suppliers and customers.
Business Strategy	 A firm's operative environment and how to sustain competitive advantage. Generate superior value for customers by designing the optimum configuration of the product mix and functional activities. Balance the opportunities and risks associated with dynamic and uncertain changes in industry attractiveness and competitive position.
Portfolio and Program Management	 Participated effectively in portfolio, program and project management initiatives overseeing both the transformation of the business and the value of the technology strategies involved Must have dealt with multiple ongoing initiatives and worked with project level stakeholders and potentially have led the enterprise class initiatives through to completion Capable of working with multiple software, infrastructure and information architects throughout the lifecycle
Financial Methods	 Will have setup and managed methods to evaluate complex investments especially in the technology space. May have worked extensively with the financial teams and organizational financial assessment in setting appropriate technology support for financial controls. Will have integrated technology value with the many financial methods used by firms. May have innovated and led the use of tools of financial analysis (credit market analysis, option pricing, valuation of interest tax shields, weighted average cost of capital) Have participated in the financial policy choices of firms (whether to finance with debt or equity, distributing cash to shareholders) Will excel in participating or leading the technology and business model impacts of deals and transactions
Technology Investment	 (mergers and acquisitions, leveraged buyouts, hostile takeovers, initial public offerings) Will have worked with many extensive financial methods which extend beyond pure ROI, NPV into a fabric of technology value. May have used systems of technology investment such as BVI, TEI, Val IT, AIE. Can differentiate technology investment to a broad audience and define capabilities from in financial terms. Will have led the usage of key technology components as business initiatives and demonstrated their value at the executive level.
Technology Strategy and Innovation	 Works closely with other business units and defined clearly strategy, goals and delivery of key innovation in the technology arena. Constantly looks for impact of technology in the business and verticals in which they have practiced. Can effectively describe the most innovative technologies in their space and delineate a strategy to counteract those based on competitive direction. Will be able to use strategic tools such as Porter and others to define the competitive environment and the direction for the business.
Governance, Risk and Compliance	 Able to delineate the relationships between corporate GRC and IT GRC and develop framework or system for integration Have worked as a part of a team on governance processes and may have managed throughout the full lifecycle with strategy, people, processes and technology Works closely with risk management to ensure minimum exposure to risk. May have averted a large risk related incident and able to define mechanism for ensuring it did not happen again. Able to identify relationship between technology, commercial, financial and policy risks. May demonstrate how compliance fundamentally impacts an organization. Able to define the structure of a compliance organization especially as business and regulatory compliance impacts the technical landscape.
Business Views, Models	 Have modeled and described business structures, capabilities, entities, processes, people, and strategy. May utilize models to demonstrate the impact of business change and direction. Have mapped models to business strategy and used them in executive level descriptions. Tied technology innovation to key business structural changes to lead to a more agile and able enterprise.

Leading Organizational	•	Have demonstrated leadership at all levels of business capability.
Change	•	Able to translate leadership to organization change including the delivery of personally driven direction.
	•	Have fully demonstrated that technology leadership is business leadership and used it to change the
		direction of the business strategy.

Pillar/Capability	Examples of what this would look like
Specialization Pillar - Information Architecture	 Success Will have worked through entire information management lifecycle stack from information user to information storage Championed information as strategy Will have demonstrated bottom line value increase through a primarily information driven strategy Is able to demonstrate depth knowledge in at least three areas of information leadership such as storage, retrieval, usage, integration, delivery, manipulation
Data Integration	 Information Entity Management Synchronous/Asynchronous Corporate Integration Compliance Integration Tools and Processes External Integration
Information Management	 Analytics Classification Schemes and Information Structures Data Quality Information Management
Information Modeling	 Data Modeling: Practical Techniques and Application Data Profiling Techniques
Information Usage	 Usage Design Usage Analysis Usage Tools Usage Patterns
Business Intelligence and Data Warehousing	 Data models Course grained systems Reporting
Information Operations	 Managing information teams Data management Processes and
Governance and Management	 Overall architecture governance Information testing and quality Information quality attributes
Information Value	 Usage valuation Information management valuation Integration valuation