What is the difference between gaming giant Electronic Arts and relatively newer game changer Zynga? Zynga’s CEO and founder, Mark Pincus, recently talked with D10 about Zynga’s major strength – Innovative decision making guided by analytics. Whereas, traditional product development would involve making product decision using business intuition and knowledge, Zynga turned decision making on its head by hypothesis driven product testing, quick analysis and agile roll out based on how customer behaved. This agile, data-driven test-and-learn process enabled Zynga to roll out new features every 24 hours, a previously unheard product roll-out frequency.

In the same vein, while Netflix struggles to maintain stock price and consumer engagement, and so is the case for most companies in entertainment business, the DVD rental kiosk company, Redbox is growing at 40%. Why is that? Jayson Tipp, VP of Analytics with RedBox, shares how analytics and testing are being used to understand customer behavior and affinity and thus drive product strategy and decisions. Their successful increase in price recently with no detrimental impact on their revenue or share of wallet stands as a great testimony to their analytics maturity.

At the end of the day, customers are central to all of our businesses’. Organizations which leverage analytics and testing to understand their customer’s needs and behavior, and transform their offering accordingly, are fast gaining share and popularity.

Zynga and Redbox both have analytics in their DNA i.e their analytics maturity is pretty high. This analytics maturity is measurable by what we defined as Analytics Maturity Quotient (AMQ™) with key dependency on data quality (DQ), data-driven leadership (L), people with analytics skills (P), data-driven decision making process (D) and agile infrastructure (I).

How did these organizations come to succeed through analytics? How does an organization mature in their analytics journey? To understand this, let’s decouple analytics maturity cycle.

**Analytics Maturity Cycle**

**DATA QUALITY (DQ)**

Analytics starts on solid foundation of good data. Organizations who have invested in infrastructure with appropriate data collection and storage process have laid the ground work needed to start leveraging data as an asset. Bad data quality can severely impair an organization’s ability to learn about their customers and their products through data. Hence data quality is the foundation on which analytics stands.

**LEADERSHIP (L)**

Once the foundation is laid, one of the first things needed is leadership that believes in leveraging data for making decision. Data-driven leaders not only trust data to prove/dis-prove their own beliefs about business opportunities but also are open to learn from data, irrespective
of their beliefs. Once the organization has majority of decision makers wired to leverage data, 40% of the battle is won.

PEOPLE (P)

Next comes, people with right analytical skills, both technical skills to analyze data and interpersonal/business skills to bridge the gap from data to business. Investment in analytics training (most analysts don’t have background with formal analytics training) and hiring senior analytics professionals to lead the team moves the organization another 30% towards analytics maturity.

DECISION MAKING PROCESS (D)

Once leadership and people are in place, then data needs to be inserted into the decision making process. As an example, how a company allocates marketing budget is a good representation of whether data has a place in the decision making process. Is it zero-sum based? i.e. $$'s allocated based on expected ROI. Or is it status quo per last year and some incremental. (i.e. data is irrelevant in decision making). Data-driven decision making makes up 20% of the AMQ pie.

INFRASTRUCTURE (I)

The remainder 10% comes from investing in agile infrastructure for ease of instrumentation i.e. as one does analytics and there is need for previously unavailable data, is there an agile infrastructure in place to quickly enable capturing of new data field and sources. The new data source or field then feeds into the foundation with which we started i.e. data quality.
So analytics maturity is a cycle that feeds into itself. Each incremental step enables higher degree of maturity in other dependent areas. The biggest hurdle organizations face, as they embark on the analytics journey, is data-driven leadership. Once that is in place, and they focus on bringing in right analytics skills, often rest falls in place.

Speaking in mathematical terms,

\[
AMQ = DQ \times (0.4 \times L + 0.3 \times P + 0.2 \times D + 0.1 \times I)
\]

Where

DQ represents data quality with value between 0 and 10. Sufficiently accurate data is foundational to analytics and poor data quality would handicap any organization wanting to leverage data for decision-making (Zynga and Redbox both would be close to 10. Netflix and Electronic Arts, I assume would be both close to 9 in their data quality).

L stands for the degree to which the leadership is data driven and has a value between 0 and 10. 0 being organizations where there are no leaders who believe in leveraging data for decision making and 10 for organizations where all the leaders are data-driven (Per my estimate, L for Zynga = 9, Redbox = 8, Netflix = 4 and EA = 6).

P is the degree to which organization has people with right analytics skills. The analytics professionals use structured process for delivering efficient analysis with actionable recommendation to drive business impact. This too, takes value between 0 and 10 (P, for Zynga = 7, Redbox = 7, Netflix = 6, Electronic Arts = 4).

D represents the degree to which the organization has data inserted within decision making process and takes on values from 0 to 10. As an example, how does marketing budget gets allocated within your organization? Is it zero-sum based and dollars allocated based on expected ROI or is it status quo per last year and some incremental? The former would be more common for organization with D closer to 10 and latter would be the case for organizations with D tending towards 0; (D, for Zynga = 10, Redbox = 8, Netflix = 4, Electronic Arts = 4)

I, represents the organization’s readiness to instrument quickly and takes on value from 0 to 10. Organizations with mature BI department, with process to take requests for previously unavailable data and make it available fairly quickly would have I closer to 10. (I, for Zynga = 10, Redbox = 8, Netflix = 7, Electronic Arts = 7)

Hence, per the AMQ method, Zynga’s AMQ = 87, Redbox’s AMQ = 77, EA’s AMQ= 46 and Netflix’s AMQ =44

So, what’s your organization’s AMQ? Follow the below DIY process to find out.
DIY: Analytics Maturity Quotient

At Aryng, we have a comprehensive method for AMQ calculation based on detailed stakeholder interviews and auditing. Short of that, here is a quick way to estimate your own organizations AMQ by taking this survey. Have this survey be taken by all or as many decision makers in your organization as possible, and take the average answer to compute AMQ.

SURVEY

**Estimating “DQ”:** Data quality is a measure of accuracy of data currently in production data base.

1. How likely is it, for a randomly pulled data set (from production environment), to be accurate?

   Not at all likely

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2. On an average, what percentage of an analytics project timeline gets spent on reconciling data from different sources?

   >50%

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**DQ = Answers from (Q1*Q2)/10**

**Estimating “L”:** Data-driven leaders are those who use data to prove/disprove ideas and have structured, evidence based approach to decision making.

3. What percentage of leaders in your organization make decisions based on data at least sometimes?

   0%

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4. Of all the decisions those leaders make, what percentage of the decisions are data-driven?

0% 100%

\[ L = \text{Answers from (Q3*Q4)/10} \]

**Estimating “P”:** People with appropriate analytical skills have structured approach to analysis: starting with identifying real business question, laying out hypothesis driven plan, collecting relevant data, analyzing with appropriate techniques and engaging presentation laden with actionable insights. In addition, they have the interpersonal and business skills to maintain alignment with stakeholders so those valuable insights can be converted to business impact.

5. What percentage of analytics people in your organization have required analytical skills (as laid above)?

0% 100%

\[ P = \text{Answers from (Q5*Q6)/10} \]

**Estimating “D”:** Data-driven decision making process involves a well-defined structured process of decision making based either on known facts or hypothesis driven learning. The process also has well defined accountability structure with clear definition of roles and responsibility. Organizations with mature data-driven decision making often lead to greater employee satisfaction due to transparency in decisions (i.e. employees can proudly tell you why they are doing - what they are doing, and can often cite evidence behind decisions).
7. What percentage of decisions made in your organization, has come about, from a well-defined process?

0% 100%

8. What percentage of those decisions, made via a well-defined process, was based on data? (truly based on data vs. data contorted to support a decision which was already made)

0% 100%

\[ D = \text{Answers from (Q7\times Q8)/10} \]

**Estimating “I”**: Agile infrastructure for instrumentation involves a process by which data gaps discovered by analysis are quickly and efficiently instrumented to enable more complete analysis towards insight generation.

9. How likely is it, for an identified data field, which is currently not captured or stored or rendered, to be eventually made available for analysis in future?

Not at all likely Very Likely

\[ I = \text{Answers from (Q9\times Q10)/10} \]

10. On an average, how long does it take for the identified data field to be made available post a request?

1 year+ 2-3 weeks

\[ I = \text{Answers from (Q9\times Q10)/10} \]

Now use the average values from above survey, to compute AMQ using the formula

\[ AMQ = DQ \times (0.4 \times L + 0.3 \times P + 0.2 \times D + 0.1 \times I) \]

**Summary**

Before embarking on the analytics journey, it is very important for an organization to take stock of their current analytics maturity, identify the weakest links and start fixing it in the optimal order.
For most well scaled organizations today with strong BI teams, data quality issues are a thing of past. The biggest hurdle most of these organizations face today is cultivating a data-driven culture often brought about by data-driven leaders and followed through with hiring skilled analytics professionals (or training the current staff). More on tips for improving the AMQ in the next whitepaper, in the meantime use our AMQ framework to understand the analytics maturity of your organization.

Comprehensive AMQ Assessment

If you like what you see here and would like Aryng to conduct a comprehensive Analytics Maturity Assessment at your organization, please contact Piyanka directly at Piyanka@aryng.com.

On an average, Comprehensive AMQ assessment involves
1. 1 week of stake-holder interview with executives + interviews with business, analytics and IT/BI department heads.
3. Last week: Heat map of findings; Prioritized list of recommendation for increasing analytics maturity.

About the Author:

Piyanka Jain, President & CEO, Aryng

Piyanka, founder of Aryng, is a well-regarded industry thought leader in analytics, keynoting at business and analytics conferences including Predictive Analytics World, Data Science Summit, TDWI Big Data Conference, Google Analytics User Conference, Business Performance conference on data driven decision making in an organization.

With her 15 years of experience in analytics, she has had $150M+ in demonstrated business impact through data. Her prior roles include the head of NA Business Analytics at PayPal and senior marketing analytics position with Adobe.

About Aryng

Aryng is a premier analytics consulting company singularly focused on in-sourcing of Analytics.

We believe -

- Data has power to transform our day-to-day product, marketing and operations decisions.
- The people, who are most well placed to extract insights from the data, are those who are working within the organization in the respective product, marketing, sales and operations role.
- 80% of business problems can be solved using simpler techniques, which can be learnt by business professionals with no statistical background and can be performed in Microsoft Excel.
- Timely and relevant insight from data holds the key to drive up revenue and growth, and
reduce cost and loss.

Aryng is about building Organization’s capability – people, process, and tool, so the organizations can leverage data for smarter decision making. We do that through systematic analytics maturity assessment and then addressing the gaps through-

1. Analytics training for business professionals,
2. Setting up decision making processes,
3. Executing analytics projects while teaching and mentoring,
4. Executive coaching and
5. Enabling right data tools.

Contact Aryng

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