



Call Data Records are the Lifeblood of Telecommunications

WHITEPAPER



The **CDRlive** technology ultimately allows Telecoms to easily answer questions for empowerment around making effective revenue and churn management decisions. Because the tool is AI and AR ready, it is well positioned for the future.

Call Data Records

Call Data Records (CDRs) are the lifeblood of telecommunications but they can also be optimized for management to see exactly what's going on in the business, and to make better business decisions that impact the bottom line.

Although CDRs are essential for billing, which of course, is the income of a telecom business, they only become truly valuable when they are analyzed.

However, the problem for most MNOs and MVNOs, is the overwhelming amount of data that is generated. Other CDR warehouses or data lakes are often incomplete or inaccurate because the systems are not built to easily allow for the extraction and analysis of data, or they just can't handle the load.

McKinsey Global Institute states that Telecom organizations who use data as their driving mechanism, reduce customer churn by up to **15%** and can dramatically reduce costs.

In this white paper, we'll explore the power of CDRs, their importance in Telecoms, and the challenges that make optimizing them difficult. In addition, we show you how CDRlive, a technology developed by Adapt IT|Telecoms over a period of 18 years, addresses those challenges to offer MVNOs and MNOs information for transformation and increased profitability.



What are Call Detail Records?

Call Detail Records (CDRs) provide data about how users utilize a phone system, the internet, video calls, SMS, etc. CDRs provide hundreds of fields for each record, and can give information related to each call type.

For example, for calls, these are some of the details it offers:

- Date and time of call
- Length of call
- Source of call (who called who)
- Location of call
- Device used
- Cause for call termination
- Type of call
- Cost of call

Call Detail Records may also include other communications transmission information. Note that it is only the information around the logistics of the call, not the content within the call or message.

CDRs are mostly used in the Telecoms industry for billing, accounting and system usage information.



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IMPORTANCE OF CDR IN THE TELECOM INDUSTRY

Call Detail Records are crucial for Telecommunications companies: without these records, no payment can be made, because there is no proof of any calls being made, and so there is no business. It is of paramount importance for carriers to fervently guard processed CDRs, with the same degree of security as a bank would protect its cash reserves.

In summary, CDRs are important for (but are not limited to):

- Billing purposes
- Revenue and usage monitoring
- Fraud detection
- Regulatory support
- Understanding and optimizing system usage
- Network integration and planning
- Measuring quality of service
- Measuring and optimizing customer behaviour (e.g. for the purpose of churn prevention)
- Information source to support strategic planning decisions
- Network monitoring to meet Service Level Agreements (SLAs)
- Traffic analysis, including roaming and interconnect
- Facility capacity planning
- Device performance analysis
- Invoice reconciliation

CDR applications allow MNOs and MVNOs to manage the business down to the smallest detail; enabling proactivity instead of reactivity.

Because CDRs are the lifeblood, or currency of the Telecoms company, neglecting them is the same as a bank leaving the cash vault code lying around.

CDRs are important and classified as Big Data. These records can become a rich wealth of information with the right systems; they can be optimized to provide the Telecoms business with deep insight into their customers, which helps management make informed strategic decisions.

But most Telecoms face common challenges around CDRs which limit their potential. Let's get into that in the next section.



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CHALLENGES OF MAXIMIZING CDR

To get the real value of Call Detail Records, the data has to be **extracted, decoded, and analyzed** and most Telecoms neglect this because of what it entails.

In fact, according to Forbes, only **53%** of companies in all industries utilize data to drive decisions.

However, Telecoms who do use Big Data, use it for things like:

- Creating and driving new product offerings.
- Improving the customer journey.
- Dramatically improve the forecasting of network capacity.
- Reducing customer churn.
- Understanding what their competitors are up to.

The reasons most telecoms businesses give for not using CDRs to dig deeper for customer insights, is:

#1: Volume of data

Most Telecom Operators are overwhelmed with the sheer volume of data and the cost to manage it. In addition, current Telecom systems are not designed for simple extraction and analysis of the data from CDRs, so the business needs to use resources that spend most of their time trying to make sense of and organize the data, and only a fraction of the time is spent on actual analysis, which is where the real value takes place.

#2: Understanding the data

To get good quality information from CDRs you need to understand what you are looking at and how to use it.

For example: it makes sense that network data quality impacts **churn rate**. Analysis of CDR data and an understanding of how usage relates to customer behaviour can help make sense of other churn drivers. Your customers could be churning because of slow connections, but they may also leave due to unhelpful call center reps. They may even leave because your competitor is offering promotions. This kind of information is important to know, because it will drive the best business decisions. Correlating and using all available network data helps from a complete picture of network health.



The kind of data analysis that is truly value-add, depends on a complete and accurate picture, and most CDR analysis tools do not provide this. When data is incomplete and inaccurate, the information is useless and can result in planning and reporting errors, missed opportunities and revenue loss.



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WHAT ADAPT IT | TELECOMS CDRlive IS AND WHY DO YOU NEED.



CDRlive enables Telco market leaders to track and manage profitability over the complete customer lifecycle

CDRlive is an Artificial Intelligence (AI) ready Telco-oriented solution, developed through 18 years of deep learning in the Mobile Operator environment. You can now make effective revenue and churn management decisions.

- Answers the questions that you’ve been asking – and even those which you haven’t thought to ask – about your customer’s behaviour, trends and usage patterns.
- Provides detailed KPI tracking and measurement through:
 - Descriptive Analytics – Hindsight - What happened?
 - Diagnostic Analytics – Insight - Why did it happen?
 - Applied Analytics – Foresight - What might happen?
- **CDRlive** moves you from just passively tracking piles of meaningless data, to proactively shaping strategy in order to future-proof your business and grow your revenue.
- **CDRlive** enables Telco market leaders to track and manage profitability over the complete customer lifecycle.

DELIVERING REVENUE MANAGEMENT

Where is your network’s Revenue coming from? Do you want a clear, easy to understand snapshot of your network’s revenue? **CDRlive** allows you to track spend and drill down to granular drivers in order to foster competitive pricing and margin management.

- See your revenue contribution by product offering through **CDRlive’s** signature raindrop chart
- Perform exploratory analysis on profitability drivers by subscriber segment and technology spectrum
- Derive your own personalized metrics to gain deeper insights and understanding
- Differentiate between high value and low value contributors at a glance by period (day, week, month, year)
- Analyze the net impact of subscriber

CHURN, TRACKING & PREDICTION

We understand the impact of churn metrics, as these are critical to your business. **CDRlive** can help you do it better. **CDRlive** refines churn tracking and prediction – including insight into your competitors’ churn metrics.

CDRlive helps you to:

- Understand your own and your competitors’ churn drivers
- Provides the decline and churn drivers per segment, per geographic location (This is data relating to “own” against “competitor”)
- Decrease your retention costs
- Protect your profitability through insight-driven next best action (NBA) and next best offer (NBO)

Visualize your data on customized KPI dashboards

With **CDRlive** you can view data in almost real time – hence the ‘live’ part!

Quickly deploy Executive, Operational, Data Quality & Data Health Management KPIs in user friendly dashboards across verticals and horizontals of your Telco business.

- Operational visibility of key growth drivers (subscriber growth, revenue and profitability ratios)
- Standard Data Model with over 200 KPIs for quick deployment and out-of-the-box use
- Displays operational inefficiencies
- Helps you to make informed decisions about competitive pricing, marketing campaigns and new service innovations
- Predict and monitor the impact of new campaigns
- Picks up any errors and mishaps straight away
- Proactive and near real-time feedback allows for an adaptive strategy that maps against results



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META DATA HEALTH MONITORING

Reliable and effective analytics through automated data health monitoring supported by proven 3GPP Compliant ETL (Extract – Transform – Load) processes.

- Draws on all relevant network data and information, e.g., billing records, customer information and Call Data Records (CDRs)
- Normalized Meta Data (Accurate & Complete) translates into comprehensive and accurate results
- Automated exception handling, reporting and escalation
- Visibility into KPI health (how current is my data?)
- File and record sequence validation to ascertain source system's health

Diagnose the fitness and vital signs of your business with daily ARPU & ASPU statistics.

Your average revenue per user (ARPU) and average spend per user (ASPU) are key metrics for your business. Track your ARPU and ASPU on a daily basis & see progress against your monthly targets ARPU.

- **CDRlive** delivers daily ARPU and ASPU trends
- Complete consolidated view of key indicators and drivers around customers
- Tracking monthly targets on a daily basis
- Supports critical subscriber profitability monitoring per usage
- Enables service innovation by providing executive decision support metrics that connect to operation intelligence metrics

SUMMARY

You already have the data from CDRs; the problem is that they are not being used effectively because of the lack of understanding around CDRs.

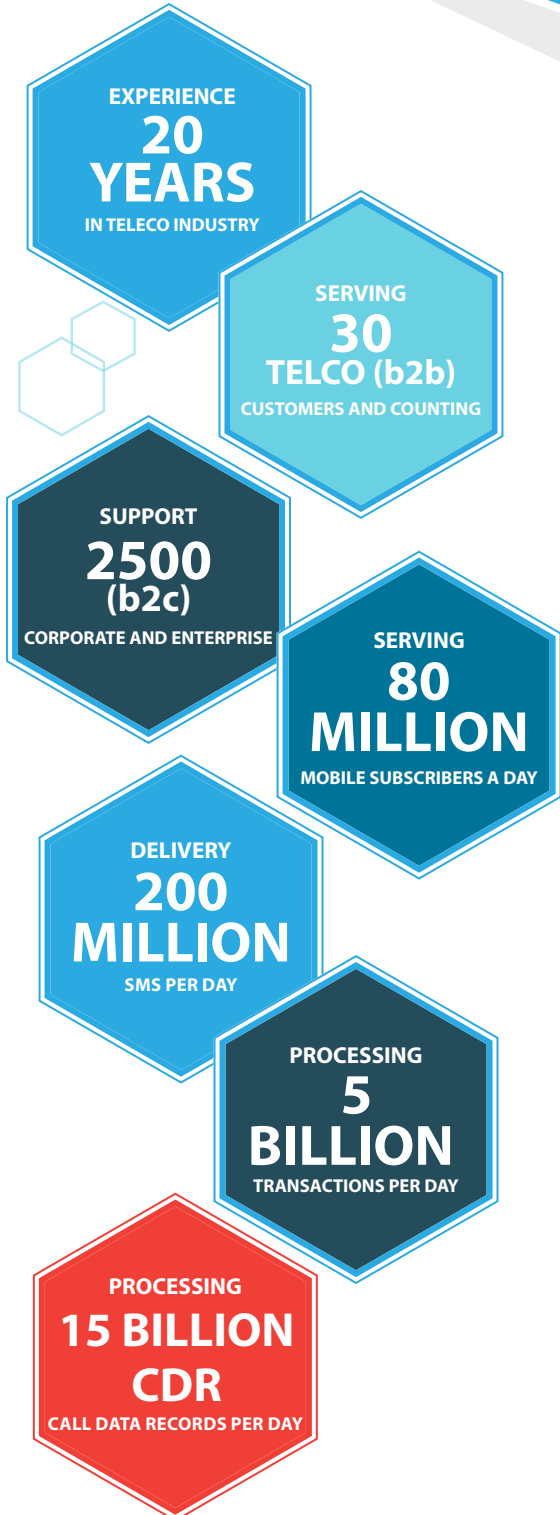
So instead of maximizing them, they are ignored because it's easier.

But your CDRs have the power to transcend the entire business: all that's needed to take their value to a new, transformational level, is a way to access, extract and analyze the records using **CDRlive** software that decreases the need for more resources and expenditure.

CDRlive, used by the world's telco giants and startups alike, furnishes your organization with the ability to:

- Track and manage profitability
- View network revenue sources
- Track ASPU, ARPU and mobile money
- Enhance marketing initiatives
- Develop products based around user insights
- Make intelligent business decisions

CDRlive gives real time transformational power that is easy to use, in order to propel your MNO or MVNO to new heights.



We create **ADVANCED TELECOMMUNICATIONS SOFTWARE SOLUTIONS** THAT UNDERSTAND, ENHANCE AND ANTICIPATE YOUR BUSINESS NEEDS

We adapt and connect:
PROBLEMS WITH SOLUTIONS
YOUR IDEAS WITH REALITY
PEOPLE THROUGH TECHNOLOGY

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