

Customer Experience Maturity Models – Improving the Business Results

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Abstract–

Customer experience maturity of any organization is important for its business results. This paper describes two kinds of maturity models, one based on competency evaluation of the employees on customer's best applied practices, and the second on maturity of using digital tools to increase the customer good experience when working with the company. These approaches are useful when discuss the performance of enterprises providing products or services in the age of customer. The included case studies show the applicability of the procedures and open a way to be extended for proficiency testing workshops (for similar business) or in ranking the enterprises from the viewpoint of customer experience maturity.

Keywords – Capability maturity model, the age of customer, digital experience, customer

I. INTRODUCTION

Nowadays, all economical life depends on new paradigms based on information and communication technologies (ICT), and new societal behavior. As we shall see below, the era of ICT in business development is old. The new paradigm addresses the customers, mainly their ability to be a good partner for business development. This is not a new idea and every chief executive officer and chief marketing officer should agree with proposals of Forrester Research. According to Bernoff in [1], the most increasing economical life can be studied during the four time periods, called ages:

- Age of manufacturing (1900-1960);
- Age of distribution (1960-1990);
- Age of information (1990-2010);
- Age of customer (since 2010).

For the current age, the interest goes to the customers from all points of view:

- The focus on customer satisfaction more than customer acquisition;
- Brand strategy alignment with customer experience;
- The usage of multiple sources of customer data and multiple social networks to respond in customer-friendly ways;
- The prediction of the customer behavior in order to prepare the next action;
- To maintain post-transactions a strong relation with customers;
- To create highly accepted content in advertising materials, and the ability to be flexible to the needs of customers.

This orientation is compatible to the main directions identified by Bernoff in [1] and considered as high priority areas of investment: real-time consumer intelligence; customer experience and customer service; sales channels delivering consumer intelligence, and developing useful content and interactive marketing. Therefore, defining capability models, related on customer experience and using them to establish a level of capability of any organization interest in high business results through customer experience improvement, have both theoretical and practical importance.

This paper addresses capability maturity models oriented to customer experience (CXM). A 4-level model of customer experience management (CXM) maturity, developed by Forrester and a 7 step model, proposed by Sitecore in [13], to characterize the customer experience along three major tracks: attract, convert, and advocate.

Details on final assessment are given as inspired by Zadeh fuzzy operators in [5].

II. CUSTOMER EXPERIENCE MANAGEMENT

Customer focus is very important to succeed in business. „CX can be a prescription for change”, as Deloitte in [3] claims, „a toolset that can be applied to a wide range of transformation efforts”. CXM model (Forrest, 2016) is based on 30 practices organized into six competencies (six practices for every competency):

- Customer understanding (CU);
- Prioritization (P);
- Design (D);

- Delivery (L);
- Measurement (M);
- Culture (C).

Forrester also defined four stages of adoption of CXM model that reflect the most common scenarios possible within organizations. Taking into account the evaluation results any organization belongs to one of the categories: 1) *undeveloped*, 2) *ad-hoc*, 3) *repeatable*, and 4) *systematic*. The **undeveloped** level is allocated to organizations without any practice of CXM. The **ad-hoc** category includes such organizations that perform CX sporadically, that is no defined process is implemented. The **repeatable** category addresses those organizations with a defined process that specify when CX should be performed most of the time, how, and by whom. Finally, the **systematic** category includes the organizations following the CX process all of the time in a full defined manner.

A. CUSTOMER UNDERSTANDING

The objective of the first evaluated competency is to offer a large view on the organization perspectives in customer understanding, to ensure that employees have a complete and accurate view on customer experience with the company. The following five good practices should be considered during the evaluation of the CU indicator:

CU1. Ask customers for qualitative feedback on their interactions with the organization.

CU2. Analyze unstructured data (e.g. call transcripts, social media messages) to better understand client values, needs and expectations.

CU3. Apply data analysis methods to identify patterns and trends in clients' behavior.

CU4. Perform opened qualitative research for a better understanding of customers needs and explore the unmet needs.

CU5. Uniquely identify a comprehensive template that characterizes what the company knows about customers.

This is the main reason to consider that customer relationship management (CRM) system should collect valuable information about the customers that will help the organization to understand their needs. If the organization is a large one (having lot of customers, and therefore there are collected huge amount of data; this is the case of E-Commerce), then Big Data (BD) solutions should be applied, because BD promises advanced marketing analytics and decision support tracks, as Rygielski in [10] revealed. There are many tools supporting data mining for CRM, as proved in [9]. An E-Commerce solution based on data mining is reported by Sadath in [11].

After the evaluation of every CU_i (i in {1, 2, 3, 4, 5}) on a continuous scale in interval [0, 1], and interpreted as the degree of success, then the CU indicator can be obtained as the $\min \{CU_i \mid i \text{ in } \{1, 2, 3, 4, 5\}\}$. An alternate measure is prod (the product of CU_i, i in {1, 2, 3, 4, 5}).

B. PRIORITIZATION

In order to have a good CX index, the organization should prioritize investments that will continuously improve the customers' experiences. The prioritization competency has as objective to assure the optimal usage of resources while increasing customer experience, according to the following practices:

P1. Model the impact of CX quality on business objectives (e.g. Income Growth, Retention).

P2. Identify key consumer groups, the basic user experience and features corresponding to each core experience.

P3. Evaluation of impact that all projects and decisions will have on key experience for clients.

P4. Reject or rework projects that hinder the unacceptable fundamental experience.

P5. Say no to work that enhances the user experience in general, but does not match the essential CX priorities.

As given above, the assessment of these practices are difficult to be operated. An organization keep some projects even the customer experience is not so high. However, in time, the project is reworked or abandoned. It is a well known practice for Microsoft to end support for some products (as operating systems, or web browsers). Lemke in [6] describe a repertory grid technique useful to evaluate the customer experience quality. Using the above data mining tools, a cluster analysis can be obtained and a supplementary analysis can be operated on the identified key consumer groups. Finally, by classical data analysis tools, on collected data by questionnaires, or interviews, the indicators P_i (i in {1, 2, 3, 4, 5}) can be calculated. The P value should be defined as the minimum of these indicators. The prod – alternate measure can also be used.

C. DESIGN

The main objective of this competency is to establish what employees need to do to deliver the right experience to clients every time. The following practices should be addressed:

D1. Document the CX global vision of the company - a description of the organization's purpose to its clients' experience.

D2. Use a human-centered process to design and/or update all the core customer experience of the company.

D3. Include partners through the CX ecosystem of the designing process (such as product managers, developers, legal).

D4. Prove that the design/update of the whole core experience corresponds to the CX vision.

D5. Use a human-centered process to design/update the ecosystem that is needed to provide a core experience.

Not only documents (paper or electronic formulary), but also special programs inspired by CEIP (Customer Experience Improvement Program) described in [7] can be used. The D value can be computed as min or prod of {D_i | i in {1, 2, 3, 4, 5}}.

D. DELIVERY

Manage current operations so that customer experiences is comparable against the design is a basic objective of the competency labeled as Delivery. It is important that core experience should be used all time, not only for some groups of customers. In order to evaluate the degree of competency on core experience delivery, the following five indicators or good practices should be obtained:

- L1.** Identify the specific activities of every role in order to deliver or allow basic customer experience as planned.
 - L2.** Train and prepare frontline staff on how to perform the part of the customer experience to be deliverable by them.
 - L3.** Provide means by which employees will deliver fundamental experience in an appropriate manner at all times (e.g. templates, automated workflow).
 - L4.** Confirm that the digital and physical touch points (e.g. mobile applications, invoices, offers) deliver or permit accurate planning experience.
 - L5.** Monitor customer feedback and CX metrics to verify if the actual experience does not match the CX plans.
- The Level L is obtained using min or prod measures based on the practices oriented indicators L_i , i in $\{1, 2, 3, 4, 5\}$.

E. MEASUREMENT

To quantify the overall level of CX quality as customers perceive it is the main objective of the competency on measurement. The organization should have a documented set of metrics, and procedures to analyze in the cases of outliers or missing data. The key practices of the competency on measurement are:

- M1.** Measure the overall customer perception of the most important customer experience.
- M2.** Measure the attributes of customer interactions and events that may affect the customer's expectations.
- M3.** Measure to provide customers with real-world experiences meeting the essential characteristics of each core experience.
- M4.** Design customized communications to be helpful and useful for employees.
- M5.** Report CX quality indicators to governing bodies (such as budgeting, design, technology) to be used for future decisions.

The M value can be computed by a min/prod approach using the indicators M_i , i in $\{1, 2, 3, 4, 5\}$. If for some practices, the evaluator/expert uses linguistic variables, then a conversion to a value in $[0,1]$ is necessary. Some working operators on linguistic variables are defined in [14].

F. CULTURE

The organization has a good maturity when consider the competency labeled as „culture”, when a culture of customer experience exists and the employees apply all good practices. The maturity level is obtained by assessment of the following practices:

- C1.** Appreciate your empathy and customer orientation of jobseekers.
- C2.** Educate employees about customers, the CX vision, the ecosystem, and their role in the ecosystem.
- C3.** Perform rituals and routines that keep customers and CX top of mind for employees.
- C4.** Officially declare to reward employees delivering or enabling good CX (e.g. bonuses, promotions).
- C5.** Informally recognize the workers who deliver or enable good CX (such as "employee of the week", send letter of recognition).

As above, the level of maturity can be obtained, directly, or by transformations on indicators describing the quality of every practice, and using min or prod operators.

G. CASE STUDY

Table 1 CXM Case Study

Competency		E1	E2	E3	E4	E5
Customer understanding	CU1	0.41	0.37	0.60	0.23	0.12
	CU2	0.54	0.70	0.23	0.34	0.70
	CU3	0.59	0.36	0.15	0.97	0.73
	CU4	0.62	0.56	0.06	0.49	0.36
	CU5	0.66	0.01	0.09	0.59	0.45
CU	CU-min	0.41	0.01	0.06	0.23	0.12
	CU-prod	0.05	0.00	0.00	0.02	0.01
Priority	P1	0.94	0.94	0.99	0.96	0.35
	P2	0.66	0.36	0.08	0.36	0.57
	P3	0.76	0.40	0.17	0.86	0.34
	P4	0.53	0.31	0.04	0.23	0.08
	P5	0.29	0.73	0.74	0.08	0.78
P	P-min	0.29	0.31	0.04	0.08	0.08
	P-prod	0.07	0.03	0.00	0.01	0.00

Design	D1	0.54	0.45	0.85	0.54	0.67
	D2	0.52	0.37	0.10	0.36	0.73
	D3	0.50	0.59	0.13	0.41	0.74
	D4	0.94	0.45	0.31	0.50	0.36
	D5	0.34	0.56	0.57	0.58	0.54
D	D-min	0.34	0.37	0.10	0.36	0.36
	D-prod	0.04	0.02	0.00	0.02	0.07
Delivery	L1	0.59	0.76	0.70	0.46	0.64
	L2	0.39	0.51	0.70	0.87	0.64
	L3	0.36	0.92	0.38	0.03	0.19
	L4	0.68	0.18	0.17	0.46	0.34
	L5	0.93	0.27	0.02	0.79	0.03
L	L-min	0.36	0.18	0.02	0.03	0.03
	L-prod	0.05	0.02	0.00	0.00	0.00
Measurement	M1	0.87	0.10	0.71	0.77	0.78
	M2	0.46	0.58	0.80	0.73	0.28
	M3	0.57	0.21	0.25	0.56	0.52
	M4	0.63	0.72	0.34	0.86	0.38
	M5	0.19	0.15	0.47	0.19	0.76
M	M-min	0.19	0.10	0.25	0.19	0.28
	M-prod	0.03	0.00	0.02	0.05	0.03
Culture	C1	0.92	0.51	0.31	0.14	0.30
	C2	0.70	0.68	0.21	0.53	0.47
	C3	0.26	0.09	0.37	1.00	0.11
	C4	0.96	0.47	0.67	0.10	0.53
	C5	0.26	0.10	0.84	0.51	0.56
C	C-min	0.26	0.09	0.21	0.10	0.11
	C-prod	0.04	0.00	0.01	0.00	0.00
Maturity index	max-min	0.41	0.37	0.25	0.36	0.36
	max-prod	0.07	0.03	0.02	0.05	0.07

In the Table 1 it is presented a case study realized on five economical entities (E1, E2, E3, E4, and E5 – the real name of the five small enterprises from is not provided due to small maturity indicators). Both min and prod operators are applied and the maturity index is shown in all cases. The data were collected directly from the economical entity as a number between zero (no practice available) and 100 (defined process of practice). This case study shows there no major difference when use min or prod operating when a ranking is necessary to be obtained. However, when the value is important, usually by the prod operator, smaller values are obtained.

III. IMPROVING CUSTOMER EXPERIENCE BY DIGITAL MATURITY

The customer experience can be really improved by digital approaches. Following [13] it is obviously that information about „where the customers are and what they’ve viewed, opened, clicked through, or bought from” a brand is necessary to improve the company strategy. Following [8], the customer experience can be easily proved by digital marketing systems that make use of the new web technologies.

Taking into consideration a three maturity levels, called „attract”, „convert”, and „advocate”, along seven strategic values (groups as 3-2-2 per maturity level), labeled as „initiate”, „radiate”, „align”, „optimize”, „nurture”, „engage”, and „lifetime customers”, Sitecore already developed tools to assess the digital competency of any organization to improve the customer experience and, the CXM maturity index.

Based on recent Information and Communication Technology terminology, the following core experience should be considered (a weight (W) is associated in order to compute a digital maturity index): User centered design (20), Traffic acquisition (18), and SEO & Search Marketing (18), Web analytics (17), Email marketing (16), Content distribution (15), Social connecting (14), Tracking Customer Interactions (13), Ecommerce services (12), Campaign management (11), Community management (11), Personalization (10), Profile content & visitors (9), Testing (8), Automation (7), Central hub for profiles (5), Predictions (4), Automated decisions (3), we outline for E1 (the best ranked economic entity in the case study) the following results (see Table 2).

Table 2 Digital Maturity Index

Strategic value	Characteristics	W	Attract	Convert	Advocate
Initiate	User centered design	20	2.07	2.07	2.07
	Traffic acquisition	18	10.04	10.04	10.04
	SEO & Search Marketing	18	14.37	14.37	14.37
	Web analytics	17	4.42	4.42	4.42
	Email marketing	16	5.46	5.46	5.46
Radiate	Content distribution	15	1.01	1.01	1.01
	Social connecting	14	5.57	5.57	5.57
Align	Tracking Customer Interactions	13	0.87	0.87	0.87
	Ecommerce services	12	14.56	14.56	14.56
Optimize	Campaign management	11	N/A	8.59	8.59
	Community management	11	N/A	2.75	2.75
	Personalization	10	N/A	3.25	3.25
	Profile content & visitors	9	N/A	5.78	5.78
	Testing	8	N/A	2.64	2.64
Nurture	Automation	7	N/A	5.27	5.27
Engage	Central hub for profiles	5	N/A	N/A	3.80
Lifetime customers	Predictions	4	N/A	N/A	3.00
	Automated decisions	3	N/A	N/A	2.69
Maturity index			43.82	86.65	96.14

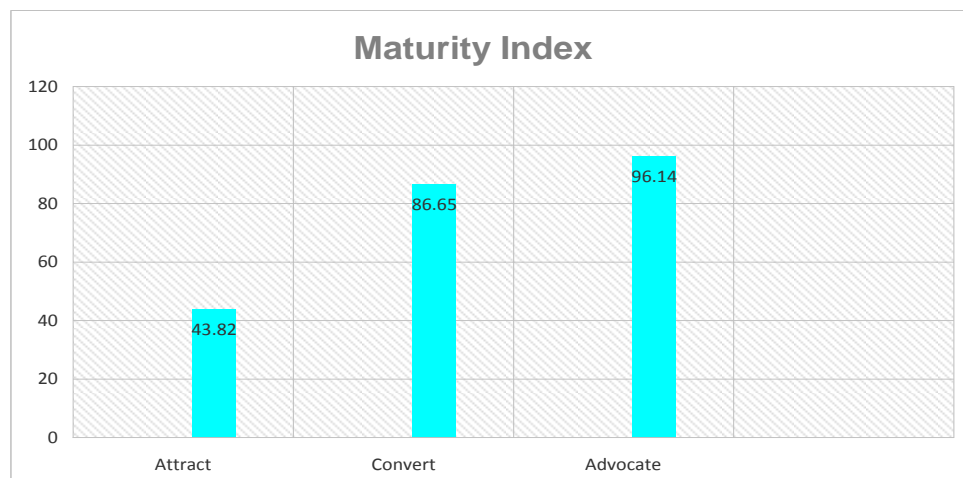


Figure 1 Maturity index

The digital maturity index of E1 is completely computed in the last cell of the table (the value is 96.14). In Table 2 it is shown that it is possible to have economical entities without implementing advanced ICT modules in order to increase the customer experience.

It is shown, also, that a strong increase in maturity is obtained by moving from „Attract” to „Convert”, and only a small improvement is obtained when moving to „Advocate”(see figure 1). However, in order to be digital competent in the customer age, the maturity index of „Attract” should be close to 0.5.

IV. CONCLUSIONS

The objective of this paper consisted of identified customer experience maturity models in order to rank some competing organizations. Also, the influence of ICT is major nowadays, and a digital maturity can be measured in order to prioritize the investments in improving the relation with customers in order to identify a group of lifetime customers.

Future investigations are related with new experiments in estimating the practice indicators, new operators on integrating indicators to obtain a global maturity index, and to develop a software template to automatically compute maturity index and rank the organizations participating in a proficiency testing workshop.

REFERENCES

- [1] Bernoff, J., Cooperstein, D.M., de Lussanet, M. and Madigan, C.J., 2011. *Competitive Strategy in The age Of The Customer*, Forrester Research Report.
- [2] Burns, M., Gazala, E.M., Zoia, G. and Hartig K., 2016. *The Customer Experience Management Maturity Model. Vision: The Customer Experience Maturity Playbook*, Forrester Research, Inc.
- [3] Deloitte Report. 2016. *Customer experience as a prescription for improving government performance* [pdf]. Available at: https://dupress.deloitte.com/content/dam/dup-us-en/articles/3183_Rx-CX/DUP_Rx-CX.pdf [Accessed 23 December 2016].
- [4] Forrester Research, 2016. *2017 Predictions: Dynamics That Will Shape The Future In The Age Of The Customer*, [pdf]. Available at: <https://go.forrester.com/wp-content/uploads/Forrester-2017-Predictions.pdf> [Accessed 23 December 2016]
- [5] Gassert, H., 2004. *Operators on Fuzzy Sets: Zadeh and Einstein*. [pdf]. Available at: [http://diuf.unifr.ch/is/studentprojects/pdf/reports/fuzzy_logic_SS04_Zadeh_and_Einstein_Operators_on_Fuzzy_Sets_\(HannesGassert\).pdf](http://diuf.unifr.ch/is/studentprojects/pdf/reports/fuzzy_logic_SS04_Zadeh_and_Einstein_Operators_on_Fuzzy_Sets_(HannesGassert).pdf) [Accessed 23 December 2016].
- [6] Lemke, F., Clark, M. and Wilson, H., 2011. *Customer Experience Quality: An Exploitation in Business and Consumer Context using Repertory Grid Technique*, Journal of the Academy of Marketing Science, 39, 846-869.
- [7] Microsoft, 2009. Microsoft Customer Experience Improvement Program [online], Available at: <https://www.microsoft.com/products/ceip/EN-US/default.aspx> [Accessed 23 December 2016].
- [8] Petersen, L.B., Customer Experience Maturity Model [online], Available at: http://mediacontent.sitecore.net/webinars/CX_Maturity_Model_NA/CX_Maturity_Model.pdf. [Accessed 23 December 2016].
- [9] Ranjan, J. and Bhatnagar, V., 2008. *A Review of Data Mining Tools In Customer Relationship Management*. Journal of Knowledge Management Practice, 9(1), Available at: <http://www.tlinc.com/artic1149.htm> [Accessed 23 December 2016].
- [10] Rygielski, C., Wangb, J.-C. and Yena, D.C., 2002. *Data mining techniques for customer relationship management*. Technology in Society, 24(4), pp. 483–502, [http://dx.doi.org/10.1016/S0160-791X\(02\)00038-6](http://dx.doi.org/10.1016/S0160-791X(02)00038-6).
- [11] Sadath, L., 2013. *Data Mining in E-Commerce: A CRM Platform*. International Journal of Computer Applications, 68(24) [pdf] Available at: <http://research.ijcaonline.org/volume68/number24/pxc3887383.pdf>, [Accessed 23 December 2016].
- [12] Schmidt-Subramanian, M., Manning, H., Campbell, C. and Czarnecki, D., 2014. *The Business Impact of Customer Experience*, Forrester Report.
- [13] Sitecore, 2016. *Customer Intelligence*. [online] Available at: <http://www.sitecore.net/en/products/sitecore-experience-platform/customer-intelligence>, [Accessed 23 December 2016].
- [14] Văduva, I. and Albeanu, G., 2004. *Introducere in modelarea fuzzy*, Editura Universității din București.