

Harnessing Citizen Sentiment to Improve Experience for Public Services

A Close Look at UAE Federal Government's Happiness Meter Initiative

3rd February 2019

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1. Introduction

Historically, government agencies provided “off-the-shelf services” in a manner that governments deemed fit for their citizens. Over time, competition in the private sector transformed service delivery to be customized, convenient, and centered on the customer. Today, citizens have grown accustomed to experiences delivered by the private sector and expect the same quality and standard from government agencies. To match these expectations, governments should adjust their strategy and place citizens at the heart of policy design and service delivery; that is, governments should be citizen-centric ¹.

The shift towards a citizen-centric government has become imperative for governments all around the world to remain efficient, trusted, and competitive. The GCC region is no exception. While the fundamental drivers to improve citizen experience are similar across the globe, the region’s current economic and sociodemographic dynamic makes certain drivers more prominent than others ¹.

What does it take for a government to be citizen-centric?

- Not leaving citizen experience to chance
- Listening to and empowering citizens
- Proactively designing and managing citizen experiences to meet their current and future needs¹

¹When referring to UAE citizens, this is inclusive of UAE nationals and residents.

The key to sustainably deliver citizen-centric experiences is knowing how the citizen truly feels about a particular service at a chosen point in time; the Happiness Meter reports exactly that. The Happiness Meter enables real-time interaction with citizens* across the UAE Federal Government service centers and identifies areas of improvement in service delivery channels across federal entities². The UAE Federal Government Happiness Meter Initiative was initiated in 2016 by Her Excellency Ohood bint Khalfan Al Roumi, Minister of State for Happiness and Wellbeing in the UAE.

In this paper, highlights of what governments are doing globally to initiate a citizen-centric transformation will be presented; the UAE Federal Government Happiness Meter Initiative will be explained; finally, a preview of the potential application of the latest technologies in Big Data and Citizen Sentiment Analysis, in the space of the Happiness Meter, will be presented.

This paper serves as a case-study for public sector leaders seeking to gauge citizen sentiment and derive actionable insights through use of data analytics, to deliver quality services that are truly centered on citizen happiness. This paper was prepared for the World Government Summit 2019.



2. Global direction

With the private sector investing heavily in disruptive technologies to understand their customers better and provide superior customer experiences; citizens are increasingly expecting government agencies to anticipate, understand, and satisfy their needs. Given the scale and spread of government services, it is not sufficient for governments to invest in disruptive technologies that will only incrementally increase the quality of services they provide; rather, they must completely transform the way they function to be citizen-centric ¹. The shift towards citizen-centricity is a journey that requires a sustainable transformation encompassing:



Preceding the development of a citizen-centric transformation framework, organization introspection is necessary. Assessing the below five critical change success factors enables an organization to understand the challenges it faces, the level of support it needs and the pace at which to enact transformation:

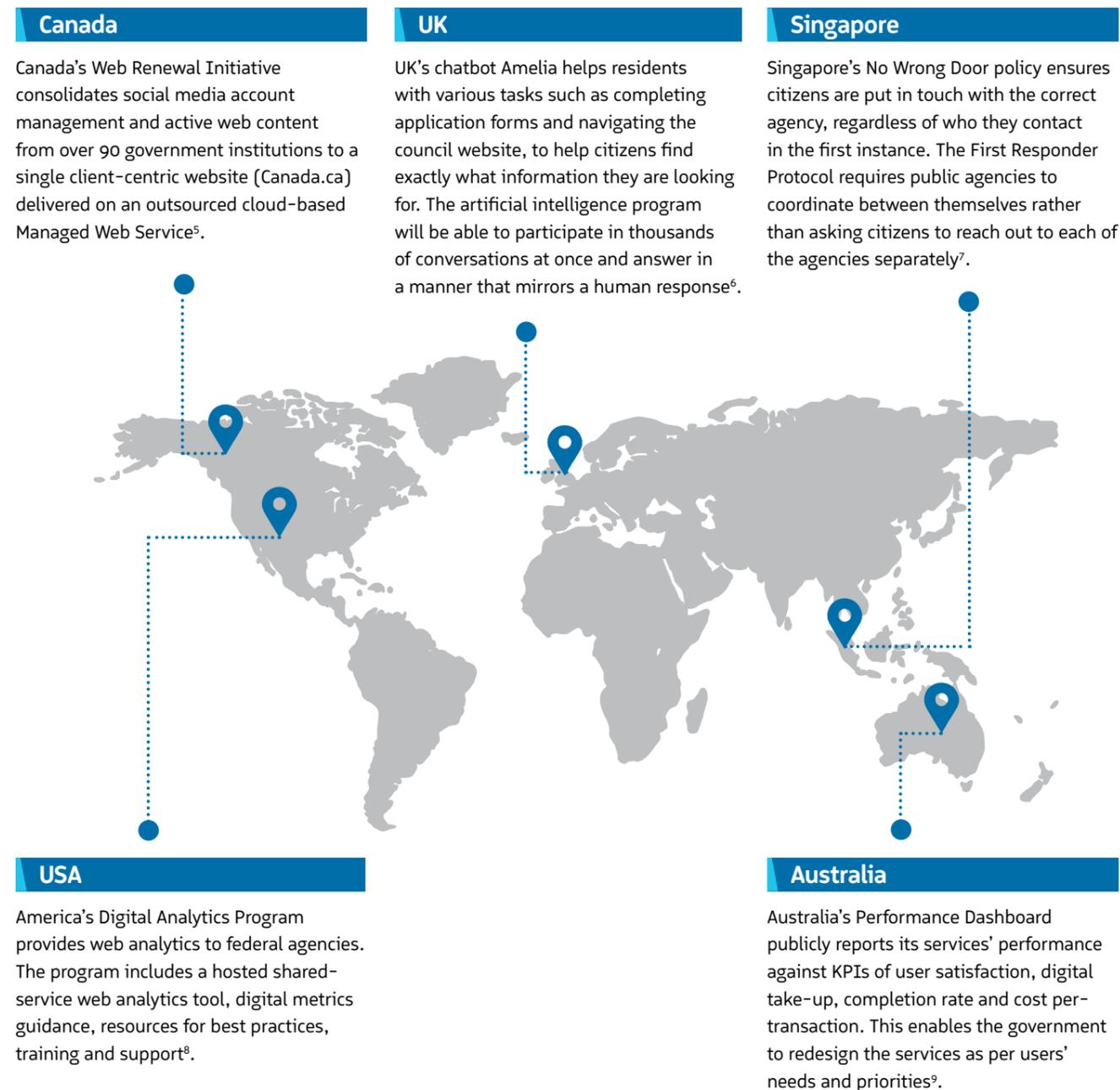
FIGURE 1: THE 5 C’S - SUCCESS FACTORS FOR HIGH-QUALITY CUSTOMER SERVICE



Pressured by citizens’ expectations, globalization and the evolution of service quality in the private sector, governments worldwide are actively transforming the way they operate. Underpinned by their transformations are a series of initiatives that cater to the ever-growing needs of their citizens. Figure 2 (page 6) illustrates a few citizen-centric programs, initiatives and technologies deployed by public sectors around the world pushing for citizen-centricity.

FIGURE 2: GLOBAL INITIATIVES DEPLOYED TO ENHANCE CITIZEN EXPERIENCE

Note - Shown below is a random sample of countries and is not a holistic representation of the global activities



Evidently, countries such as Australia, Singapore, UK, and Canada have deployed numerous initiatives spanning across people, processes and systems to become citizen-centric. Inspired by this, the UAE Government is instilling change towards citizen-centricity by curating programs aimed at empowering federal entities to reach service delivery excellence and cultivate citizen happiness across the UAE.

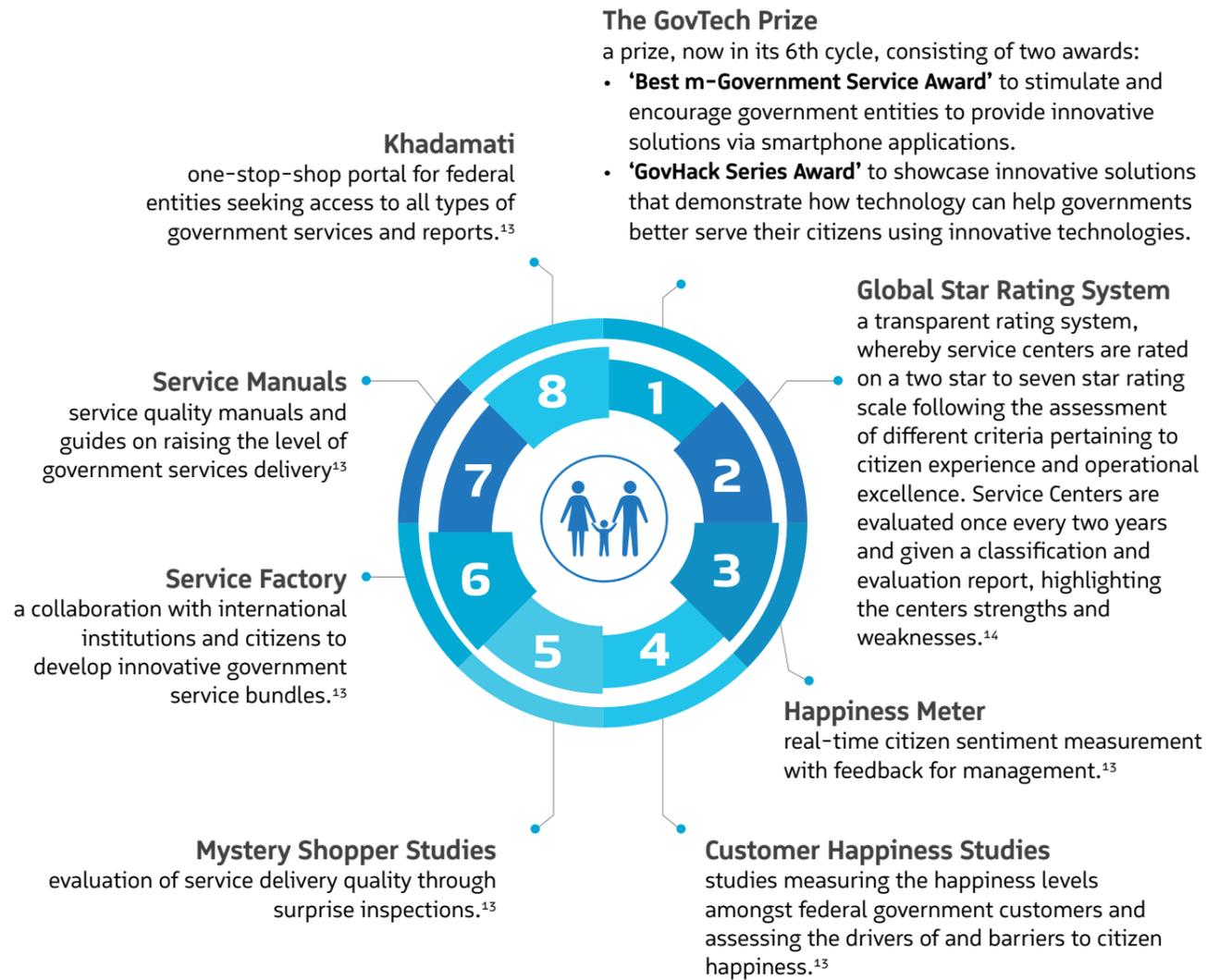
“The job of government is to create the environment in which people can achieve their happiness. Yes, the government’s job is to achieve happiness.”

His Highness Sheikh Mohammed bin Rashid Al Maktoum
 UAE Vice President, Prime Minister and Ruler of Dubai

3. The UAE direction

Enhancing government services is one of the seven pillars in UAE's Vision 2021 and the UAE National Agenda ⁴⁰. In line with this vision, His Highness Sheikh Mohammed bin Rashid Al Maktoum, UAE Vice President, Prime Minister and Ruler of Dubai launched the Mohammed Bin Rashid Government Excellence Award in 2009, under the umbrella of Sheikh Khalifa Government Excellence Programme (SKGEP). The SKGEP was the first integrated federal platform to develop the capabilities necessary to enable excellence across service delivery and performance through the implementation of an international excellence model. Meanwhile, the award encourages federal government entities to better serve the UAE society continuously, at all levels ^{11,12}.

To further instill principles of excellent practices, the Emirates Government Services Excellence Program (EGSEP) was launched in 2011. The EGSEP is a comprehensive program comprising of a portfolio of projects, initiatives and awards aimed at raising the efficiency of government services across the UAE ¹³:



The UAE is going beyond empowering federal entities to enriching the greater happiness of the nation. With citizen happiness being a key focus area for the UAE government, the UAE Government created the post of Minister of State for Happiness and Wellbeing. With so few ministries globally supporting such a position, the UAE is determined to accelerate citizen-centricity. Leading this is the National Program for Happiness & Wellbeing comprising of community, government and international initiatives that harmonize all government plans, programs and policies to achieve a happier society ^{2,15}. Most notably:



The UAE is proactively striving to be demographically responsive, by aiming to be citizen-centric for over 200 of its residing nationalities. A testament to this is the World Happiness Report*, which reports that the UAE ranked first globally in 2017 regarding the satisfaction of residents from other countries. Furthermore, the UAE advanced 8 ranks from 28th in 2016 to 20th in 2018 in the global happiness rank. It is no coincidence that the ranking has significantly improved since the appointment of the Minister of State for Happiness and Wellbeing in 2016. Such levels of dedication towards citizen-centricity, is what places the UAE ahead of GCC countries and the Arab world, and next to leading countries such as Australia and Singapore in terms of government effectiveness and e-services participation ^{2,16,17}.

4. The UAE Federal Government Happiness Meter Initiative: the early days, the recent progress and what tomorrow looks like

A strategic initiative in the UAE Government Services Excellence program, National Program for Happiness & Wellbeing and Vision 2021, the UAE Federal Government Happiness Meter Initiative empowers citizen-centric governance and plays a pivotal role in measuring citizen happiness across public service delivery channels.

The Happiness Meter has grown over time to yield transformational results with wide-ranging implications on public service delivery and on the promotion of innovation across the UAE Federal Government. As a result, it has become a significant factor in numerous programs such as the Global Star Rating System, the UAE Government Performance System Adaa and Sheikh Khalifa Government Excellence Programme. In this section, the evolution of the Happiness Meter will be thoroughly described and the metrics reported by the happiness meter will be explained.



Source: emaratalyom. (2019), محمد بن راشد يطلق مركزاً نموذجياً للخدمات الحكومية, Available at: <https://www.emaratalyom.com/local-section/other/2017-09-10-1.1025745> [Accessed 27 Jan. 2019]

Early Days



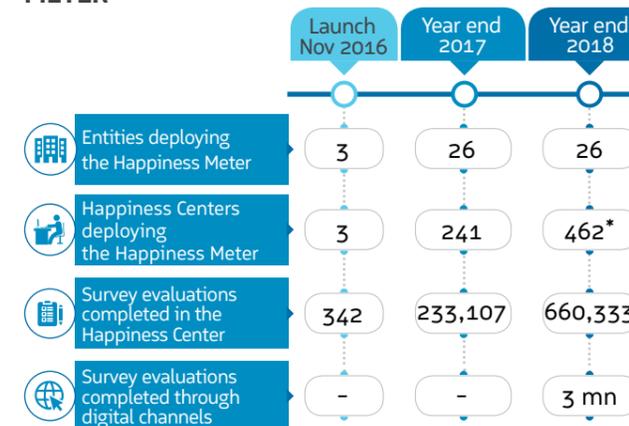
With the blessing of the executive leadership, the UAE Federal Government Happiness Meter was established in November 2016. In its early days, the Happiness Meter began delivering real-time citizen sentiment on service delivery across government centers. The Happiness Meter continues to do so by allowing citizens to seamlessly rate their level of happiness during or immediately after a service, through a 15 – 30 second survey. As a part of the initiative's experiential strategy, the survey is readily docked on an intricate network of customized tablet devices deployed across centers, responses are then collected and processed at the UAE Federal Government's secure data centers for further analysis and reporting.

Recent Progress



In 2017, the initiation of Happiness Centers across the UAE fueled the adoption of the Happiness Meter. The unique ability for the Happiness Meter to capture and measure citizen happiness proved essential to its deployment across government entities and Happiness Centers throughout all seven Emirates, and UAE embassies around the world. With the accelerated deployment of the Happiness Meter by federal entities and Happiness Centers, consequently, there has been a drastic uplift in the number of surveys evaluated by the Happiness Meter. Figure 3 below quantitatively illustrates the evolution of the happiness meter since its launch in November 2016.

FIGURE 3 – THE EVOLUTION OF THE HAPPINESS METER



With increased collaboration from federal entities, the Happiness Meter's analysis and reporting capabilities evolved:

1. Website and mobile application integration: Survey widgets on websites and mobile applications allow for more feedback to be collected on citizen happiness from a wider audience. In fact, there has been a steeper incline by citizens to provide feedback through digital surveys in comparison with center docked surveys.
2. Center cameras integration: Headcount cameras at Happiness Centers send daily and weekly footfall data to the Happiness Meter platform, thus providing more insight on center traffic and citizen behavior across the day and week.
3. Call center integration: The Happiness Meter On The Go is a functionality developed to enable integration with numerous back-end systems to capture feedback from different channels. One such application is citizen feedback captured through the Customer Happiness Surveys completed by citizens following a call to call centers.
4. Queue system integration: Integration between entities' queue system devices (across five vendors thus far) provides a holistic view on visitor demographic, visitor volume per hour, total visitors per day, average visitors served, average waiting time and average service time.
5. Government portal integration: Integration with UAE Federal Government services portal, Khadamati, correlates the public service transactions retrieved from queue systems with the 2,700+ services defined across the Federal Government. This integration permits the mapping of citizen journeys across both digital and physical public service delivery channels. As of the writing of this case study, 39 federal entities out of 42 are integrated with Khadamati.

As a result of these integrations, the Happiness Meter grasps multiple dimensions of data providing platform users with a bird's eye-view on service delivery. These integrations are well-structured and are enforced by a pre-defined information exchange protocol between each type of system. Moreover, a multitude of quality control checks and rule based normalization algorithms allow a consistent view for Happiness Centers across the seven Emirates.

The distributed nature of the Happiness Meter's surveying ecosystem requires the use of intelligent software management solutions. The Happiness Meter platform imbedded such solutions to monitor and manage survey operational resilience and safe-keeping of survey responses during interruptions in connectivity. Moreover, the survey's flow has progressively become adaptive to varying responses provided by citizens and is now designed to capture both quantitative and qualitative responses in seven different languages, thus enriching the information collected. Its adaptive nature ensures that in case of a low happiness score ($\leq 40\%$), reasons for unhappiness are captured (figure 4). Likewise, in case of a mid-range happiness score (41% to 89%) areas of improvement are enquired (figure 5).

FIGURE 4: GLOBAL AREAS FOR IMPROVEMENT REPORTED BY THE HAPPINESS METER (2018)

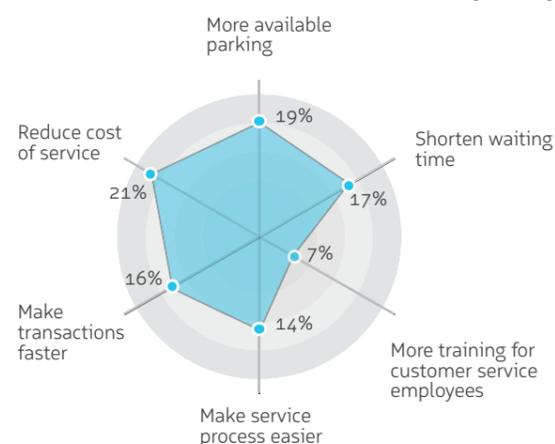
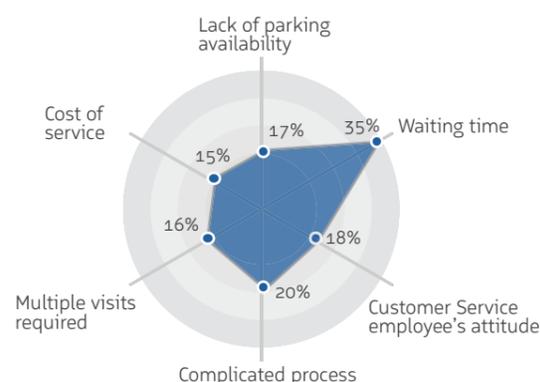


FIGURE 5: GLOBAL REASONS FOR UNHAPPINESS REPORTED BY THE HAPPINESS METER (2018)



The powerful reporting capabilities of the UAE Federal Government Happiness Meter provides insight into citizen sentiment across digital and physical public service delivery channels. Key operational performance metrics including citizen happiness, net promoter score and citizen footfall are reported live onto the Happiness Meter Dashboard (depicted on the left in figure 6) thus enabling executives, decision makers and entities to monitor progress instantaneously. Additionally, KPIs on the level of adoption of different data systems and their live integration with the Happiness Meter platform are reported weekly via the Happiness Meter Weekly Report (depicted on the right in figure 6). A recently enabled capability developed by the Happiness Meter team allows timely and automated delivery of the Happiness Meter Weekly Report right into decision makers' inboxes.

FIGURE 6 — A snapshot of the live Happiness Meter Dashboard and the Happiness Meter Weekly Report



Delivering live negative or positive feedback at the entity level and the Happiness Center level enables entities to scale their progress towards service delivery excellence and motivates employees to positively impact customer experience. As of the writing of this case study, 450 users are registered with segregated levels of access to entity-wise, happiness center-wise metrics.

The Happiness Meter Initiative goes beyond metric reporting to entity executives, the Happiness Meter team developed a framework that enables concurrent progress by all federal entities across back-office integration and front-office deployment. The framework includes workshops to direct entities with back-end implementation of the meter and interpretation of the operational metrics reported by the meter, curated guidelines for the deployment of the Happiness Meter across Happiness Centers and curated guidelines to feed into the e-training programs for front-line Happiness Center agents.

The Happiness Meter in Action



Depicted in figure 7 (page 14) are actual figures from the Happiness Meter dashboard. They illustrate the results collected from a Happiness Center that implemented the Happiness Meter in 2017. Investing time in addressing the feedback provided by the 'Global Areas for Improvement' function proved fruitful; the center was able to improve its service efficiency metrics and increase citizen happiness in one year.

5. Potential use cases for the Happiness Meter

FIGURE 7 – METRICS ACHIEVED BY ONE HAPPINESS CENTER (ANONYMOUS)

Improvement Areas Customer Experience Trends



Waiting & Transaction Times



What Tomorrow Looks Like



Prior to the Happiness Meter, entities had different mechanisms to capture citizen feedback. Over the past two years, the Happiness Meter has been pivotal to unifying the collection of citizen feedback across federal entities to derive valuable insights. It has gone a long way to make it easier on citizens to provide feedback and is working its way through data amalgamation and insight sharing across the Nation.

As part of the mid-term roadmap, there are plans to integrate various digital government platforms such as the National CRM, to collect citizen profile data across the UAE, and OneApp, to allow user access to 2,700+ government services and provide intuitive service notifications personalized to user needs.

As part of the long-term roadmap, there are plans to integrate with commercial entities such as national telecom operators to gain visibility into commute time and dwell time, highly localized weather metrics providers and chat platforms.

The Federal Government Happiness Meter is an ambitious initiative that has plans to influence public service delivery across the UAE. The capability to map the actual end-to-end citizen journey is interpreted as a critical milestone in the Happiness Meter's evolution and it is well within grasp. However, this is largely dependent on timely availability of consistent and reliable data for citizen sentiment analysis.

“The Happiness Meter should predict how citizens are feeling when they walk into a Happiness Center without having to explicitly tell us how they are feeling” -

Mohamed Bin Taliah, Assistant Director General for Government Services Sector at the Prime Minister's Office, United Arab Emirates

With numerous forms of disruptive technologies such as Artificial Intelligence and Robotic Process Automation on the rise, the development potential of the Happiness Meter is near infinite. Given the budgetary constraints faced by most governments, selecting the right technologies to invest in is important, but ensuring that they fit in the overall economic and social agenda of the country is vital.

The Happiness Meter is a cutting-edge tool that allows instantaneous collection of citizen sentiment data and with this substantial data come substantial insights. Accordingly, this section will explore potential use cases of Big Data and Analytics Tools for the Happiness Meter.



The Gap

Timeliness, completeness, precision and accessibility of data makes for accurate analysis and actionable insights. The Happiness Meter is heavily dependent on data fed from two main channels:

- Happiness Centers - queue system data, call center data, tablet devices etc.
- Digital surveys - data from survey widgets on websites and mobile applications

The completeness of data received by the Happiness Meter is as good as the level of integration with entity systems and platforms. Similarly, the volume of data absorbed by the Happiness Meter is as good as the level of collaboration across the government entities and engagement of citizens with the Happiness Meter platform. The level of adoption and integration of the Happiness Meter platform has not yet reached its full capacity. Although entities continue to be collaborative, the Happiness Meter lacks a steady stream of consistent data, provided by sources other than the entities themselves, to derive accurate insights.

Some of the feedback received by entities can be generic when the integration with queue systems is incomplete. In such cases, the feedback cannot be directly attributed to a specific service or transaction. Although the Happiness Meter provides insight into service delivery across entities at a global level, entities are unable to consistently derive service-specific areas of improvement.

Moreover, the feedback provided by citizens at Happiness Centers tends to be rated differently to feedback provided via other platforms. When comparing Happiness scores from digital surveys with the Happiness scores from Happiness Center devices, on average, digital surveys tend to score 10 points lower than surveys from Happiness Centers. Although instantaneous feedback is captured by devices deployed in Happiness Centers, citizens tend to be more critical when providing feedback in the comfort of their own space as opposed to on a device deployed next to a Happiness Center agent.

The Potential

Close to 90% of the Middle East's online population uses social media daily. This improved connectivity has increased vocal citizenry, where citizens are not shy of criticizing the government and expressing their discontent with public services¹⁸. With a Social Media Application Program Interface (API) integration, the Happiness Meter has the potential to harness the power of Big Data from widely used social media platforms as well as data coming in from entities' platforms to derive actionable insights. Below are potential use cases following the Social Media API integration:

1 Prioritized areas of improvement using Affinity Analysis:

Affinity Analysis is a data mining technique that uses associated rule learning¹⁹ to derive citizen sentiment. Entities can embed an Affinity Analysis tool in the Happiness Meter to track negative and positive hotwords per entity per service per transaction. Based on a service's level association with negative hotwords, entities are able to identify services that require immediate attention.²⁰

2 Citizen segmentation using Affinity Analysis:

Entities can use the Affinity Analysis tool in the Happiness Meter to segment citizens based on their curated citizen segmentation rules. This allows entities to filter feedback pertaining to their targeted audience.

3 Actionable insights using Root Cause Analysis:

Root Cause Analysis a problem-solving technique that identifies the contributing factors to an event²¹. Social Media APIs provide access to large amounts of direct and detailed feedback. Social interactions in the form of written feedback, comments or hashtags can be processed through a Root Cause Analysis tool and correlated to events. This is especially helpful when entities are piloting new and innovative services.

The power of these tools grows stronger with direct and descriptive feedback, governments can tease such feedback by empowering their citizens to speak up and engaging with their citizens on social media and other widely used platforms.

Whilst upholding citizen privacy and confidentiality, the UAE Federal Government can gain conclusive sentiment insights on unhappiness with service delivery that can be converted into actionable roadmap for entities. This can support the Happiness Meter in reaching new heights of service delivery.

6. Challenges and key takeaways

The Happiness Meter has gone a long way since its inception to allow citizens' voices to be heard and unhappiness in the space of service delivery to be identified. However, there are some challenges that have yet to be overcome to fully benefit from the potential of the platform:

- **Adoption of the Happiness Meter:** Entities have different mechanisms for capturing citizen feedback, the adoption rate of the Happiness Meter by government entities is gradual and the live integration of the entities' data systems with the Happiness Meter platform is not yet established across all government entities. This limits the ability to obtain comprehensive data and skews the KPIs reported back to the entities. As a result, the precision of insights on areas of improvement and accurate comparison of the weekly progress of entities may be hindered.

Going forward, the Happiness Meter Initiative would require more support from entity executives to ensure comprehensive adoption of the platform across all entities. This could be facilitated through the development and application of a Change Management plan to support the cultural move towards citizen-centricity from front-line agents at Happiness Centers all the way to entity executives.

- **Data governance of the Happiness Meter:** The evolution of the Happiness Meter is centered on integration with different channels to gain a holistic view on the sentiment of citizens before, during and after their use of government services. The success of its evolution is heavily dependent on orchestrating open data received from numerous channels.

The platform, as it stands, is a Big Data and Internet of Things platform that possess the infrastructure to manage large influxes of data. However, the platform could benefit from consistent data sharing from entities backed by well-defined data sharing protocols. Enablement of data sharing between entities could enrich citizen experience and allow governments to find the root causes of unhappiness and reengineer their service delivery process accordingly.

Key Takeaways

Placing citizens at the heart of service design and delivery leads to operational efficiencies, cost reductions and citizen happiness.¹ The beauty of a citizen-centric government is that it not only benefits the citizen; when done right, it indirectly benefits front-line staff, ministries and others within the government.

High-quality citizen service is a signature of a functioning, well-performing government. The Happiness Meter is a tool that supports governments in attaining high-quality citizen service by feeding back the ever-changing demands of citizen²².

The implementation of the Happiness Meter alone is not sufficient to achieve citizen-centricity. It requires the sustainable transformation of the government's strategy, organization, processes and systems to cater to the evolving needs of citizens.

Governments are the original "big data" entities, they manage technologies that provide services to billions of people across the globe²³. With Big Data, one can fall into the trap of having too much data with no direction on what to do with it, having clear cut goals in mind that fit into the overall strategy and vision is essential.

7. References

1. J Sear, M. and Pirinccioglu, A. (2017). "Driving citizen centricity: An ecosystem to help GCC governments sustainably deliver better citizen experiences."
2. Happy.ae. (n.d.). "National Program for Happiness & Wellbeing." [online] Available at: <https://www.happy.ae/home> [Accessed 27 Jan. 2019].
3. Willen, B., Zuazua, M. and Massa, A. (2013). "Agile Government: A Citizen-Centric Approach to Growth."
4. Harter, J. (2014). "Dear Customer: We are Ready, Willing, and Able." Loyalty Management, Second Quarter 2014.
5. Oecd.org. (2019). "Web Renewal Initiative - OPSI." [online] Available at: <https://www.oecd.org/governance/observatory-public-sector-innovation/innovations/page/webrenewalinitiative.htm> [Accessed 27 Jan. 2019].
6. IPsoft. (n.d.). "IPsoft Amelia, The Most Human AI." [online] Available at: <https://www.ipsoft.com/amelia/> [Accessed 27 Jan. 2019].
7. Public Service Division, Singapore (2007). "Oral Reply to Parliamentary Question on "No Wrong Door" policy." [online] Available at: <https://www.psd.gov.sg/press-room/parliamentary-replies/oral-reply-to-parliamentary-question-on-no-wrong-door-policy> [Accessed 27 Jan. 2019].
8. DigitalGov. (n.d.). "DAP: Digital Analytics Program." [online] Available at: <https://digital.gov/dap/#> [Accessed 27 Jan. 2019].
9. Dashboard.gov.au. (n.d.). "Australian Government Performance Dashboard: Performance Dashboard overview." [online] Available at: <https://dashboard.gov.au/> [Accessed 27 Jan. 2019].
10. UAE Cabinet. (n.d.). "Prime Ministers Initiatives: UAE National Agenda." [online] Available at: <https://www.uaecabinet.ae/en/details/prime-ministers-initiatives/uae-national-agenda> [Accessed 22 Jan. 2019].
11. SKGEP. (n.d.). "Sheikh Khalifa Government Excellence Program: About the program." [online] Available at: <https://www.skgep.gov.ae/en/about-the-program> [Accessed 22 Jan. 2019].
12. UAE Cabinet. (n.d.). "Prime Ministers Initiatives: Mohammed Bin Rashid Government Excellence Award." [online] Available at: <https://www.uaecabinet.ae/en/details/prime-ministers-initiatives/mohammed-bin-rashid-government-excellence-award> [Accessed 22 Jan. 2019].
13. MOCAF. (n.d.). "Government Services." [online] Available at: <https://www.mocaf.gov.ae/en/area-of-focus/government-service-improvement> [Accessed 22 Jan. 2019].
14. Global Star Rating. (n.d.). "About the Global Star Rating Program." [online] Available at: <https://www.globalstarrating.org/AboutUs> [Accessed 22 Jan. 2019].
15. Government. (n.d.). "Happiness." [online] Available at: <https://government.ae/en/about-the-uae/the-uae-government/government-of-future/happiness> [Accessed 22 Jan. 2019].
16. "The United Nations E-Government Survey 2014: E-Government for the Future We Want." (2014). [online] The United Nations. Available at: <https://publicadministration.un.org/egovkb/en-us/Reports/UN-E-Government-Survey-2014> [Accessed 27 Jan. 2019].
17. Schwab, K. (2014). "The Global Competitiveness Report 2014-2015." [online] The World Economic Forum. Available at: http://www3.weforum.org/docs/WEF_GlobalCompetitivenessReport_2014-15.pdf [Accessed 27 Jan. 2019].
18. GO-GULF. (2005). "Internet Usage in The Middle East - Statistics and Trends [Infographic]." [online] Available at: <http://www.go-gulf.ae/blog/internet-usage-middle-east/> [Accessed 27 Jan. 2019].
19. Reclade, A. (2016). "To Affinity Analysis and Beyond." [Blog] The Data Point. Available at: <https://blog.rjmetrics.com/2016/10/12/to-affinity-analysis-and-beyond/> [Accessed 27 Jan. 2019].
20. Arunachalam, R. and Sarkar, S. (2013). "The New Eye of Government: Citizen Sentiment Analysis in Social Media."
21. Department of Enterprise Services. (2019). "Root Cause Analysis." [online] Available at: <https://des.wa.gov/services/risk-management/about-risk-management/enterprise-risk-management/root-cause-analysis> [Accessed 27 Jan. 2019].
22. Lawrence, P., McBride, A. and Harter, J. (2014). "Customer first: Improving the customer experience across government."
23. Atalla, G., Malik, R. and Rishi, R. (2015). "Agents of change: How government CTOs can drive digital transformation."

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