

# ENTERPRISE ARCHITECTURE TOOL IMPLEMENTATION

## Abstract

Enterprise Architecture tools are maturing in capabilities and organizations are no longer averse to investments in such tools now a days. EA tool helps organizations in better business outcomes by effective and efficient data driven decision making. Today organizations face challenges in planned adaption of EA tool to provide visible business value. The aim of this Point of view is to provide a process for EA tool adaption, governance and KPIs and cares that organizations should take.

## Typical Misconceptions in EA Tool Implementation

EA tool implementation can be a costly affair and implementation might become highly ineffective if not done in planned way. In a way come various misconceptions about EA tool implementations that decision makers shall be aware of

- **It takes just a quarter to implement an EA tool:** Implementation of EA tool is an involved process and timelines are dependent on EA maturity in organization, objectives of such activity and many more factors.
- **EA tools are about capturing & visualization of application & infrastructure data:** Data capture is one of the aspects of EA tools. Effective use of EA tool will include informed decision making, scenario management, documenting strategies and monitoring progress of strategies, identifying risk to name a few.
- **EA Tool resolves IT data quality issues:** EA tool captures the data, while it can help identify data quality issues, just having an EA tool might not help in resolution.
- **EA Tool Implementation can be fully outsourced:** Value realization of EA tool happens when all stakeholders start realizing benefits of such an



implementation. Vendors and SI partners can help augment organization capabilities but these can't replace in-house usage.

- **All benefits of EA Tool can be measured:** Forrester analysis suggest 306% ROI for three year EA tool implementation. Tool implementation provides visible benefits like TCO reduction due optimization of licenses, infrastructure and FTE. Less visible benefits from reduced cost of application downtime, improved productivity and reduced risk are difficult to measure. Realization of benefits varies based upon EA maturity, timelines of value realization against opportunity identification among few.

## Holistic view for EA Tool Implementation

To ensure that organizations mitigate challenges mentioned above, Infosys recommends holistic approach towards EA tool implementation.

**Figure 1** presents EA tool implementation processes. Proposed process here shall be considered as guideline and would need minor changes based on organization specific requirements. E.g. steps are not strictly sequential, data capture steps can run in parallel with initial deployment or some organizations might prefer LOB wise or phased releases to ensure the change is well accepted before it is institutionalized.

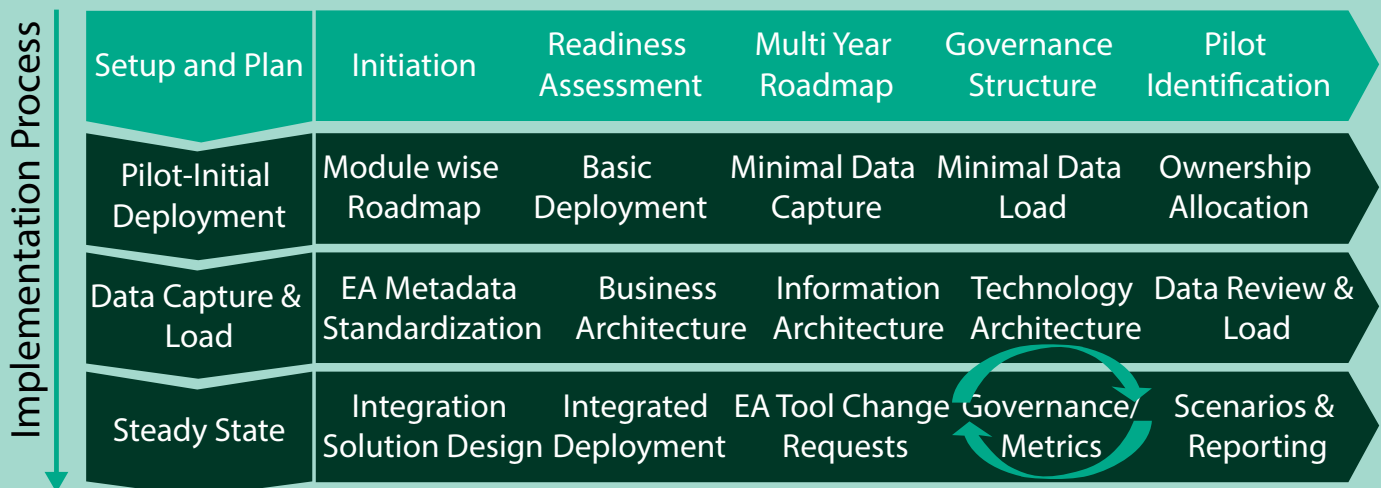


Figure 1: EA Tool Adaption Process

## Phase 1: Setup and Plan

While deployment process of EA tools can be short, enterprise wide adaption of the tools can be a time consuming process to ensure the potential is truly realized. It is important for organizations to consider readiness dimensions while adapting EA tool.

### Dimensions for Readiness

- EA Capability Maturity: Stable EA practice within organization helps in quicker realization of the benefits. At the same time where EA practice does not have enough influence on decisions, it is difficult to implement and enforce processes for data quality & governance. Right set of reusable

reports, dashboards, stable metadata and quick turnaround time are essential for senior management for taking informed decisions.

- Data Sufficiency: It is essential to assess data availability, quality and timeliness for various data categories such as business / functional, technical, operational and costs

Data Category	Data Attribute	Source	Availability	Quality	Timeliness
Application (Business / Functional)	App Name	ABC	●	●	●
	LOB		●	●	●
	Business Owner		●	●	●
	L0 – Biz Capability	XYZ	●	●	●
	L1 – Biz Capability		●	●	●
	Business Criticality		●	●	●

Table 1: Data Sufficiency Assessment

## Phase 2: Pilot - Initial Deployment

Pilot / Initial deployment is essential so that team members and stakeholders are able to see and feel the system. As through Pilot rollout EA organization understand their enterprise better, Module wise roadmap shall be prepared on how the tool will be rolled out in enterprise. Minimalistic data collection ensures that effort is not wasted on collecting detailed information about duplicate applications. Ownership identification ensures that orphan application names are identified and a process is set to capture existence of any shadow IT scenarios. It is also important to identify minimalistic use cases to be implemented so that we are able to take key stake holders along.

## Phase 3: Data Capture, Validation & Load

Once team has accustomed itself with the tool and has set up priorities regarding module rollout, next step is to capture

information regarding enterprise. While all steps in this section are recommended to be done by the organization sequentially, steps can be done in parallel or skipped for later stage.

First among these steps is identification of organization specific values of meta data that shall be captured in EA tool. Fields in this section will include values for as is and future business, information, technology architecture, operations and TCO to name a few.

- Business architecture definition will involve capturing information like business capabilities, organizations/ departments, processes, services and so on. Capturing other information like business capabilities and technology capabilities also is very important to understand business impact of any IT changes to organization delivery. Business capabilities shall be captured at right granular level so as to ensure that SMEs are able to map assets to capabilities and not at the level of capturing business processes. Finer capabilities will overwhelm SMEs and do

not help in decisions.

- Information architecture will involve capturing information about applications, organization's information model and data flows. Data capture related to business objects and capturing enterprise information model are involved tasks. There is also a factor of immediate business value that gets derived out of this activity vs effort that needs to go in.
- Technology architecture data capture is relatively easy as most of the organizations do have infrastructure information either in custom files or in systems like CMDB.

All this information shall be loaded in tool and processes shall be set to review the data that has been captured in time bound manner. One of the key concerns that we have seen in this space is efficient ways of capturing data. Unless automated, this work can become very tedious, especially considering the fact that "re-org" activities in organizations are becoming much more frequent than earlier.

## Phase 4: Steady State

In this phase stakeholders can see visible value of EA tool implementation effort. While continuous improvement can happen in such an initiative, some organizations can implement Phase 3 and Phase 4 iteratively to realize full capabilities in this space.

- **Integrate with other organizational systems:** This phase shall try to implement significant automation in data collection and reporting. Multiple IT systems help managing enterprise IT. Data ownership needs to be identified for all data elements captured so there is no need of duplicate data entries and all systems provide consistent information.
- **Continuous improvement cycle:** It will go on where newer requirements and requests will come in and be taken up for implementation cyclically. It is important to prioritize use cases that can be accomplished using EA tool

so as to demonstrate visible business value at regular intervals. Apart from this, established governance will not only help in managing tool changes but will also help in creation of new requirements that would need newer solutions and to measure success factors. Fulfillment of report requests, scenario planning and other advanced features will create considerable impact on organization where stakeholders will see substantial saving on time while taking informed decisions about their subsequent investments. In case where sponsors are not fully convinced about the value of such investment, some of the activities in this phase are performed early to show tangible benefits. E.g. we have provided our sponsor a report of organizations/departments that might get impacted if we move data center from one location to other. This quick response helped gain more faith and investments started moving in.



## EA Tool Adaption Maturity Model

Organizations can be in one of the stages (as mentioned in Figure 2 below) on EA Tool adaption maturity. After implementation, it is recommended to be in any stage between Stage III to Stage V.

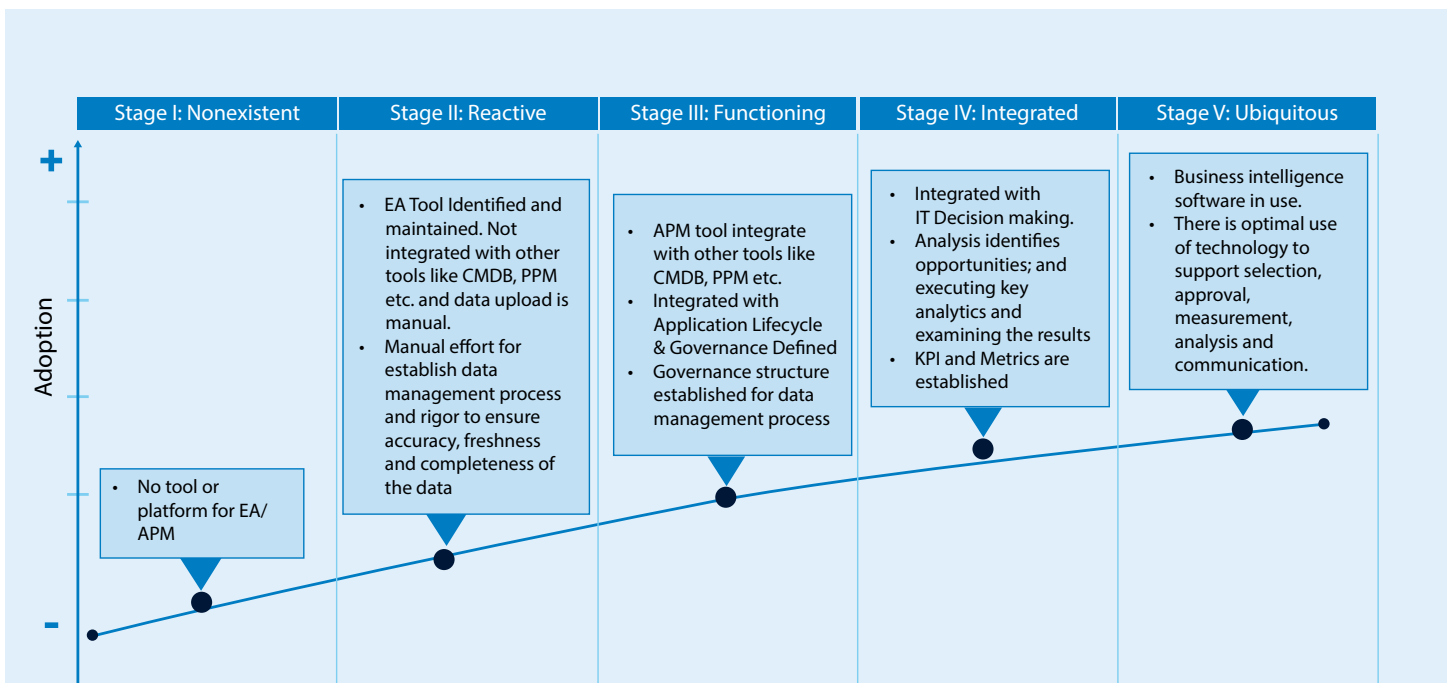


Figure 2 : EA Tool Adoption Maturity Model





## Success Criteria

Having a tangible success criteria helps organizations monitor progress of investments and gives teams continuous feedback to change the course. One of the effective ways for qualitative feedback is EA team being open for continuous feedback about impact introduction of tool to various stakeholders. Cultural changes

that allow SMEs, application managers and solution architects to voice their opinion about impact on their workload due to introduction of new tool like this can help formulate better governance mechanisms. Making sure that reports from EA tool are used in established processes like architecture review board, design documents, production transition ensure that the benefits of the tool are reached to

every stakeholder that is feeding data in the system.

Apart from this we also propose few metrics (as provided in Table 2 below) that can help measure success of use of EA tools. These metrics help measure effectiveness of EA practice and in turn can help measure success of EA tool implementation in organization.

#	Metric	Description
1	Reports/Quarter	# of reports that are extracted every quarter using tool
2	Ratio of Approved Applications to total applications	# of Approved application in tool/# of total Applications in tool. Approval is set for applications that pass data quality gating criterion.
3	#of technologies reaching end of life within a defined time window	Technologies that are reaching end of life for a time window that can be say next one year, half year or a quarter based on organization need. This will give insight to technology upgrade projects that need to be undertaken as early as possible and finances will have to be provisioned accordingly.
4	Ratio of applications not using standard technologies to total applications	This metric gives list of applications that are not compliant to prescribed standard technologies. This helps manages exceptions while allowing innovation based on business needs.
5	Average Data driven decision time	Time taken to respond to management per query regarding IT landscape, report of which is extracted from EA Tool
6	Data Entry Inefficiency due to Manual updates	Number of Attributes that need to be updated in EA Tool divided by Total number of attributes that are updated in EA tool. This reflects inefficiencies and affects engagement of users and in turn effects data quality
7	Data Entry Inefficiency due to Manual updates	Number of Attributes that need to be updated multiple systems along with EA tool divided by total number of attributes that are updated in EA tool. This reflects inefficiencies and affects engagement of users and in turn effects data quality

Table 2 : EA function effectiveness metrics





## Conclusion

EA tools can have significant impact on business through scenario planning, cost benefit analysis of scenarios, risk and impact assessments, identification of impact due to new opportunities,

transformation programs and impact due to disruptions. Being a complex domain we suggest following activities to be carried out for successful EA tool implementation

- Assess and understand EA Practice Maturity and Data Sufficiency

- Link Use Cases to Business Outcome then perform prioritization
- Ensure Sponsor and EA team Commitment
- Align Governance & Organization Culture

## References

1. EA tool Selection Guide, link: <https://www.enterprise-architecture.info/documents/Enterprise%20Architecture%20Tool%20Selection%20Guide%20v6.3.pdf>



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