

Dialog Axiata PLC democratizes use of data analytics

By Joanne Taffe

Who: Dialog Axiata PLC

What: Become a data-driven telco by giving employees in each business unit the data analytics capabilities they need to quickly solve business problems and provide exceptional customer experience across multiple business verticals.

How: Transformed its way of working, informed by TM Forum's AI and Data Maturity Model. It went from relying solely on a small, highly centralized analytics team to putting data analytic capabilities within the reach of hundreds of employees, many with little or no previous IT knowledge, through its "Analytics at the Edge" transformation program. This involved training employees across 20 different business units and giving them access to a cloud-based decentralized secure platform where they can analyze, visualize and act rapidly on data, guided by new data governance procedures and a Big Data Analytics/AI maturity index.

Results:

- The use of analytics contributed 2.3Bn LKR in revenue (over US\$12 million); 2% of overall revenue of 120.1 billion LKR in 2020, compared to 0.64% in 2019, while at the same time delivering cost savings of 400 million LKR (over US\$2 million) in 2020
- Savings of 845 manual work hours per month with the development of automated dashboards, which lead to faster response to business problems and which the CSP was able to re-allocate towards using advanced analytics to improve operations, sales and customer service.
- Overall Analytics maturity of the company grew from 3.0 in Q1 2019 to 4.7 in Q4 2020
- Agile maturity of the transformation program, which involves 1000+ employees, rated 4.3 out of 5 at the end of 2020, up from 0 in 2019.

When Dialog Axiata set out to become an analytics / AI-driven telco, using data to make better business decisions and create personalized services for its business and consumer markets in Sri Lanka, several obstacles stood in its way. Its AI and analytics reporting capabilities were limited to a central 15-member team with sparse knowledge of the day-to-day activities of the different business units they serve. In addition, they had to rely on outdated data engineering platforms and relatively immature data governance practices. The result was slow execution and an inability to perform the micro and fine macro segmentation Dialog Axiata needs to create precisely targeted, personalized offers based on a detailed understanding of customer needs and preferences.

It is one thing to deploy new cloud-based data analysis, AI and machine learning tools. It is quite another to create an environment where agile, data-based decision making is the norm for business teams far removed from central IT functions. Yet without widespread cultural change, investments in analytics / AI technology are unlikely to bring about the desired business transformation.

So, when Dialog Axiata set itself the goal of becoming an analytics / AI-driven telco by 2021 it went much further than bringing on board the latest data security and analytical tools and migrating software to the public cloud. It designed and delivered an "Analytics at the Edge" transformation program to place highly relevant analytics / AI-driven, data analysis directly in the hands of the business units and people that need it to quickly make the business decisions that impact customer experience, service roll-out, revenue and investment priorities.

The structural and cultural changes involved in “Analytics at the Edge” were sizeable, but so is Dialog Axiata’s ambition. A subsidiary of Axiata Group Berhad (Axiata), Dialog Axiata serves more than 16 million residential and enterprise customers in Sri Lanka, providing mobile communications, fixed services, digital pay TV and financial services in a competitive market.

It identified 63 business problems it wanted to solve using data analytics, but its highly centralized analytics team of 15 data scientists did not have the resources or the on-the-ground customer knowledge to address them rapidly. In addition, it faced a lack of local data analytics and AI experts, making it difficult to bring in external expertise. Dialog Axiata, however, turned the problem into an opportunity. It set out to reduce siloed thinking across the company and foster an agile, data-driven culture, where employees focus on delivering solutions based on a full picture of customers’ needs and preferences.

Board-level support

The first step was to get senior management buy-in for the “Analytics at the Edge” transformation program, explains Lasantha Theverapperuma, Group Chief Operating Officer, Dialog Axiata. “This involves asking the right questions.”

For example, one way he illustrated the need for change was to show that business teams could not readily answer questions about the number of customer complaints, the value of the complaints, or their geographical origin. Once the analytics department had secured the backing of senior leadership, it nominated a team of data translators to act as a bridge between the analytics department and the rest of the business.

It was key to put in place data governance policies and procedures to ensure data is secure, documented, trustworthy, and accessible, so Dialog Axiata drew on TM Forum assets and both external and internal experts to create a governance framework. The framework covers analytics / AI governance, data governance, data security policy and analytics maturity across all areas of the business, including customer experience, sales and marketing, mobile, home fixed/digital TV, enterprise, digital/fintech/networks, finance and business control functions. “We took the recipe from TM Forum and created our own digital maturity framework,” says Theverapperuma.

Analytics Academy

Democratizing data analytics and giving employees more responsibility for their business unit’s success demands investment in upskilling. Dialog Axiata set up an Analytics Academy, which kicked off by training 100 tech-savvy staff to become data scientists, data engineers, analytics translators and data analysts. Many of these were not IT staff and had backgrounds in areas such as accountancy, marketing and sales. These 100 newly trained employees collaborated to create 27 analytics models and 88 operational dashboards in 2020 alone. But Dialog Axiata did not stop there.

Dialog Axiata's "Analytics at the Edge" transformation program

Transformed its way of working, informed by TM Forum's AI and Data Maturity Model

trained employees across 20 business units



100
analytics people



600
non-tech staff to use analytics in their day-to-day activities



250
managerial staff have taken courses in data-driven decision making, AI and agile methodologies

the use of analytics contributed **2.3bn LKR** in revenue (over US\$12 million); **2%** of overall revenue of 120.1 billion LKR in 2020.



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savings of **845** manual work hours per month



analytics maturity increased from 3.0 in Q1 2019 to **4.7** in Q4 2020

agile maturity of the transformation program, involving **1000+ employees,**



rated **4.3 out of 5** by end 2020 (up from 0 in 2019)

"It is now not just 15 people with analytics / AI skills – it spans 1,000 people," says Theverapperuma. "The academy has been very important in driving transformational change," he explains. "In addition to upskilling an initial 100 analytics people, the Academy has trained 600 non-tech staff to use analytics in their day-to-day activities and a further 250 managerial staff have taken courses in data-driven decision making, AI and Agile methodologies."

Other initiatives include fostering problem-solving through hackathons and bringing in interns. "We have seen tremendous new ideas and engagement," said Theverapperuma. "There is value creation at each step." The "Analytics at the Edge" program has also given employees shared access to a central BI and analytics platform, a data storage and upload platform, and a common data lake, into which multiple data sources feed, including telco business support systems, ERP (SAP) and others.

Dialog Axiata keeps a close eye on the performance of the "Analytics at the Edge" program as it becomes more deeply rooted in the business. It constantly drives, measures and maintains success through an ideation and monitoring arm, called Growth Hacking. Set up as part of the "Analytics at the Edge" program, Growth Hacking allows the telco to evaluate the performance and profitability of each unique project against a mix of business objectives, key deliverables, expected EBITDA value and KPIs, including analytics/AI maturity. It also consults with the business leads and the analytics team to develop new ideas and to strategize scaling and wide adoption of successful models. The Growth Hacking unit along with the analytics team conducts maturity measurements across all divisions

every 6 months to measure data, visualization dashboards, analytics models and staff capability maturity and score it out of 5, says Theverapperuma. The technology and cultural transformation drive led to the divisional analytics maturity improving from 1.5 in Q1 2020 to 3.0 in Q4 2020.

The choice of technology has also facilitated widespread and secure use of accurate, relevant data. Dialog Axiata is in the process of transferring data analytics and AI-related software operations to the public cloud and sees cloud infrastructure playing an important role in supporting the secure, widespread use of analytics / AI.

“The cloudification of data is a critical part in terms of the analytics journey. Cloud migration enables rapid scaling, improves accessibility and availability and brings in cost efficiencies. Further, it facilitates stronger governance of data privacy and security, which is a number one priority,” says Theverapperuma.

AI and data maturity

Dialog Axiata used TM forum’s [AI and Data Maturity Model](#) to design its “Divisional Analytics Maturity” KPI. This is a key performance metric, which has underpinned the “Analytics at the Edge” transformation program and helped create a new analytics culture across the organization. TM Forum’s big data analytics use cases, artificial intelligence user stories and use case tool kits also played an important role in defining and crafting strategies for all divisions, making it possible for analytics usage and results to grow exponentially in a single year through the careful targeting of high-value use cases.

Customer insight drives revenues

The analytics / AI-driven “Analytics at the Edge” program has already delivered multiple business benefits. Dialog Axiata estimates that the use of analytics contributed 2.3Bn LKR in revenue (over US\$12 million); 2% of overall revenue of 120.1 billion LKR in 2020, compared to 0.64% in 2019, while at the same time delivering cost savings of 400 million LKR (over US\$2 million) in 2020.

Part of the boost to revenues comes from being able to understand the customer needs much more effectively, enabling the company to grant personalized services and offers.

“Before this we had limited knowledge about customers’ needs and wants,” explains Theverapperuma. “Now we have the tools to understand customer preferences as well as future needs. We use these insights to bring the right products and offers to customers at the right time.

“The business teams now have information directly at their fingertips including customer segmentation, competitor performance as well as network experience - signal strengths, speeds, network quality KPIs - at a granular level, If the broadband quality is not good enough, for example, then Dialog Axiata can promptly identify the issue and rectify it before engaging customers with product offers,” says Theverapperuma.

In addition, analytics is widely adopted across the network on multiple use cases; to predict network capacity which helps to determine the best places for base station placement or future upgrade requirements, equipment fault predictions for inventory planning and battery bank capacity planning, among others.

A widespread access to good data and decision-making tools also helps the CSP decide where to position retail outlets. Sales operations team, meanwhile, use data analytics to predict low stock balances so they can restock

efficiently and cost-effectively. This helped them surpass business targets during 2020, despite the pandemic and, according to Dialog Axiata, accounted for 26% of the revenues that analytics contributed to the business in 2020.