

Is there an application that isn't CRM, and would you recognize one that is?

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The importance of managing customer relationships is axiomatic, so I will presume that if you're reading this article I don't need to convince you that it's an area of your business that's worth focusing on.

Undoubtedly, I could deluge you with analyst-generated research statistics that underline the point, but I'll spare you those too. If you're not yet convinced that looking after your customers as well as you are able is a good idea (and good for business), then I doubt Gartner or IDC will persuade you otherwise. Besides, if you are ignoring your customers, you probably have other things on your mind rather than customer relationship management (CRM) or reading this article. Like filing for bankruptcy.



The journey I want to take you on in this article doesn't so much look at "what is CRM and what characteristics do the best CRM offerings have?" in the conventional sense. It asks the question, "what isn't CRM?" That's because pretty much any box in any application or equipment stack that in some way touches your customers (which is to say more or less every box you have) ought to be seen as a CRM related application, at least of one sort or another. Given that a malfunctioning box, whether it's a network switch or a billing system, negatively impacts your customer's experience... well, you get the point.

From there, I want to look at a box that, unlikely as it sounds, addresses multiple key customer experiences from a single "horizontal" vantage point. This, perhaps, leads to the conclusion that there are more ways to dramatically improve customer experience than just deploying a (new) CRM application.

So, what is and what isn't CRM?

If you deliver a good customer experience, then the likelihood is that you'll have a platform from which to effectively manage customer relationships. If your customers don't have good experiences on your network and visibility to it, well, good luck with CRM. Smoke and mirrors won't last forever, if at all.

The fuel of CRM...the crude oil that provides a gateway to managing the customer effectively is data; of that there can be little doubt. If you don't know what, when, where and how your customers are utilizing your service, then you won't understand the experience they want....and you won't be able to deliver it. So we can agree on a basic principle: good data is prerequisite for good CRM. Thus, at the heart of your CRM strategy, there must sit a data management application. Sure, you can deploy the world's best CRM product but rubbish data in, rubbish out. A superior CRM product is part two of the story and it only works once the data question is answered.

This is where success comes from thinking outside the box; understanding that there's not much point investing in the car before you've sorted out access to quality fuel. The immediately vexing CRM question thus becomes: "what's the best way to get the data?"

There are, wait for it, choices! Middleware, ETL, ESB, mediation and other product categories all compete for the role of data provider in different parts of the telco stack. So, what are you looking for? Given, as we've seen, the breadth of data necessary to fire a successful CRM strategy an

obvious answer might be “multiple applications.” Why? Well:

- **Policy (PCRF) applications** close the decision loops and ensure information is enforced back to network elements, thus is central to the customer experience and thus customer relationships,
- **Billing and charging applications** track data central to the customer experience and thus customer relationships, and
- **Network performance management applications** track data central to the customer experience and, thus, customer relationships.

At this point, effective CRM would seem to be starting to look like traditional data center spaghetti. Before, however, you conclude that your future involves a repeat of your complex legacy infrastructure past. The good news is that isn't true (or at least doesn't have to be). Again, the question to ask is why?

If we jump back a couple of paragraphs, we see that Middleware, ETL, ESB and mediation are all fundamentally data management and integration technologies. How they are applied, how their individual functional strengths are exploited and which use cases they address may differ from each other but the core reality is that effective data technology should be able to operate 'horizontally' as a direct or indirect CRM feeder engine, across all the use cases above and others. To underline the point, there's no inherent reason why a mediation system has to be an antecedent to billing or an ETL application has to be configured to simply extract, transfer and load. At least, theoretically, that's the case.

What about the reality? What does a 'horizontal CRM data management application' look like? Does such a beast exist? Thankfully, it does. We can see this by examining the following three use cases, all of which massively impact the customer experience and the service providers relationship with them; and all of which are discharged using the same technology platform. Mediation. This can be the basis of providing real, proactive CRM.



Use Case 1 - Probe Integration

A Tier 2 CSP in Eastern Europe needed to enable enhanced Customer Experience Management to better relationships on its multi-vendor network. In the process, it wanted to create new, additional alarms and audit flows. Scoping defined dimensioning requirements at around 450,000 events and the OSS Data Integration needed to be completed in only thirty days.

Data Integration had to act as a generic probe collection layer, thus solving the problem of integration of data from probes into existing CRM tools and unlock a silo of data between network signalling information and its before dedicated application. This was required to enable the CSP's CRM system to provide multi-vendor reporting, that is to get and present performance data from non-standard networks and probes. In the process, Mediation needed to extract data from 8 network interfaces.

Use Case 2 - Real-Time Service Assurance

A Tier 1 operator in the Americas region needed to monitor its LTE network data sessions to identify performance issues. Data Integration Mediation was deployed to collect millions of subscribers' radio and core signaling events and correlate them into end-to-end session records (roughly 100,000 events per blade). The result was a 92 percent data off-load on down-stream monitoring tools/DB.

This Use Case demonstrates Mediation's ability to address complex processing cases with high input loads, a common problem in LTE networks and a serious challenge for LTE Product Managers and, thus, customer experience managers. Prior to deploying mediation, the operator's Service Operations Center (SOC) based its monitoring and root cause analysis on manual processes.

Now, the E2E records of both successful and unsuccessful data sessions generated by mediation enables the SOC to get visibility within less than a minute on quality degradation per service (ordinary performance counters from eNodeBs would have taken 30-60 minutes delay to be collected with higher churn and lack of information in customer dialogues as consequence). Mediation handles:

Collection:

Real-time collection of signalling data (Raw cell/call trace data collected over TCP/IP (binary); collected from 4000 eNodeBs, MMEs and SGWs over TCP/IP 400 000 events/s from 4000 eNodeBs with corresponding MMEs and SGWs).

Processing:

Enrichment and correlation of data from both radio and core to tie the IMSI and session ID coming from the MME to the radio performance events and the Session ID coming from the eNodeB.

Distribution:

Load files generated at one minute intervals. Load files contain enriched end-to-end correlated sessions (cross-correlated on all 4000 eNodeBs). The data forwarded to receiving systems is reduced by 92 percent from the raw collected input. A user session consists of (in average) 12 input record and OSS mediation forwards only one E2E record summarizing all twelve. Perfectly suited data for customer experience information.

Dimensioning:

Six server blades in total (HP BL460c, 2 * quad cores with 64GB RAM): Two blades handle collection, forwarding, and platform resources. Four blades handle the processing, totaling 100 000 events/s per blade.

Use Case 3 - Innovation!

An EMEA-based transportation services provider needed an IT system to handle vouchers and related data and processing requirements for its rail network, in a scalable and highly-available manner. The company initially wanted to use its CRM to handle the voucher definition. However, the CRM product was found to be not sufficiently scalable and, thus, unable to function in the required, real-time manner.

Mediation functionality offered a way to cache the structure of the voucher and position it as a 'runtime and real-time capable database', as opposed to the CRM alternative which relied on a 'static/reference' database (using/distributing vouchers as planned).

Mediation was a particularly attractive option with these requirements in mind as it could carry state

of a subscriber and, in this case, vouchers across a scaled environment. Today, the mediation-based solution is used to cache the information contained in the CRM system, so that all eligibility checks on vouchers are done in a fast and reliable way. It interfaces with the Point of Sales (PoS) or ticket vending machines, charging and the CRM.

My guess is that paging through *Pipeline's* CEM-focused issue, you probably weren't expecting to stop at mediation on your journey. But the reality is, if you really want to tackle and improve customer relationships, it should be the first port of call on your journey.