Enterprise Architecture programs must have a way to prove their worth. In order to do this, a series of value measurements are used to illustrate the effective success or failure of an EA program. These measurements can then be used to justify continued support or warrant the end of a given program. In many cases, the effects of an EA program will be observed internally by the EA program itself as well as externally by the enterprise. In order to effectively capture the impact of an EA program, an organization must find a way to measure both internal and external success.

Currently, many metrics concerning an EA program focus primarily on internal measurements, neglecting external factors [1]. Metrics are a way for an EA program to illustrate its level of success relevant to the goals of the organization it is supporting. With a stable group of metrics, an EA program will be able to create a business case for resources such as funding, personnel, etc. [2]. Unfortunately, the measurement values that are being presented by current architects do not resonate with business stakeholders [1]. Instead, the metrics that are commonly reported include measurements such as consulting hours, compliance standards, and project reviews [2]. Although these measurements are important to an EA program internally, they do not necessarily show business value or growth.
Survey on EA Value Measurement

This research seeks to gain an understanding of the current value measurements employed by various organizations. A comprehensive survey was conducted that collected information concerning EA framework usage, EA value measurements, and the demographics surrounding the leader(s) of an organization’s EA program.

The EA Value Measurement portion of the survey was designed to provide a profile of how the value of enterprise architecture is measured in a large cross-section of organizations and industries. Through a review of the literature and many consultations with the survey partners, it was determined that an initial set of seven value measurement categories are most commonly utilized to capture the impact of an EA program. These value measurement categories include financial, business/strategy, IT, customer, EA internal program, growth/innovation, and compliance/regulatory metrics.
Findings

- Usage of value metrics to construct EA business case. Results indicate that majority of the organizations did not utilize value metrics to construct the EA business case.
  - 80 answered ‘Yes’ (33%)
  - 113 answered ‘No’ (46%)
  - Don’t know (21%)

- Most senior person who approved the EA business case. CIO was selected most frequently
  - CIO (34%)
  - CEO (32.3%)
  - Director / VP of EA (24.6%)
  - COO (4.6%)
Categories of value metrics used for EA business case

Seven major categories of metrics:
- Financial (71%)
- IT (53%)
- Customer
- Business / Strategy (80%)
- EA internal program
- Growth / Innovation
- Risk and compliance / Regulatory
EA value measurement program

- Presence of EA value measurement program
  - Yes (47%)
  - No (34%)
    - EA program is in its early stage of adoption (not mature enough); not enough EA architects and resources
    - Many indicated it is hard to realize the value of EA; metrics are difficult to be established;
    - Not a priority as of now
  - Don’t know (19.3%)
- Results indicate that organizations are not very mature when it comes to EA value measurement
## Popular financial metrics

Please identify the financial metrics used with the EA value measurement program in your organization (Check all that apply)

<table>
<thead>
<tr>
<th>Answer Options</th>
<th>Response Percent</th>
<th>Response Count</th>
</tr>
</thead>
<tbody>
<tr>
<td>Return on Investment (ROI): used to evaluate the efficiency of EA investment</td>
<td>55.6%</td>
<td>60</td>
</tr>
<tr>
<td>Return on Shareholders' Equity (ROE): Measures the rate of return the company has earned on its equity investment</td>
<td>3.7%</td>
<td>4</td>
</tr>
<tr>
<td>Return on Total Assets (ROA): Measures the effectiveness of the company’s assets to generate net profits</td>
<td>13.0%</td>
<td>14</td>
</tr>
<tr>
<td>Internal Rate of Return (IRR): used to calculate and assess the financial attractiveness/viability of capital intensive projects or investments</td>
<td>20.4%</td>
<td>22</td>
</tr>
<tr>
<td>Benefit-to-cost ratio (B/CR): ratio of EA benefits to EA costs</td>
<td>35.2%</td>
<td>38</td>
</tr>
<tr>
<td>Net Present Value (NPV): is the net amount of all the discounted cash flows</td>
<td>18.5%</td>
<td>20</td>
</tr>
<tr>
<td>Breakeven point (BEP): point when benefits exceed costs of EA</td>
<td>11.1%</td>
<td>12</td>
</tr>
<tr>
<td>Total investment in new applications (bought or built) over time</td>
<td>30.6%</td>
<td>33</td>
</tr>
<tr>
<td>No financial metrics are used in our organization</td>
<td>24.1%</td>
<td>26</td>
</tr>
</tbody>
</table>
Questions related to financial metrics

- **Challenges gathering metrics information**
  - Difficulty in consolidating data from existing disparate systems (59%)
  - Poor data quality and low data consistency due to inefficient reporting tools (44%)
  - No standard business architecture documentation (32%)

- **Reliability in measuring EA value**
  - Very satisfied, Somewhat satisfied, Neither satisfied nor dissatisfied, Somewhat dissatisfied, Very dissatisfied
  - "Somewhat satisfied" (42%) - lack of proper metrics, proper methods to track ROI and inability to align financial data to specific initiatives

- **Degree of success in achieving org goals**
  - Very successful, Partially successful, Unsuccessful, Too early in the process to adequately assess, We have the goals set but don’t measure against them
  - "Partially successful" (39%) - If CIO focused on “cost cutting” then these metrics are important. But if the focus is on “transforming the organization” then they become secondary.
  - "Too early in the process to assess" (33%)

- **Importance in performance evaluation of EA**
  - Very high importance, High Importance, Moderately important, Low importance, Very low importance
  - "High importance" (42%) - without financial metrics, proving the role of EA in controlling costs and other long term prospects for EA program becomes difficult.
  - Moderately important (29%)
Please identify the IT metrics used with the EA value measurement program in your organization (Check all that apply)

<table>
<thead>
<tr>
<th>Answer Options</th>
<th>Response Percent</th>
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</tr>
</thead>
<tbody>
<tr>
<td>IT Total Cost of ownership: this measures the overall total cost of ownership (TCO) for technology owned, operated or supported by the organization</td>
<td>56.6%</td>
<td>56</td>
</tr>
<tr>
<td>Percentage of IT initiatives that are aligned, as identified through EA process</td>
<td>38.4%</td>
<td>38</td>
</tr>
<tr>
<td>Percentage reuse of architectural components including services</td>
<td>41.4%</td>
<td>41</td>
</tr>
<tr>
<td>Cost savings through reuse of software components, standardized purchase agreements and common product sets</td>
<td>41.4%</td>
<td>41</td>
</tr>
<tr>
<td>Percentage reuse and repeat of common designs that speed decision making with less time to complete design</td>
<td>34.3%</td>
<td>34</td>
</tr>
<tr>
<td>No IT metrics are used in our organization</td>
<td>8.1%</td>
<td>8</td>
</tr>
</tbody>
</table>
Questions on IT metrics

- Silo nature of the departments (60%)
- Lack of integrated technology or inefficient reporting tools (40%)
- Poor data quality and low data consistency (39%)

Reliability in measuring EA value
- Very satisfied, Somewhat satisfied, Neither satisfied nor dissatisfied, Somewhat dissatisfied, Very dissatisfied
- “Somewhat satisfied” (36%)
- ‘Metrics are historical in focus and anemic in impact’; Early in the process; still need to tie IT metrics to $ value

Degree of success in achieving org goals
- Very successful, Partially successful, Unsuccessful, Too early in the process to adequately assess, We have the goals set but don’t measure against them
- “Partially successful” (38%); Too early to assess (34%)
- ‘Very little focus on what IT metrics should be used, let alone crafting of any particular goals related to them’

Importance in performance evaluation of EA
- Very high importance, High Importance, Moderately important, Low importance, Very low importance
- “High importance” (41%)
- IT metrics provide the ‘base’ for service levels of specific capability; IT enables business;
Popular customer metrics

Please identify the customer metrics used with the EA value measurement program in your organization (Check all that apply)

<table>
<thead>
<tr>
<th>Answer Options</th>
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</tr>
</thead>
<tbody>
<tr>
<td><strong>On-Time Delivery</strong>: shows the ability of the organization to meet customer expectations with respect to the time it takes to satisfy a specific order or service request</td>
<td>30%</td>
<td>26</td>
</tr>
<tr>
<td><strong>Customer Service Performance</strong>: measures the organization’s ability to complete customer requests within agreed performance objectives</td>
<td>24.1%</td>
<td>21</td>
</tr>
<tr>
<td><strong>Customer Care Performance</strong>: measures critical aspects of customer service including time-to-respond and time-to-resolve. It also shows the ability of the customer care function to complete requests within agreed service-level agreements</td>
<td>21.8%</td>
<td>19</td>
</tr>
<tr>
<td>Feedback through customer surveys</td>
<td>19.5%</td>
<td>17</td>
</tr>
<tr>
<td>No customer metrics are used in our organization</td>
<td>33.3%</td>
<td>29</td>
</tr>
</tbody>
</table>
Questions on customer metrics

- Many customer metrics like customer satisfaction are unobservable or perceptual (39%)
- Ensuring metrics are continually evaluated for relevance and identification of new metrics as necessary (32%)
- Poor data quality and low data consistency due to inefficient reporting tools (32%)

- Very satisfied, Somewhat satisfied, Neither satisfied nor dissatisfied, Somewhat dissatisfied, Very dissatisfied
  - “Somewhat satisfied” (37.3%)
  - ‘Programs are not yet forced to deliver metrics to measure return’

- Very successful, Partially successful, Unsuccessful, Too early in the process to adequately assess, We have the goals set but don’t measure against them
  - “Partially successful” (53%)
  - Varies from client to client; could do better

- Very high importance, High Importance, Moderately important, Low importance, Very low importance
  - “Moderately important” (35%); “High importance” (33%)
  - Not mature enough; EA projects do not significantly integrate with nor impact our Customer interaction programs, i.e., separate Business programs from EA programs.
### Popular business / strategy metrics

Please identify the business/strategy metrics used with the EA value measurement program in your organization (Check all that apply)

<table>
<thead>
<tr>
<th>Answer Options</th>
<th>Response Percent</th>
<th>Response Count</th>
</tr>
</thead>
<tbody>
<tr>
<td>Increase in the ability of EA team to respond effectively to new business opportunities</td>
<td>35.3%</td>
<td>30</td>
</tr>
<tr>
<td>Decrease in time-to-market for new products and the revenue generated</td>
<td>27.1%</td>
<td>23</td>
</tr>
<tr>
<td>Percentage of applications used by more than one business / Product mix offerings</td>
<td>25.9%</td>
<td>22</td>
</tr>
<tr>
<td>Number of business strategies that map to multiple funded initiatives</td>
<td>21.2%</td>
<td>18</td>
</tr>
<tr>
<td>No business/strategy metrics are used in our organization</td>
<td>27.1%</td>
<td>23</td>
</tr>
</tbody>
</table>
Questions on business metrics

Challenges gathering metrics information
- Metrics created in this category are silo metrics that are not orchestrated relative to big picture corporate needs (38%)
- Poor data quality and low data consistency due to inefficient reporting tools (34%)
- No aggregation of common business processes to common value streams (34%)

Reliability in measuring EA value
- Very satisfied, Somewhat satisfied, Neither satisfied nor dissatisfied, Somewhat dissatisfied, Very dissatisfied
- “Neither satisfied nor dissatisfied” (34%); “Somewhat satisfied” (32%)
- Metrics are not made transparent; lack of clear relationship between business metrics and EA
- Depends on top-level management which is person dependent and highly fluid

Degree of success in achieving org goals
- Very successful, Partially successful, Unsuccessful, Too early in the process to adequately assess, We have the goals set but don’t measure against them
- “Partially successful” (47%)
- Very limited metrics available and they don’t drive any decision making process; Metrics can be arbitrarily set and adjusted for political reasons

Level of importance in performance evaluation of EA
- Very high importance, High Importance, Moderately important, Low importance, Very low importance
- “High importance” (48%)
- IT strategy depends on business strategy; hence important
Popular EA internal program metrics

Please identify EA internal program metrics used with the EA value measurement program in your organization (Check all that apply)

<table>
<thead>
<tr>
<th>Answer Options</th>
<th>Response Percent</th>
<th>Response Count</th>
</tr>
</thead>
<tbody>
<tr>
<td>Amount of architect time per project</td>
<td>35.3%</td>
<td>30</td>
</tr>
<tr>
<td>Percentage of successful projects in which EA team participated</td>
<td>31.8%</td>
<td>27</td>
</tr>
<tr>
<td>Number of projects that leverage EA repository for future-state designs</td>
<td>31.8%</td>
<td>27</td>
</tr>
<tr>
<td>Percentage of time each EA role is in strategic and business planning process</td>
<td>29.4%</td>
<td>25</td>
</tr>
<tr>
<td>No EA internal metrics are used in our organization</td>
<td>20%</td>
<td>17</td>
</tr>
</tbody>
</table>
EA internal program metrics

Challenges gathering metrics information:
- Lack of business standards to define EA internal metrics (41%)
- Poor data quality and low data consistency due to inefficient reporting tools used (40%)
- Ensuring metrics are continually evaluated for relevance and identification of new metrics as necessary (30%)

Reliability in measuring EA value:
- Very satisfied, Somewhat satisfied, Neither satisfied nor dissatisfied, Somewhat dissatisfied, Very dissatisfied
- **“Somewhat satisfied” (45%)**
- They are indicators of how well we do what we do and not the value of what we do
- Too heavily focused on governance; arbitrary as any other metrics

Degree of success in achieving org goals:
- Very successful, Partially successful, Unsuccessful, Too early in the process to adequately assess, We have the goals set but don’t measure against them
- **“Partially successful” (52%)**

Level of importance in performance evaluation of EA:
- Very high importance, High importance, Moderately important, Low importance, Very low importance
- **“High importance” (38%)**
- Important within EA, less so to other groups
Popular growth / innovation metrics

- Not an important category in EA value measurement (about 45% of the responses indicated that the organizations did not utilize growth metrics)

- Many respondents indicated that they do not utilize any growth / innovation metric for EA evaluation.
  - “Innovation is not blue sky thinking. From EA perspective Innovation is yet another element of demand that you deal with no matter where it is generated from within the organization and EA complements/supports the process.”
  - Not an EA function

- Some of the growth metrics we listed are:
  - Percentage of ideas relevant to business objectives, relevant to innovation focus (22%)
  - Innovation funding as a percentage of IT spending (16%)
  - Improvement in “anytime, anywhere, anyway” access to information (15%)
  - Innovation funding as a percentage of revenue (13.4%)
Many respondents indicated that they do not utilize any compliance / regulatory metrics: “This is not primary focus for most of our EA initiatives.”

Please identify the compliance/regulatory metrics used with the EA value measurement program in your organization

<table>
<thead>
<tr>
<th>Answer Options</th>
<th>Response Percent</th>
<th>Response Count</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of internal/external audit filings</td>
<td>32.1%</td>
<td>26</td>
</tr>
<tr>
<td>Percentage of projects that follow clearly defined governance</td>
<td>28.4%</td>
<td>23</td>
</tr>
<tr>
<td>Accuracy and completeness of documentation</td>
<td>29.6%</td>
<td>24</td>
</tr>
<tr>
<td>Number of designs/projects that are 100% compliant with EA standards</td>
<td>24.7%</td>
<td>20</td>
</tr>
<tr>
<td>No compliance/regulatory metrics are used in our organization</td>
<td>37%</td>
<td>30</td>
</tr>
</tbody>
</table>
Compliance / regulatory metrics

- Silo mentality lacking vision of interdependency of risks within organization (49%)
- Redundancy and inconsistency in the deployment of a given capability (35%)
- Lack of management sponsorship/support/proper guidelines (29.4%)
- Varying regulations with time (28%)

- Very satisfied, Somewhat satisfied, Neither satisfied nor dissatisfied, Somewhat dissatisfied, Very dissatisfied
- "Somewhat satisfied" (37.3%)
- Lack of awareness; Time for regulatory documentation is too long

- Very successful, Partially successful, Unsuccessful, Too early in the process to adequately assess, We have the goals set but don’t measure against them
- "Partially successful" (59%)
- Difficulty in enforcing mandates/regulations

- Very high importance, High Importance, Moderately important, Low importance, Very low importance
- "High Importance" (42%)
More on metrics..

Are there other metrics that your organization utilizes?
87% answered “No”
-13% said “Yes” (varied greatly)
- Metrics we listed is quiet comprehensive

Review procedure for metrics:
28% said “We don’t have a formal review process”
27% said quarterly
Possible Future Research

From the preliminary baseline data provided by this survey, initial possible research streams include:

There is much confusion in the marketplace about what metrics are meaningful for specific performance goals. Are there correlations between business performance metrics and EA metrics? Are there differences in types of organizations and different industries?

How to design and implement an effective EA measurement practice. Over half of the organizations in the survey have no measurement practice in place and most existing measurement practices are less than three years old and immature. What elements need to be in place to better ensure long-term success? Best practices for data collection and validation of data.

Design and implementation of an EA Value Communications Strategy – once we measure value, can we effectively communicate value to different stakeholder groups successfully over an extended period? What are the components and best practices for an effective EA communications plan?
References

http://www.forrester.com.ezaccess.libraries.psu.edu/rb/Research/five_essential_metrics_for_managing_ea/q/id/54422/t/2


Questions/Discussion