Introduction and Consent

Thank you for agreeing to participate in our survey, which aims to acquire a deeper understanding of Enterprise Architecture (EA) in higher education (HE) institutions. We want to learn more about the motivations, methods, tools, success factors, challenges and impacts of EA in HE. This survey follows up on a series of interviews that we have already conducted with enterprise architects and CIOs working in higher education.

This survey is being conducted by Aliaa Alghamdi, PhD student at the University of Ottawa, Canada, and her supervisor Dr. Timothy Lethbridge.

The survey should only take 20-25 minutes to complete. Be assured that all your responses will be kept strictly confidential.

If you have any questions with regards to the ethical conduct of this study, you may contact the Protocol Officer for Ethics in Research, University of Ottawa: ethics@uottawa.ca

We really appreciate your input!

If you would like more information before consenting, you may click here to view our complete consent Form.

* 1. Do you consent to participate in this survey?
  * By clicking Yes, you consent that you are willing to answer the survey, but you always retain the right to withdraw at any time.

- ◯ Yes
- ◯ No

General Information

* 2. What is your country?

* 3. Is your institution public or private?

- ◯ Public (obtains core funding from a government, and is subject to government regulation)
- ◯ Private

* 4. How many students (undergraduate and graduate) are enrolled in your institution?

- ◯ Less than 5,000 (Small)
- ◯ Between 5,000 and 15,000 (Medium)
- ◯ Between 15,000 and 40,000 (Large)
- ◯ More than 40,000 (very large)

* 5. Is Enterprise Architecture (EA) implemented in your institution?

- ◯ Yes, it is known as Enterprise Architecture
- ◯ Yes, but it is known with a different name
- ◯ Maybe, partially or unsure: Aspects of Enterprise architecture may be in place
- ◯ No, but we have a plan to adopt it
- ◯ No, and we do not have a plan to adopt it

Reasons for Not Adopting Enterprise Architecture at Your Institute

6. Please indicate the extent to which each of the following is a factor explaining why your institution is not planning on adopting enterprise architecture?

	Not a factor	A minor factor	A significant factor	A major factor
Senior management does not support it	◯	◯	◯	◯
IT team(s) do not support it	◯	◯	◯	◯
Other potential stakeholders do not support it	◯	◯	◯	◯
The university is too decentralized	◯	◯	◯	◯
University finances are too limited	◯	◯	◯	◯
The university has other processes in place to manage its assets, information and processes that ma	◯	◯	◯	◯
There is a desire to keep the amount of administrative work as small as possible	◯	◯	◯	◯
Nobody has seriously thought about it	◯	◯	◯	◯
Relevant people have not yet learned enough about it	◯	◯	◯	◯
Staff are too busy with other tasks	◯	◯	◯	◯
The university is too small, so it is considered unnecessary	◯	◯	◯	◯
We have heard about failures of EA (or experienced them)	◯	◯	◯	◯
We are unable to hire sufficiently-knowledgeable staff	◯	◯	◯	◯

Other (please specify)

General Overview of Your Institute

* 7. How centralized is your institution?

- ◯ Single campus
- ◯ Single campus but with independent colleges (or similar)
- ◯ Multi-campus

* 8. How centralized is your institution with regarding to its Information Technology (IT) team?

- ◯ There is a central IT team that does most of the IT work
- ◯ There is a central IT team, but some of the work is distributed to departments, units, colleges or campuses
- ◯ There is a central IT team but most IT work is distributed
- ◯ Almost all IT work is distributed

Definition of Enterprise Architecture

9. In your opinion, to what extent do each of the following definitions will apply to EA in your institution? Each of these definitions come either from the literature or from our interviews with Enterprise Architects. Enterprise Architecture is:

	Does not apply at all	Somewhat applies	Strongly applies
A digital representation of the organization’s business and information technology landscape	◯	◯	◯
A process of understanding the different elements that go to make up the enterprise and how those elements are inter-related.	◯	◯	◯
A master plan that "acts as a collaboration force" between aspects of business planning, business operations, automation, and enabling technological infrastructure.	◯	◯	◯
A discipline for proactively and holistically leading enterprise responses to disruptive forces by identifying and analyzing the execution of change toward desired business vision and outcomes.	◯	◯	◯
A strategic information asset base, which defines the mission, the information necessary to perform the mission, the technologies necessary to perform the mission, and the transitional processes for implementing new technologies in response to changing mission needs.	◯	◯	◯
A formal description of the current and future state(s) of an organization, and of managed change between these states to meet organization’s stakeholders’ goals and to create value in the organization.	◯	◯	◯

Motivations and Objectives For Enterprise Architecture

10. For each of the following motivations and objectives for Enterprise Architecture, please indicate the extent to which it is important for your institution:

	Not Important At All	Slightly Important	Moderately important	Very Important	Absolutely Essential
EA is mandated by government for public sector organizations	◯	◯	◯	◯	◯
To align the university’s business and IT sectors.	◯	◯	◯	◯	◯
To rationalize and simplify, including reducing duplication	◯	◯	◯	◯	◯
To reduce costs	◯	◯	◯	◯	◯
To enable decision making to be data driven	◯	◯	◯	◯	◯
To enable the institution to be more adaptable	◯	◯	◯	◯	◯
To be able to undertake digital transformation and to improve automation	◯	◯	◯	◯	◯
To align projects with the university’s goals	◯	◯	◯	◯	◯
To better leverage university assets	◯	◯	◯	◯	◯

Other (please specify)

Models Used

11. To what extent do you manage each of the following kinds of models even if they are not under the enterprise architecture umbrella?

	Not at all	Somewhat	Moderately	A lot	Extensively
Enterprise models	◯	◯	◯	◯	◯
Organization charts	◯	◯	◯	◯	◯
Business process models	◯	◯	◯	◯	◯
Capability models	◯	◯	◯	◯	◯
Application models	◯	◯	◯	◯	◯
Data models	◯	◯	◯	◯	◯
Network models	◯	◯	◯	◯	◯
IT hardware models	◯	◯	◯	◯	◯
Service and interface models	◯	◯	◯	◯	◯
Security models	◯	◯	◯	◯	◯

Other (please specify)

EA Principles

12. For each of the following general principles, please indicate the extent to which it is important for your institution:

	Not Important At All	Slightly Important	Moderately important	Very Important	Absolutely Essential
Maximize the benefits to the university	◯	◯	◯	◯	◯
Orient the architecture to provision of services	◯	◯	◯	◯	◯
Ensure the continuity and recoverability of critical university operations	◯	◯	◯	◯	◯
Ensure compliance with laws, standards and policies	◯	◯	◯	◯	◯
Enable a holistic approach	◯	◯	◯	◯	◯
Enable partnership between business units and IT units	◯	◯	◯	◯	◯
Focus on the performance of the organization	◯	◯	◯	◯	◯
Focus on efficiency of using resources	◯	◯	◯	◯	◯
Be digitally integrated	◯	◯	◯	◯	◯
Enable quick, accurate decision making support	◯	◯	◯	◯	◯
Enhance simplicity	◯	◯	◯	◯	◯
Ensure the architecture is maintainable	◯	◯	◯	◯	◯
Ensure elements of the architecture are measurable.	◯	◯	◯	◯	◯
Align decisions and architecture with the strategic mission, vision and values of the University.	◯	◯	◯	◯	◯
Enable a single federated enterprise-wide architecture	◯	◯	◯	◯	◯
Be agile	◯	◯	◯	◯	◯
Base change on careful requirements analysis	◯	◯	◯	◯	◯
Be responsive to stakeholders as their needs change	◯	◯	◯	◯	◯

13. For each of the following data management principles, please indicate the extent to which it is important for your institution:

	Not Important At All	Slightly Important	Moderately important	Very Important	Absolutely Essential
Data is an asset	○	○	○	○	○
Data is shared	○	○	○	○	○
There is a common vocabulary and definitions for data	○	○	○	○	○
Data is reused: duplication of data should be avoided	○	○	○	○	○
Data is accessible, available and discoverable	○	○	○	○	○
Data is kept secure, and security risks are managed	○	○	○	○	○
Data is under the control of a trustee	○	○	○	○	○
There are policies and data management guidelines for data	○	○	○	○	○

14. For each of the following technology management principles, please indicate the extent to which it is important for your institution:

	Not Important At All	Slightly Important	Moderately important	Very Important	Absolutely Essential
Applications must be easy to use	○	○	○	○	○
Ensure end users can perform their work as efficiently as possible	○	○	○	○	○
Design solutions such that they are “good enough” in order to minimize costs and maximize value	○	○	○	○	○
Use or try out applications and technologies before buying	○	○	○	○	○
Buy instead of building	○	○	○	○	○
Prefer open solutions to commercial solutions	○	○	○	○	○
Configure instead of customizing	○	○	○	○	○
Control technical diversity	○	○	○	○	○
Ensure applications are independent of specific technology choices (e.g. databases, browsers, operating systems)	○	○	○	○	○
Avoid vendor lock-in	○	○	○	○	○
Align with multiple products from a single vendor to best leverage that vendor's ecosystem	○	○	○	○	○
Ensure the interoperability of technological components	○	○	○	○	○
Comply with technological standards and policies	○	○	○	○	○

15. If there are any very important principles that are not in the above lists, please provide them:

Success Factors in EA

16. In your opinion, to what extent is each of the following considered to be success factors in the EA process?

	Irrelevant	Somewhat unimportant	Moderately important	Very important	Critical
Having top management support, commitment & sponsorship	○	○	○	○	○
Having a good EA Team	○	○	○	○	○
Understanding EA stakeholders	○	○	○	○	○
Buy-in of the EA from stakeholders	○	○	○	○	○
Collaboration among EA team members	○	○	○	○	○
Collaboration with senior management	○	○	○	○	○
Collaboration with different departments and units	○	○	○	○	○
Usefulness, transparency & openness of EA itself	○	○	○	○	○
Availability of data	○	○	○	○	○
Clarity of EA vision, goals, and objectives	○	○	○	○	○
Support of the university's mission and goals	○	○	○	○	○
Communication and awareness of EA among all stakeholders	○	○	○	○	○
Having a good set of EA principles	○	○	○	○	○
Following the defined EA principles	○	○	○	○	○
Following a disciplined EA process	○	○	○	○	○
Conformance of the architecture to standards	○	○	○	○	○
Adding value to the institution	○	○	○	○	○
Supportability and maintainability of the technological solutions	○	○	○	○	○

17. In your opinion, to what extent is each of the following considered to be success factors for individual EA team members? (These might be assessed when hiring or promoting such team members)

	Irrelevant	Somewhat unimportant	Moderately important	Very important	Critical
Has good interpersonal skills: Listens well and effectively manages conflicts with others	○	○	○	○	○
Has a high level of education and training in EA	○	○	○	○	○
Has a deep knowledge of higher education in general	○	○	○	○	○
Has a background in this particular institution	○	○	○	○	○
Understands the mission of the university	○	○	○	○	○
Understands EA stakeholders	○	○	○	○	○
Understands the principles of EA adopted by the institution	○	○	○	○	○
Communicates well with stakeholders	○	○	○	○	○
Integrates well with other EA team members	○	○	○	○	○
Helps ensure the EA team is doing the right work in the right manner at the right time	○	○	○	○	○
Helps ensure the EA team is targeting the right goals	○	○	○	○	○
Deeply understands their domain(s)	○	○	○	○	○
Understands the perspectives and domains of other team members	○	○	○	○	○
Is able to adapt effectively to change	○	○	○	○	○

Other (please specify)

Challenges in EA

* 18. In your opinion, to what extent does each of the following pose a challenge to EA?

	Not a problem	A minor problem	A moderate problem	A major problem	A critical problem
Resistance to change (fixed mindsets and habits)	◯	◯	◯	◯	◯
Resistance to improvement	◯	◯	◯	◯	◯
Lack of higher education experience by EA leadership or the CIO	◯	◯	◯	◯	◯
Frequent changes to management structure	◯	◯	◯	◯	◯
Changes to EA team members resulting in loss of corporate knowledge or experience	◯	◯	◯	◯	◯
Changes to EA leadership resulting in changes of direction	◯	◯	◯	◯	◯
Lack of awareness of EA among university leadership and other stakeholders	◯	◯	◯	◯	◯
EA immaturity	◯	◯	◯	◯	◯
Difficulty in realizing, showing and delivering EA value	◯	◯	◯	◯	◯
Rigidity of university policies	◯	◯	◯	◯	◯
Difficulty in hiring people for EA jobs	◯	◯	◯	◯	◯
Insufficient background among EA team members to do required work	◯	◯	◯	◯	◯
Bad reputation of EA among stakeholders	◯	◯	◯	◯	◯
Lack of trust in EA by stakeholders	◯	◯	◯	◯	◯
Lack of leadership skills	◯	◯	◯	◯	◯
Lack of communication skills	◯	◯	◯	◯	◯
Lack of collaboration with other university units and stakeholders	◯	◯	◯	◯	◯
Misunderstanding of EA language & terminology	◯	◯	◯	◯	◯
Focus too much on business aspects and not enough on IT	◯	◯	◯	◯	◯
Focus too much on IT and not enough on business aspects	◯	◯	◯	◯	◯
Barriers between EA and other business units	◯	◯	◯	◯	◯
Not enough time to work on EA	◯	◯	◯	◯	◯
Not enough budget for EA	◯	◯	◯	◯	◯
Lack of organization buy-in	◯	◯	◯	◯	◯
Lack of openness (not inviting a broad spectrum of stakeholders to engage)	◯	◯	◯	◯	◯
Not meeting the university's goals	◯	◯	◯	◯	◯
Excessive decentralization of the university	◯	◯	◯	◯	◯
Excessive centralization of the university	◯	◯	◯	◯	◯
Stakeholders only caring about tangible benefits of EA but not EA itself	◯	◯	◯	◯	◯
Lack of linkages among different types of EA information	◯	◯	◯	◯	◯
More demand for EA than what the EA team can support	◯	◯	◯	◯	◯
EA is not sufficiently helping the IT team to keep up with change	◯	◯	◯	◯	◯
Poor inter-personal relationships with stakeholders	◯	◯	◯	◯	◯
Difficulty in realizing cost-saving or other benefits of EA	◯	◯	◯	◯	◯
Different perspectives and opinions from stakeholders on what they need and what they want to achieve	◯	◯	◯	◯	◯

Other (please specify)

General Overview of EA at Your Institution

* 19. Which of the following best characterizes the state of implementation of EA in your organization?

- ◯ Very early development, and relatively immature
- ◯ Established and has had a positive impact, but still being actively developed
- ◯ Established but has not had much impact on the institution or has not been successful yet
- ◯ Mature and is having a significant impact
- ◯ Was established but is winding down or is having less impact

* 20. Are you planning to continue your Enterprise Architecture work in the coming years?

- ◯ Yes, and we expect to put increasing effort into it
- ◯ Yes, and we expect the amount of effort to remain at current levels
- ◯ Yes, but we expect to somewhat reduce the amount of EA effort in the institution
- ◯ No, we are (or will be) winding our EA work down

* 21. Which organizational model of EA best fits your institution?

- ◯ Informal/ Ad hoc architecture (no formal architecture group. Individuals acting as ad hoc architects in their areas)
- ◯ Isolated Architecture (a "more formal" architecture group but that group is focused on one or two departments)
- ◯ Limited Central Architecture (a central architecture group but with limited interaction in select areas and projects across campus or campuses)
- ◯ Federated Architecture (Architecture groups or individuals around campus or campuses working together to form a "enterprise architecture" group)
- ◯ Head Architect with Domain Architects (like federated but with a central lead architect(s) orchestrating the federation)
- ◯ Central Architecture (a core group of architects that review all projects in the institution)
- ◯ Other (please specify)

22. What is the size of the EA team? (people who focus on EA only; not including people who focus on IT or related work)

- ◯ Less than one (it is a part time role, or the persons responsible have other tasks)
- ◯ 1
- ◯ 2-3
- ◯ 4-6
- ◯ More than 6

23. The head of the EA team (or those in charge of EA) reports to:

- ◯ Senior administration (such as the President or Provost) directly
- ◯ CIO (Chief Information Officer) or similar
- ◯ A manager of a business-focused group such as a director of planning
- ◯ An IT manager (below the CIO level)
- ◯ A manager of a specialized IT area such as security
- ◯ Other (please specify)

* 24. How centralized is your institution?

- ◯ Single campus
- ◯ Single campus but with independent colleges (or similar)
- ◯ Multi-campus

* 25. How centralized is your institution with regarding to its Information Technology (IT) team?

- ◯ There is a central IT team that does most of the IT work
- ◯ There is a central IT team, but some of the work is distributed to departments, units, colleges or campuses
- ◯ There is a central IT team but most IT work is distributed
- ◯ Almost all IT work is distributed

26. In your opinion, to what extent do each of the following definitions apply to EA in your institution? Each of these definitions come either from the literature or from our interviews with Enterprise Architects. Enterprise Architecture is:

	Does not apply at all	Somewhat applies	Strongly applies
A digital representation of the organization's business and information technology landscape	◯	◯	◯
A process of understanding the different elements that go to make up the enterprise and how those elements are inter-related.	◯	◯	◯
A master plan that "acts as a collaboration force" between aspects of business planning, business operations, automation, and enabling technological infrastructure.	◯	◯	◯
A discipline for proactively and holistically leading enterprise responses to disruptive forces by identifying and analyzing the execution of change toward desired business vision and outcomes.	◯	◯	◯
A strategic information asset base, which defines the mission, the information necessary to perform the mission, the technologies necessary to perform the mission, and the transitional processes for implementing new technologies in response to changing mission needs.	◯	◯	◯
A formal description of the current and future state(s) of an organization, and of managed change between these states to meet organization's stakeholders' goals and to create value in the organization.	◯	◯	◯

* 27. For each of the following motivations and objectives for Enterprise Architecture, please indicate the extent to which it is important for your institution:

	Not Important At All	Slightly Important	Moderately important	Very Important	Absolutely Essential
EA is mandated by government for public sector organizations	◯	◯	◯	◯	◯
To align the university's business and IT sectors.	◯	◯	◯	◯	◯
To rationalize and simplify, including reducing duplication	◯	◯	◯	◯	◯
To reduce costs	◯	◯	◯	◯	◯
To enable decision making to be data driven	◯	◯	◯	◯	◯
To enable the institution to be more adaptable	◯	◯	◯	◯	◯
To be able to undertake digital transformation and to improve automation	◯	◯	◯	◯	◯
To align projects with the university's goals	◯	◯	◯	◯	◯
To better leverage university assets	◯	◯	◯	◯	◯

Other (please specify)

Use of EA Frameworks

* 28. For each of the following frameworks or reference models, please indicate the extent to which it has influenced your EA process:

	Never heard of it	Do not use	Discovered that we are aligned with it somewhat	Somewhat influenced by it	Have borrowed elements from it	Have adapted it	Follow it closely
TOGAF (The Open Group Architecture Framework)	◯	◯	◯	◯	◯	◯	◯
KPMG EA approach	◯	◯	◯	◯	◯	◯	◯
Zachman Framework	◯	◯	◯	◯	◯	◯	◯
APQC Framework	◯	◯	◯	◯	◯	◯	◯
Gartner EA approach	◯	◯	◯	◯	◯	◯	◯
CAUDIT Enterprise Architecture Commons for Higher Education	◯	◯	◯	◯	◯	◯	◯
National Overall Reference Architecture (NORA)	◯	◯	◯	◯	◯	◯	◯
ITANA Reference Architecture for Teaching and Learning	◯	◯	◯	◯	◯	◯	◯

Other (please specify)

Reasons for Using Specific EA Frameworks

* 29. Please indicate the main reasons that motivated your organization to choose the framework(s) identified in the last question (you may need to scroll to the right to see all the reasons).

	It is very general	It is very complete	It complements other frameworks	It gives guidance for organizing an EA team	It helps manage risks	It helps guide the choice of IT and business solutions	It is aligns well with the university's functions and challenges	We were required to use it	Unknown (it was chosen by my predecessors)
TOGAF (The Open Group Architecture Framework)	☐	☐	☐	☐	☐	☐	☐	☐	☐
KPMG EA approach	☐	☐	☐	☐	☐	☐	☐	☐	☐
Zachman Framework	☐	☐	☐	☐	☐	☐	☐	☐	☐
APQC Framework	☐	☐	☐	☐	☐	☐	☐	☐	☐
Gartner EA approach	☐	☐	☐	☐	☐	☐	☐	☐	☐
CAUDIT Enterprise Architecture Commons for Higher Education	☐	☐	☐	☐	☐	☐	☐	☐	☐
National Overall Reference Architecture (NORA)	☐	☐	☐	☐	☐	☐	☐	☐	☐
ITANA Reference Architecture for Teaching and Learning	☐	☐	☐	☐	☐	☐	☐	☐	☐

Models and Tools Used in Enterprise Architecture

30. To what extent do you manage each of the following kinds of models in your EA process?

	Not at all	Somewhat	Moderately	A lot	Extensively
Enterprise models	◯	◯	◯	◯	◯
Organization charts	◯	◯	◯	◯	◯
Business process models	◯	◯	◯	◯	◯
Capability models	◯	◯	◯	◯	◯
Application models	◯	◯	◯	◯	◯
Data models	◯	◯	◯	◯	◯
Network models	◯	◯	◯	◯	◯
IT hardware models	◯	◯	◯	◯	◯
Service and interface models	◯	◯	◯	◯	◯
Security models	◯	◯	◯	◯	◯

Other (please specify)

* 31. To what extent do you use each of the following tools to manage your EA?

	Do not use	Use a little	Use moderately	Use extensively
Generic drawing or diagramming tools (e.g. Visio, Lucidchart)	◯	◯	◯	◯
Spreadsheet tools (e.g. Excel, Google sheets)	◯	◯	◯	◯
Text editors or word processors (e.g. Word, Google docs, Wikis)	◯	◯	◯	◯
Presentation tools (e.g. Powerpoint)	◯	◯	◯	◯
Archimate	◯	◯	◯	◯
iServer by Orbus Software	◯	◯	◯	◯
Enterprise Architect by Sparx Systems	◯	◯	◯	◯
Abacus by Avolution	◯	◯	◯	◯
erwin EA by erwin	◯	◯	◯	◯
Insight EA by FIOS Insight	◯	◯	◯	◯
Cameo Enterprise Architecture by No Magic	◯	◯	◯	◯
Casewise Modeler by Casewise	◯	◯	◯	◯
BiZZDesign Enterprise Studio by BiZZDesign	◯	◯	◯	◯
HOPEX by MEGA International	◯	◯	◯	◯
IBM Rational System Architect	◯	◯	◯	◯
Other software or system modeling tools (e.g. Papyrus)	◯	◯	◯	◯
Data management tools (e.g. Google Data Studio)	◯	◯	◯	◯
Other specially designed business modeling tools	◯	◯	◯	◯

Other (please specify)

Pros and Cons of Specific Tools Used in EA

32. What do you like about the tool(s) that you selected in the last question?

	Supports our EA framework(s)	Integrates with other tools	Cross-platform (e.g. Windows and Mac)	Cost effective	Supports EA standards	Easy to use	Facilitates collaborating, sharing & communication	Helps maintain consistency of information	Produces good and understandable model representations	Validates models and diagrams	Manages specific representations and diagrams we need	Integrates with a central repository
Generic												

drawing or diagramming tools (e.g. Visio, Lucidchart)	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
Spreadsheet tools (e.g. Excel, Google sheets)	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
Text editors or word processors (e.g. Word, Google docs, Wikis)	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
Presentation tools (e.g. Powerpoint)	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
Archimate	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
iServer by Orbus Software	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
Enterprise Architect by Sparx Systems	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
Abacus by Avolution	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
erwin EA by erwin	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
Insight EA by FIOS Insight	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
Cameo Enterprise Architecture by No Magic	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
Casewise Modeler by Casewise	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
BiZZDesign Enterprise Studio by BiZZDesign	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
HOPEX by MEGA International	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
IBM Rational System Architect	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
Other software or system modeling tools (e.g. Papyrus)	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
Data management tools (e.g. Google Data Studio)	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
Other specially designed business modeling tools	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐

33. What do you dislike about the tool(s) that you use? (you may have to scroll right to see all columns)

Not suited						Does		Can not automatically		Makes it hard to		Does not

	for EA tasks we need to achieve	Does not allow effective organization of information	Expensive	Not easy to use	A lot of learning time	not work with a central repository	Not integrated with other tools	populate data from other sources	Inflexible	keep models up to date	Requires excessive time to set up or configure	allow tracking of changes	Does not allow easy collaboration or sharing	Does not allow validation of models
Generic drawing or diagramming tools (e.g. Visio, Lucidchart)	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
Spreadsheet tools (e.g. Excel, Google sheets)	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
Text editors or word processors (e.g. Word, Google docs, Wikis)	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
Presentation tools (e.g. Powerpoint)	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
Archimate	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
iServer by Orbus Software	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
Enterprise Architect by Sparx Systems	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
Abacus by Avolution	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
erwin EA by erwin	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
Insight EA by FIOS Insight	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
Cameo Enterprise Architecture by No Magic	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
Casewise Modeler by Casewise	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
BiZZDesign Enterprise Studio by BiZZDesign	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
HOPEX by MEGA International	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
IBM Rational System Architect	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
Other software or system modeling tools (e.g. Papyrus)	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
Data management tools (e.g. Google Data Studio)	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
Other specially designed business modeling tools	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐

EA Principles

* 34. For each of the following general enterprise architecture principles, please indicate the extent to which it is applied in your organization

	Not applied at all	Considered sometimes	Important but informally applied	This is similar to one of our organization's formal EA principles
Maximize the benefits to the university	◯	◯	◯	◯
Orient the architecture to provision of services	◯	◯	◯	◯
Ensure the continuity and recoverability of critical university operations	◯	◯	◯	◯
Ensure compliance with laws, standards and policies	◯	◯	◯	◯
Enable a holistic approach	◯	◯	◯	◯
Enable partnership between business units and IT units	◯	◯	◯	◯
Focus on the performance of the organization	◯	◯	◯	◯
Focus on efficiency of using resources	◯	◯	◯	◯
Be digitally integrated	◯	◯	◯	◯
Enable quick, accurate decision making support	◯	◯	◯	◯
Enhance simplicity	◯	◯	◯	◯
Ensure the architecture is maintainable	◯	◯	◯	◯
Ensure elements of the architecture are measurable.	◯	◯	◯	◯
Align decisions and architecture with the strategic mission, vision and values of the University.	◯	◯	◯	◯
Enable a single federated enterprise-wide architecture	◯	◯	◯	◯
Be agile	◯	◯	◯	◯
Base change on careful requirements analysis	◯	◯	◯	◯
Be responsive to stakeholders as their needs change	◯	◯	◯	◯

* 35. For each of the following data management principles, please indicate the extent to which is applied in your enterprise architecture

	Not applied at all	Considered sometimes	Important but informally applied	This is similar to one of our organization's formal EA principles
Data is an asset	◯	◯	◯	◯
Data is shared	◯	◯	◯	◯
There is a common vocabulary and definitions for data	◯	◯	◯	◯
Data is reused: duplication of data should be avoided	◯	◯	◯	◯
Data is accessible, available and discoverable	◯	◯	◯	◯
Data is kept secure, and security risks are managed	◯	◯	◯	◯
Data is under the control of a trustee	◯	◯	◯	◯
There are policies and data management guidelines for data	◯	◯	◯	◯

* 36. For each of the following technology management principles, please indicate the extent to which is applied in your enterprise architecture

	Not applied at all	Considered sometimes	Important but informally applied	This is similar to one of our organization's formal EA principles
Applications must be easy to use	◯	◯	◯	◯
Ensure end users can perform their work as efficiently as possible	◯	◯	◯	◯
Design solutions such that they are “good enough” in order to minimize costs and maximize value	◯	◯	◯	◯
Use or try out applications and technologies before buying	◯	◯	◯	◯
Buy instead of building	◯	◯	◯	◯
Prefer open solutions to commercial solutions	◯	◯	◯	◯
Configure instead of customizing	◯	◯	◯	◯
Control technical diversity	◯	◯	◯	◯
Ensure applications are independent of specific technology choices (e.g. databases, browsers, operating systems)	◯	◯	◯	◯
Avoid vendor lock-in	◯	◯	◯	◯
Align with multiple products from a single vendor to best leverage that vendor's ecosystem	◯	◯	◯	◯
Ensure the interoperability of technological components	◯	◯	◯	◯
Comply with technological standards and policies	◯	◯	◯	◯

37. If there are any very important principles that are not in the above lists, please provide them:

38. If there is a resistance to following an EA principle please describe the nature of this resistence

39. To what extent do your EA principles affect the flexibility of the architecture:

- ◯ Reduce flexibility a lot
- ◯ Reduce flexibility a little
- ◯ Has no effect
- ◯ Increase flexibility a little
- ◯ Increase flexibility a lot

Success Factors and Challenges in EA

* 40. To what extent do you consider each of the following to be success factors in your EA process?

	Irrelevant	Somewhat unimportant	Moderately important	Very important	Critical
Having top management support, commitment & sponsorship	◯	◯	◯	◯	◯
Having a good EA Team	◯	◯	◯	◯	◯
Understanding EA stakeholders	◯	◯	◯	◯	◯
Buy-in of the EA from stakeholders	◯	◯	◯	◯	◯
Collaboration among EA team members	◯	◯	◯	◯	◯
Collaboration with senior management	◯	◯	◯	◯	◯
Collaboration with different departments and units	◯	◯	◯	◯	◯
Usefulness, transparency & openness of EA itself	◯	◯	◯	◯	◯
Availability of data	◯	◯	◯	◯	◯
Clarity of EA vision, goals, and objectives	◯	◯	◯	◯	◯
Support of the university's mission and goals	◯	◯	◯	◯	◯
Communication and awareness of EA among all stakeholders	◯	◯	◯	◯	◯
Having a good set of EA principles	◯	◯	◯	◯	◯
Following the defined EA principles	◯	◯	◯	◯	◯
Following a disciplined EA process	◯	◯	◯	◯	◯
Conformance of the architecture to standards	◯	◯	◯	◯	◯
Adding value to the institution	◯	◯	◯	◯	◯
Supportability and maintainability of the technological solutions	◯	◯	◯	◯	◯

* 41. To what extent do you consider each of the following to be success factors for individual EA team members? (These might be assessed when hiring or promoting such team members)

	Irrelevant	Somewhat unimportant	Moderately important	Very important	Critical
Has good interpersonal skills: Listens well and effectively manages conflicts with others	◯	◯	◯	◯	◯
Has a high level of education and training in EA	◯	◯	◯	◯	◯
Has a deep knowledge of higher education in general	◯	◯	◯	◯	◯
Has a background in this particular institution	◯	◯	◯	◯	◯
Understands the mission of the university	◯	◯	◯	◯	◯
Understands EA stakeholders	◯	◯	◯	◯	◯
Understands the principles of EA adopted by the institution	◯	◯	◯	◯	◯
Communicates well with stakeholders	◯	◯	◯	◯	◯
Integrates well with other EA team members	◯	◯	◯	◯	◯
Helps ensure the EA team is doing the right work in the right manner at the right time	◯	◯	◯	◯	◯
Helps ensure the EA team is targeting the right goals	◯	◯	◯	◯	◯
Deeply understands their domain(s)	◯	◯	◯	◯	◯
Understands the perspectives and domains of other team members	◯	◯	◯	◯	◯
Is able to adapt effectively to change	◯	◯	◯	◯	◯

Other (please specify)

* 42. To what extent does each of the following pose a challenge to your EA?

	Not a problem	A minor problem	A moderate problem	A major problem	A critical problem
Resistance to change (fixed mindsets and habits)	◯	◯	◯	◯	◯
Resistance to improvement	◯	◯	◯	◯	◯
Lack of higher education experience by EA leadership or the CIO	◯	◯	◯	◯	◯
Frequent changes to management structure	◯	◯	◯	◯	◯
Changes to EA team members resulting in loss of corporate knowledge or experience	◯	◯	◯	◯	◯
Changes to EA leadership resulting in changes of direction	◯	◯	◯	◯	◯
Lack of awareness of EA among university leadership and other stakeholders	◯	◯	◯	◯	◯
EA immaturity	◯	◯	◯	◯	◯
Difficulty in realizing, showing and delivering EA value	◯	◯	◯	◯	◯
Rigidity of university policies	◯	◯	◯	◯	◯
Difficulty in hiring people for EA jobs	◯	◯	◯	◯	◯
Insufficient background among EA team members to do required work	◯	◯	◯	◯	◯
Bad reputation of EA among stakeholders	◯	◯	◯	◯	◯
Lack of trust in EA by stakeholders	◯	◯	◯	◯	◯
Lack of leadership skills	◯	◯	◯	◯	◯
Lack of communication skills	◯	◯	◯	◯	◯
Lack of collaboration with other university units and stakeholders	◯	◯	◯	◯	◯
Misunderstanding of EA language & terminology	◯	◯	◯	◯	◯
Focus too much on business aspects and not enough on IT	◯	◯	◯	◯	◯
Focus too much on IT and not enough on business aspects	◯	◯	◯	◯	◯
Barriers between EA and other business units	◯	◯	◯	◯	◯
Not enough time to work on EA	◯	◯	◯	◯	◯
Not enough budget for EA	◯	◯	◯	◯	◯
Lack of organization buy-in	◯	◯	◯	◯	◯
Lack of openness (not inviting a broad spectrum of stakeholders to engage)	◯	◯	◯	◯	◯
Not meeting the university's goals	◯	◯	◯	◯	◯
Excessive decentralization of the university	◯	◯	◯	◯	◯
Excessive centralization of the university	◯	◯	◯	◯	◯
Stakeholders only caring about tangible benefits of EA but not EA itself	◯	◯	◯	◯	◯
Lack of linkages among different types of EA information	◯	◯	◯	◯	◯
More demand for EA than what the EA team can support	◯	◯	◯	◯	◯
EA is not sufficiently helping the IT team to keep up with change	◯	◯	◯	◯	◯
Poor inter-personal relationships with stakeholders	◯	◯	◯	◯	◯
Difficulty in realizing cost-saving or other benefits of EA	◯	◯	◯	◯	◯
Different perspectives and opinions from stakeholders on what they need and what they want to achieve	◯	◯	◯	◯	◯

Other (please specify)

Change and Impact

* 43. To what extent has the EA team and its work had an impact on the following

	Very negative impact	Negative impact	Somewhat negative impact	No impact at all	Somewhat positive impact	Positive impact	Very positive impact
The alignment of IT strategies with the university's mission and goals	◯	◯	◯	◯	◯	◯	◯
Decision making in the university as a whole	◯	◯	◯	◯	◯	◯	◯
Business process improvement	◯	◯	◯	◯	◯	◯	◯
Purchasing of software	◯	◯	◯	◯	◯	◯	◯
Purchasing of supplies or assets (other than software)	◯	◯	◯	◯	◯	◯	◯
Development of software	◯	◯	◯	◯	◯	◯	◯
Security	◯	◯	◯	◯	◯	◯	◯
The choices of software that can be used by end users	◯	◯	◯	◯	◯	◯	◯
The ability of university employees to work efficiently	◯	◯	◯	◯	◯	◯	◯
Job satisfaction of university employees	◯	◯	◯	◯	◯	◯	◯
University budget (i.e. what has the impact been on the 'bottom line')	◯	◯	◯	◯	◯	◯	◯
Student experience	◯	◯	◯	◯	◯	◯	◯
Integration of different units of the university	◯	◯	◯	◯	◯	◯	◯

44. Pick up to 10 of the most prominent changes that have been made to EA at your university since its establishment

- [ ] Setting up an architecture board
- [ ] Making an architecture board open to everyone
- [ ] Doing a lot of self-evaluation
- [ ] Doing a lot of self-assignment
- [ ] Moving from being reactive to being proactive
- [ ] Growing the EA team substantially
- [ ] Building community to work closely with other university's departments
- [ ] Acquiring new skills
- [ ] Adopting amore agile approach to EA
- [ ] More meetings among team members
- [ ] More meetings with stakeholders
- [ ] More support from leadership of the university
- [ ] Pushing for "enterprise thinking"
- [ ] Increasingly informing technology and business decisions
- [ ] Making the EA process more disciplined
- [ ] Formalizing rules and responsibilities
- [ ] Reviewing the terms of reference
- [ ] Increasing focus on Information and technology management
- [ ] Increasing focus on application and technology domains within IT unit(s)
- [ ] Adjusting from working mostly on projects to leading strategies
- [ ] More focus on key investments
- [ ] Working as a service unit
- [ ] Increasing ability to share information across different systems
- [ ] Becoming more motivated by visions derived from business units
- [ ] Better defining EA program needs and goals
- [ ] Deepening, broadening or increasing the validity of the overall architecture
- [ ] Building virtual groups of architects and business analysts
- [ ] No changes have been made
- [ ] Other (please specify)

Agility

* 45. To what extent do you feel your EA process is agile (agility means that the models can be easily changed, and that the EA can help the organization make rapid changes if needed)?

- ◯ Not agile at all
- ◯ Slightly agile
- ◯ Moderately agile
- ◯ Very agile
- ◯ Extremely agile

46. For the following aspects, please indicate how each of them affects the agility of EA at your institution?

	Decreases agility a lot	Decreases agility a little	Has no effect on agility, or is not a factor at this institution	Increases agility a little	Increases agility a lot
Formal and strict EA process	◯	◯	◯	◯	◯
Security concerns regarding information and IT infrastructure	◯	◯	◯	◯	◯
Requirements for considerable consultation before making changes	◯	◯	◯	◯	◯
The EA process is pinned to the university's budgetary cycle	◯	◯	◯	◯	◯
The university has a large number of policies, or complex policies	◯	◯	◯	◯	◯
There is resistance to change in university management	◯	◯	◯	◯	◯
The EA process is loosely defined	◯	◯	◯	◯	◯
IT processes are not mature	◯	◯	◯	◯	◯
No process has been developed for how to perform EA in an agile manner	◯	◯	◯	◯	◯
There is a large amount of documentation to maintain	◯	◯	◯	◯	◯
EA team works in sprints	◯	◯	◯	◯	◯
EA team is very small	◯	◯	◯	◯	◯
The university is very large	◯	◯	◯	◯	◯
The EA team must consider a large number of applications and technologies	◯	◯	◯	◯	◯
The EA team is involved in a large number of initiatives and projects	◯	◯	◯	◯	◯
EA team works across every aspect of the university	◯	◯	◯	◯	◯
EA team has regular meetings with stakeholders	◯	◯	◯	◯	◯
The whole university is organized with agility in mind	◯	◯	◯	◯	◯
The EA team has a vision for adaptability in the university	◯	◯	◯	◯	◯
EA is developed in a stepwise and pragmatic manner	◯	◯	◯	◯	◯
The university performs frequent review of policies and directions	◯	◯	◯	◯	◯
There is a flexible mindset regarding adoption of new technologies that might fit into the overall architecture	◯	◯	◯	◯	◯
The EA team applies the “just-enough architecture” principle to limit the volume of information they manage, or scale it down	◯	◯	◯	◯	◯
EA is driven by business issues and is responds quickly to the needs of business units	◯	◯	◯	◯	◯
The EA team does careful planning before taking any action	◯	◯	◯	◯	◯
EA frameworks are used as a guide but do not need to be followed closely	◯	◯	◯	◯	◯
New software developed in the university is created using agile software development methods	◯	◯	◯	◯	◯
The EA team works towards a more streamlined process with fewer tools	◯	◯	◯	◯	◯
The EA team carefully prioritizes tasks	◯	◯	◯	◯	◯
The EA framework(s) used do not support agility	◯	◯	◯	◯	◯

Other (please specify)

Concluding Comments

47. Please provide any other comments you may have relating to the questions about EA in this Survey