

Survey Enterprise Architecture Maturity and Quality of IT Investment Decisions

Introduction

The Vrije Universiteit Amsterdam and the University of Applied Sciences Utrecht are researching the use of enterprise architecture (EA) as a management tool. The purpose of their research is to improve the effectiveness of EA. EA is not an end in itself, but has various purposes. One of these purposes is decision support. The objective of this survey is to study the relationship between the maturity of an EA practice and the quality of IT investment decisions. Your contribution to this subject is essential and highly appreciated.

Some important remarks:

- The information you provide will only be used for the purpose of this particular study and will be kept confidential.
- At the end of the survey you can leave your email address if you would like to receive the results of this study.
- It is possible to stop the survey and continue from the place where you left.
- Answering all questions will take you about 20 minutes.

This survey contains eight sections:

1. EA and IT investment decisions in your organization
2. Statements regarding the maturity of the EA practice (part 1)
3. Statements regarding the maturity of the EA practice (part 2)
4. Introduction to IT investment decisions
5. Statements on the quality of IT investment decisions
6. Statements on the quality of IT investment decision outcomes
7. Questions regarding the relationship between EA maturity and the quality of IT investment decisions
8. Demographic questions

We have defined EA as a discipline that provides overview and insights needed to translate strategy into execution, enabling senior management to take ownership of the key decisions on the design of the future organization. We consider an EA practice to consist of architects who develop EA artifacts such as business capability models, principles, policies, standards, guidelines, future state architectures, current state architectures, solution outlines, landscape diagrams and project start architectures. These artifacts are used by people who manage and implement change in order to guide and steer the future direction and evolution of an organization in the fields of business, information/data, applications, and technical infrastructure.

We have defined the IT investment decision as the decision to approve or disapprove an IT investment. An IT investment is an initiative with an IT component for which funds are requested. Examples are a business transformation programme to change the organization's business model, the purchase and deployment of an ERP system, or the outsourcing of a data centre.

Please answer the questions for the organization in which you are currently employed. If you are employed in more than one organization, please answer the questions for the organization that you are most familiar with.

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EA and IT investment decisions in your organization

1. For which organization are you going to answer the questions?

(Please be aware that the information you provide will be kept confidential)

* 2. What is your role in your organization with regard to EA?

(Multiple answers allowed)

- ☐ I develop EA artifacts (e.g. as an enterprise architect, domain architect, EA-manager, external EA consultant)
- ☐ I use EA artifacts in making decisions on the design of the future organization (e.g. as a C-level executive, business manager, IT manager, information manager, portfolio manager)
- ☐ I apply EA artifacts in projects (e.g. as a project manager, solution architect, software architect, business analyst, information analyst, developer)
- ☐ I do not deal with EA

* 3. What is your role in your organization with regard to IT investment decisions?

(Multiple answers allowed)

- ☐ I approve IT investment decisions (accountable)
- ☐ I prepare IT investment decisions (responsible)
- ☐ I am consulted in the preparation of IT investment decisions (consulted)
- ☐ I am informed about IT investment decisions (informed)
- ☐ I do not deal with IT investment decisions

* 4. Who makes the final decision to approve IT investments in your organization?

(Multiple answers allowed)

- ☐ One business representative
- ☐ A group of business representatives
- ☐ One IT representative
- ☐ A group of IT representatives
- ☐ A group of business and IT representatives
- ☐ Don't know
- ☐ Other (please specify)

* 5. How many years ago was the EA practice first established in your organization?

- ☐ 0
- ☐ 1
- ☐ 2
- ☐ 3 - 5
- ☐ 6 - 10
- ☐ 11 - 15
- ☐ 16 - 20
- ☐ >20
- ☐ Don't know

* 6. How many enterprise architects are currently employed in your organization?

- ☐ 0
- ☐ 1
- ☐ 2 - 5
- ☐ 6 - 10
- ☐ 11 - 25
- ☐ >25
- ☐ Don't know

* 7. How many architects in total (enterprise, solution, software etc.) are currently employed in your organization?

- ☐ 0
 - ☐ 1
 - ☐ 2 - 5
 - ☐ 6 - 10
 - ☐ 11 - 25
 - ☐ 26 - 50
 - ☐ 51 - 100
 - ☐ 101 - 200
 - ☐ >200
 - ☐ Don't know
-

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Enterprise Architecture maturity (part 1)

This section contains 12 statements regarding the maturity of the EA practice in your organization.

Please choose the statement that best reflects your current EA practice.

* 8. We develop EA artifacts.....

(Examples of EA artifacts are business capability models, principles, policies, standards, guidelines, future state architectures, current state architectures, solution outlines, landscape diagrams and project start architectures. The client is the one who orders to create EA artifacts and benefits from the insights these artifacts provide)

- ☐ Occasionally without a clear client.
- ☐ As a targeted activity with a clear client.

* 9. We develop EA artifacts.....

- ☐ Without the involvement of stakeholders.
- ☐ With the involvement of stakeholders.

* 10. We develop EA artifacts.....

- ☐ Without including these artifacts as an integral part in the total set of EA artifacts.
- ☐ While including these artifacts as an integral part in the total set of EA artifacts.

* 11. Our EA artifacts.....

- ☐ Are only used by architects themselves.
- ☐ Are used by architects and stakeholders, and are acknowledged by management.
- ☐ Serve as a concrete framework for guiding decisions made within the context of the organization's projects.
- ☐ Are used as an integral part of the organization's control process. They are a key factor in its decision-making processes.

* 12. The choices we make in EA artifacts....

- ☐ Are not explicitly linked to the organization's business objectives.
- ☐ Are substantiated by explicitly linking them to the organization's business objectives.
- ☐ Are triggered and steered by the changes necessary to realize business objectives.
- ☐ Arise from the organization's strategic discussions. Thinking in terms of architecture is an integral part of the organization.

* 13. Our staff involved in development and operations.....

- ☐ Are not aware of EA principles and guidelines.
- ☐ Are aware of EA principles and guidelines. Compliance with these principles and guidelines is not standard practice.
- ☐ Are fully aware of EA principles and guidelines. Compliance with these principles and guidelines is a standard part of the change process.

* 14. Our staff involved in development and operations.....

- ☐ Do not collaborate with architects to enhance EA principles and guidelines.
- ☐ Collaborate with architects to enhance EA principles and guidelines.

* 15. Our EA artifacts provide.....

- ☐ No insight into the current situation.
- ☐ Insight into the current situation and how to deal with it.
- ☐ Insight into the current and future situation as interrelated situations and how to migrate from the current to the future situation.

* 16. Responsibility

- ☐ No one is formally responsible for EA.
- ☐ The responsibility for the EA content has been assigned.
- ☐ The responsibility for the EA content and the EA processes has been assigned at a management level.
- ☐ The responsibility for the EA content, the EA processes, and the effect of EA has been assigned at a senior management level.

* 17. EA is...

- ☐ Not used to scope projects in relation to other projects.
- ☐ Used to scope individual projects in relation to other projects.
- ☐ Used to scope, align and coordinate the entire range of projects.
- ☐ Used to define the change portfolio of projects at a strategic level.

* 18. Compliance with EA.....

- ☐ Is not structurally monitored.
- ☐ Is assessed afterwards.
- ☐ Is proactively encouraged and assessed.
- ☐ Is proactively encouraged and assessed and is a standard feature of project execution.

* 19. Our EA artifacts.....

- ☐ Are not reviewed with regard to quality.
 - ☐ Are reviewed with regard to quality.
 - ☐ Are reviewed with regard to quality. This review is part of an EA quality assurance process.
 - ☐ Are reviewed with regard to quality. This review is part of an organization-wide quality assurance policy.
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Enterprise Architecture maturity (part 2)

This section contains further 11 statements regarding the maturity of the EA practice in your organization.
Please choose the statement that best reflects your current EA practice.

* 20. Management of the EA process

- ☐ There is no awareness that the EA process needs to be managed.
- ☐ There is awareness that the EA process needs to be managed.
- ☐ The EA process is actively managed.
- ☐ The EA process is scrutinized and improved on a regular basis.

* 21. Management of EA artifacts

- ☐ There is no awareness that the EA artifacts need to be managed.
- ☐ The EA artifacts are updated occasionally.
- ☐ The EA artifacts are actively kept up to date.
- ☐ The EA artifacts are managed according to a policy based on an overall vision covering all different components of the EA.

* 22. Structurally,

- ☐ No money and time is allocated to EA.
- ☐ Money and time is allocated to EA.
- ☐ Money and time is allocated to EA, and EA is acknowledged as a tool of tactical importance.
- ☐ Money and time is allocated to EA, and EA is acknowledged as a tool of strategic importance.

* 23. The architect's role....

- ☐ Has not been recognized in our organization.
- ☐ Has been recognized in our organization.
- ☐ Has been formalized in our organization in terms of tasks and responsibilities.

* 24. The architect's role....

- ☐ Is not actively supported with instruments and tools to improve his or her performance.
- ☐ Is actively supported with instruments and tools to improve his or her performance.
- ☐ Is actively supported with instruments and tools to improve his or her performance, and there are career paths for architects.

* 25. EA method

(To develop and use EA artifacts, organizations can use a certain method or procedure that involves specific activities, techniques, tools and deliverables. Such a method can be self-developed, obtained from the market or a combination of both)

- ☐ No specific EA method is used.
- ☐ Specific EA methods are used, but these are not yet shared by all architects.
- ☐ A cohesive EA method is used and shared by all architects.
- ☐ A cohesive EA method is used, shared by all architects, and linked to the organization's change processes.

* 26. Architects....

- ☐ Do not collaborate in our organization.
- ☐ Form a team and collaborate with each other.
- ☐ Form a team and collaborate with each other and with stakeholders.

* 27. Stakeholder involvement is initiated by....

- ☐ Nobody.
- ☐ The architects.
- ☐ Both the architects and the stakeholders.

* 28. Tool

(To develop EA artifacts, organizations can use a tool by which these artifacts can be created, maintained, and stored in a repository)

- ☐ Our architects do not use an EA tool.
- ☐ Our architects use an EA tool, but on an ad hoc basis.
- ☐ All of our architects use an EA tool, and they use it in the same way.

* 29. Tool

- ☐ Use of an EA tool is not embedded in the EA development process.
- ☐ Use of an EA tool is partly embedded in the EA development process.
- ☐ Use of an EA tool is fully embedded in the EA development process and allows to check the mutual consistency of EA artifacts.

* 30. The development of EA artifacts is.....

- ☐ Not preceded by a plan.
- ☐ Preceded by a plan.
- ☐ Preceded by a plan that is drawn up with a defined budgeting and planning method.
- ☐ Preceded by a plan that is drawn up with a defined budgeting and planning method. Plans are assessed afterwards for the purpose of quality improvement.

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Introduction IT investment decisions

An IT investment decision comprises two stages:

Preparation stage.

The first stage is the stage in which a decision is prepared. At the end of the preparation stage the IT investment decision is approved. During the preparation phase, the due date, the budget and the desired outcomes of the IT investment, as well as the concerns of stakeholders involved, can be determined, usually as part of a business case.

Implementation stage.

The second stage is the stage in which the decision is implemented. At the end of the implementation stage it becomes clear how long it took before the actual implementation was completed, how much money was spent, what the final outcomes were, and how satisfied the stakeholders were with these outcomes.

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Quality of IT investment decisions (preparation stage)

During the preparation stage IT investment decisions are prepared and finally approved.

This section contains eight statements regarding the quality of IT investment decisions.

Please take IT investment decisions in mind that were recently implemented in your organization and answer the following questions.

- * 31. When investment decisions are made in my organization, due dates are set for IT investments.

(The due date for an investment is the date by which the implementation tasks should be completed)

☐ Never ☐ Seldom ☐ About half the time ☐ Often ☐ Always

- * 32. IT investment decisions in my organization are made on a timely basis.

(On a timely basis means that the decision is made on time)

☐ Never ☐ Seldom ☐ About half the time ☐ Often ☐ Always

- * 33. When IT investment decisions are made in my organization, budgets are determined for IT investments.

(The budget is the amount of money required for the investment)

☐ Never ☐ Seldom ☐ About half the time ☐ Often ☐ Always

* 34. When IT investment decisions are made in my organization, the desired outcomes of IT investments are determined.

(The desired outcomes of an investment can be quantitative, e.g. a certain return on investment, or more qualitative, e.g. improved corporate identity)

☐ Never ☐ Seldom ☐ About half the time ☐ Often ☐ Always

* 35. When IT investment decisions are made in my organization, the concerns of stakeholders are carefully considered.

☐ Never ☐ Seldom ☐ About half the time ☐ Often ☐ Always

* 36. When IT investment decisions are made in my organization, the contribution to strategic, long-term objectives is considered.

☐ Never ☐ Seldom ☐ About half the time ☐ Often ☐ Always

* 37. When IT investment decisions are made in my organization, all relevant information is available.

(Relevant information in case of an IT investment: objectives, benefits, requirements, alternatives, costs, risks, stakeholders, planning, portfolio of investments, and governance)

☐ Never ☐ Seldom ☐ About half the time ☐ Often ☐ Always

* 38. When IT investment decisions are made in my organization, all relevant information is used.

☐ Never ☐ Seldom ☐ About half the time ☐ Often ☐ Always

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Quality of IT investment decision outcomes (implementation stage)

During the implementation stage IT investments are implemented. Final outcomes are the result.

This section contains six statements regarding the quality of the IT investment decision outcomes.

Please take IT investment decisions in mind that were recently implemented in your organization and answer the following questions.

* 39. The due dates for IT investments are achieved in my organization.

☐ Never ☐ Seldom ☐ About half the time ☐ Often ☐ Always

* 40. IT investments in my organization are implemented on a timely basis.

(On a timely basis means that the IT investment is implemented on time)

☐ Never ☐ Seldom ☐ About half the time ☐ Often ☐ Always

* 41. IT investments in my organization are on budget.

☐ Never ☐ Seldom ☐ About half the time ☐ Often ☐ Always

* 42. The desired outcomes of IT investments are achieved in my organization.

☐ Never ☐ Seldom ☐ About half the time ☐ Often ☐ Always

* 43. Stakeholders are satisfied with the final outcomes of IT investments in my organization.

☐ Never ☐ Seldom ☐ About half the time ☐ Often ☐ Always

* 44. The final outcomes of IT investments contribute to strategic, long-term objectives of my organization.

☐ Never ☐ Seldom ☐ About half the time ☐ Often ☐ Always

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Relationship between EA Maturity and the Quality of IT Investment Decisions

In this section you are requested to answer questions regarding the relationship between the maturity of your EA practice and the quality of IT investment decisions.

* 45. How do you rate the influence of the EA practice on IT investment decisions in your organization?

- ☐ Very poor
 ☐ Poor
 ☐ Acceptable
 ☐ Good
 ☐ Very good

* 46. To what extent are EA insights used in the preparation of IT investment decisions in your organization?

- ☐ Not at all
 ☐ Very little
 ☐ Moderate
 ☐ To a great extent
 ☐ Always

* 47. To what extent has the EA maturity in your organization changed over the last three years?

- ☐ Worsened to a large extent
 ☐ Worsened to a small extent
 ☐ Remained the same
 ☐ Improved to a small extent
- ☐ Improved to a large extent

* 48. What EA artifacts are used in the preparation of IT investment decisions in your organization?

(Multiple answers allowed)

- ☐ Business capability models
- ☐ Future state architectures
- ☐ Current state architectures
- ☐ Principles
- ☐ Policies
- ☐ Guidelines
- ☐ Standards
- ☐ Heat maps
- ☐ Landscape diagrams
- ☐ Roadmaps
- ☐ Project Start Architectures
- ☐ Solution outlines
- ☐ None
- ☐ Don't know
- ☐ Other (please specify)

* 49. What are the key insights that EA provides in the preparation of IT investment decisions in your organization?

(Multiple answers allowed)

- ☐ Relationship with past IT investments
- ☐ Relationship with current IT investments
- ☐ Relationship with future IT investments
- ☐ Risks of IT investment
- ☐ Feasibility of IT investment
- ☐ Fit with the future state architecture
- ☐ Fit with the business strategy
- ☐ Consequences for the current state
- ☐ Options for the future
- ☐ Different solution alternatives and their pros and cons
- ☐ None
- ☐ Don't know
- ☐ Other (please specify)

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Demographics

In this final section you are requested to answer a few questions about your organization and about yourself.

* 50. In what country is your organization headquartered?

* 51. To which economic sector does your organization belong?

- ☐ Finance and insurance
- ☐ Manufacturing (products and food) and construction
- ☐ Agriculture, fishing, forestry and mining
- ☐ Information, communication, entertainment and recreation
- ☐ Public administration (including defence)
- ☐ Education and research
- ☐ Energy and water supply and waste management
- ☐ Human health and social work activities
- ☐ Trade, transportation, hotel, catering, real estate and other services
- ☐ Don't know

* 52. What is your organization's headcount?

- ☐ <200
- ☐ 200-499
- ☐ 500-1999
- ☐ 2000 - 5000
- ☐ >5000
- ☐ Don't know



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Thank you for participating in this survey!

53. Do you have any final remarks or comments on this survey?

54. If you would like to receive the results of this study, please leave your email address. We will send you a personal copy of the results as soon as they become available.