

EVOLUTION OF A CUSTOMER INFORMATION HUB

A Corios client case study

by Robin Way



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Executive Summary

In the words of a Chief Marketing Officer who is a Corios client, “At our bank, Corporate Marketing needs to be accountable for every message sent to every customer over every communications channel that our bank operates. We need a single place to track every actionable, relevant piece of information about every relationship with every customer and prospect we have, every communication we’ve had with them, and how those communications have impacted our relationship with them, in a quantitatively measurable way.”

This is an articulate and coherent summary of the key issues. It’s a straightforward objective, with a more difficult roadmap to execution. The point of this Corios RedPaper is to chronicle the evolution of a specific Corios client’s Customer Information Hub which we built for one of the country’s top banks. We’ve built similar customer information hubs for property and casualty insurers, credit unions, regional banks, retailers, and energy utilities.

One of the highlights of this Corios RedPaper is that we visually present the evolution of this customer information hub, one phase at a time, with a visual depiction of the elements that we constructed in each phase. This charts the trajectory of the customer information hub, with the lesson learned of what ought to be built first, second, third, and so on.

Evolution of a Customer Information Hub

What is a Customer Information Hub?

A Customer Information Hub (the “Hub”) is a living, breathing asset, serving as a key element of an analytics-based customer management platform, spanning channels and technologies, as well as business constituents and objectives. The Hub:

- Collects a continuously-refreshed and comprehensive view of all your customers and prospects, and a wide variety of attributes describing their relationship with your organization: products, financial transactions, interactions
- Identifies the mutual relationships across people, accounts, households and business entities, and ties them together across time as those relationships evolve
- Provides a view of all your customer strategies: acquisition, onboarding, activation, cross-sell, retention, financial risk, recovery, and supports the assignment of strategies to relationships via programs, treatments, campaigns and offers
- Tracks every communication and interaction with every customer and prospect over every channel, and the measurable impact of those interactions with your organization as captured by business-meaningful metrics: exposures, interactions, conversions, transactions, revenue, costs and margins
- Supports your ability to attribute the impact of customer strategies on customer relationships, so that your organization can learn what works and what doesn't, the difference between these two outcomes, and why it happened that way, so you can leverage the good stuff and avoid repeating the bad stuff

Why would you want to have a Customer Information Hub?

In the words of a Chief Marketing Officer who is a client of ours, “At our bank, Corporate Marketing needs to be accountable for every message sent to every customer over every communications channel that our bank operates. We need a single place to track every actionable, relevant piece of information about every relationship with every customer and prospect we have, every communication we've had with them, and how those communications have impacted our relationship with them, in a quantitatively measurable way.”

This is an articulate and coherent summary of the key issues. It's a straightforward objective, with a more difficult roadmap to execution.

The point of this Corios RedPaper is to chronicle the evolution of a specific Corios client's Customer Information Hub which we built for one of the country's top banks (ranked by assets). We've built similar customer information hubs for property and casualty insurers, credit unions, regional banks, retailers, and energy utilities. The similarities in objectives, challenges and lessons learned across these examples are considerable, despite the differences in the business models across those industries.

Evolution of a Customer Information Hub

As the subtitle of this Corios RedPaper states, this is a Client Case Study, broken down into four phases. We have found these four phases, and the story that unfolds in each one, tend to be common to most of our Customer Information Hub engagements. Speaking broadly, these four phases include:

- 1. The First Great Single View of the Customer Relationship:** wherein, Corios (and our client) defined the most important and actionable attributes of each class of customers, pulled them together into a single place, identified the mutual relationships among those customers, and made this information available to our client's product, brand, marketing and sales strategists to begin the customer strategy development and assignment process.
- 2. Launching Consumer Strategies and Closing the Loop:** Corios and our client assigned the initial first customer strategies to the client's customer portfolio in a targeted way, and tracked customer behavior in response to these strategies, by capturing and connecting them back into the customer relationship in the Hub.
- 3. Our First Analytic Model Factory and Next Best Offer Strategies:** Now that our client has been monitoring customer behavior in response to the initial contact strategies, the bank can analytically stack-rank and micro-target the best strategies for every individual customer, which enhances the closed loop between strategy and customer relationship.
- 4. Accelerating Cycle Time and Responsiveness:** Our client cranks the volume on the process. More strategies launched for more customers across more channels, and everything is faster. Cycle times are measured in weeks and days, rather than quarters and months. Strategists can micro-target not only customers, but also the timing of the strategy so they are more relevant and timely for the customer.

Customer Information Hub Framework

The schematic in Figure 1 (below) illustrates the Customer Information Hub framework, which took shape over the four phases of this engagement. In each phase, we will add more assets to each part of the Hub's framework.

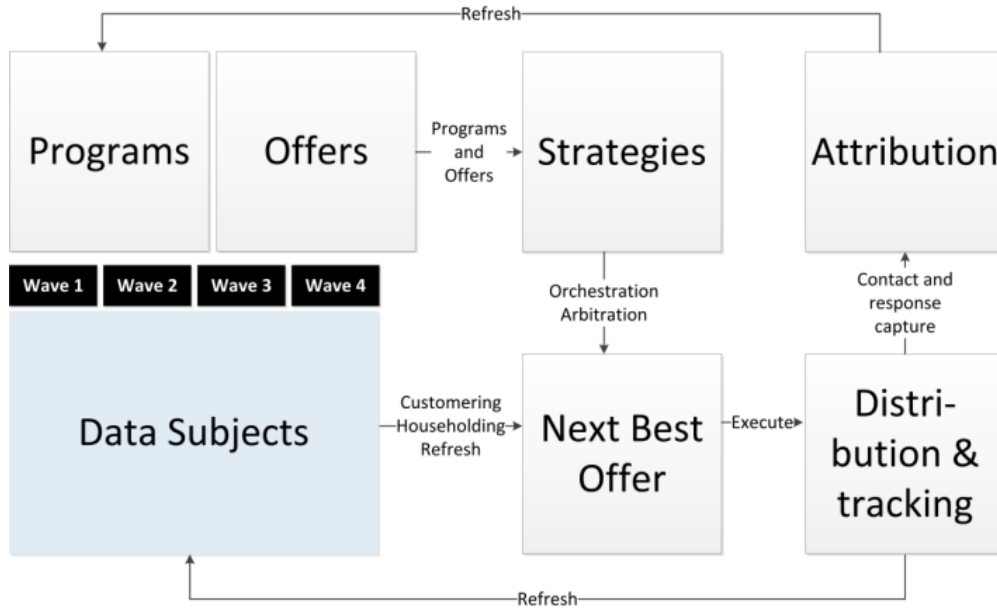


Figure 1: Overview of the Customer Information Hub

PHASE 1: THE FIRST GREAT SINGLE VIEW OF THE CUSTOMER RELATIONSHIP

As you might guess, the first chapter of building the Customer Information Hub inevitably begins with “information about the customer”, naturally.

Working backwards from your strategic objectives to drive gradual improvement of measurable margin contribution tied to customer relationships, you can **determine the first set of data assets you want to insert in the Hub**. There are often some legacy initiatives available in your organization, whose goal was to assign unique customer identity keys across your products. No doubt your organization has product- and transaction-specific data repositories, with or without globally-shared customer identity keys.

Your organization may have already established a means of **uniquely identifying all your relationships with consumers and businesses**. More than likely, however, this is not the case today. It is more common to find that rationalizing all your customer and prospect identities has been performed within data sources, not across them. This is even more likely when trying to connect consumer customer relationships with business customer relationships. Complicating this further is **keeping these relationship connections fresh**, as customers' relationships with each other evolve.

What's more challenging, in our experience, than cataloging the data sources you want and getting an extract you can play with, is **recruiting the support of the people in the organization who own those data sources** to provide you with a continually refreshed feed of their data every week. Here's our theory for why that is. A data owner has their own objectives that relate to supporting their product and processes. You need to develop a compelling rationale for the data owners to provide you with this support. Exercise caution in trying to please too many stakeholders, however; more on this in the Lessons Learned section below.

The diagram in Figure 2 below is sourced from one of our engagements with a large bank who serves retail, commercial and wealth clients. As you can see from the left-hand side of the diagram:

- We initially focused on the products that we'd be using in our initial customer strategies (in Phase 2), as well as on the prospect market for businesses (Dun and Bradstreet) and the assignments of bankers to customers (in the Human Resources database and the legacy CIS).
- We created unique keys relative to the Customer Information Hub to track accounts, parties, households and super-households (i.e., the relationships with the same parties across the bank's retail, commercial and wealth lines of business).
- We also built a mechanism to track historically how customer parties, households, accounts and bankers changed over time, so that we knew longitudinally who spoke with whom, and when.

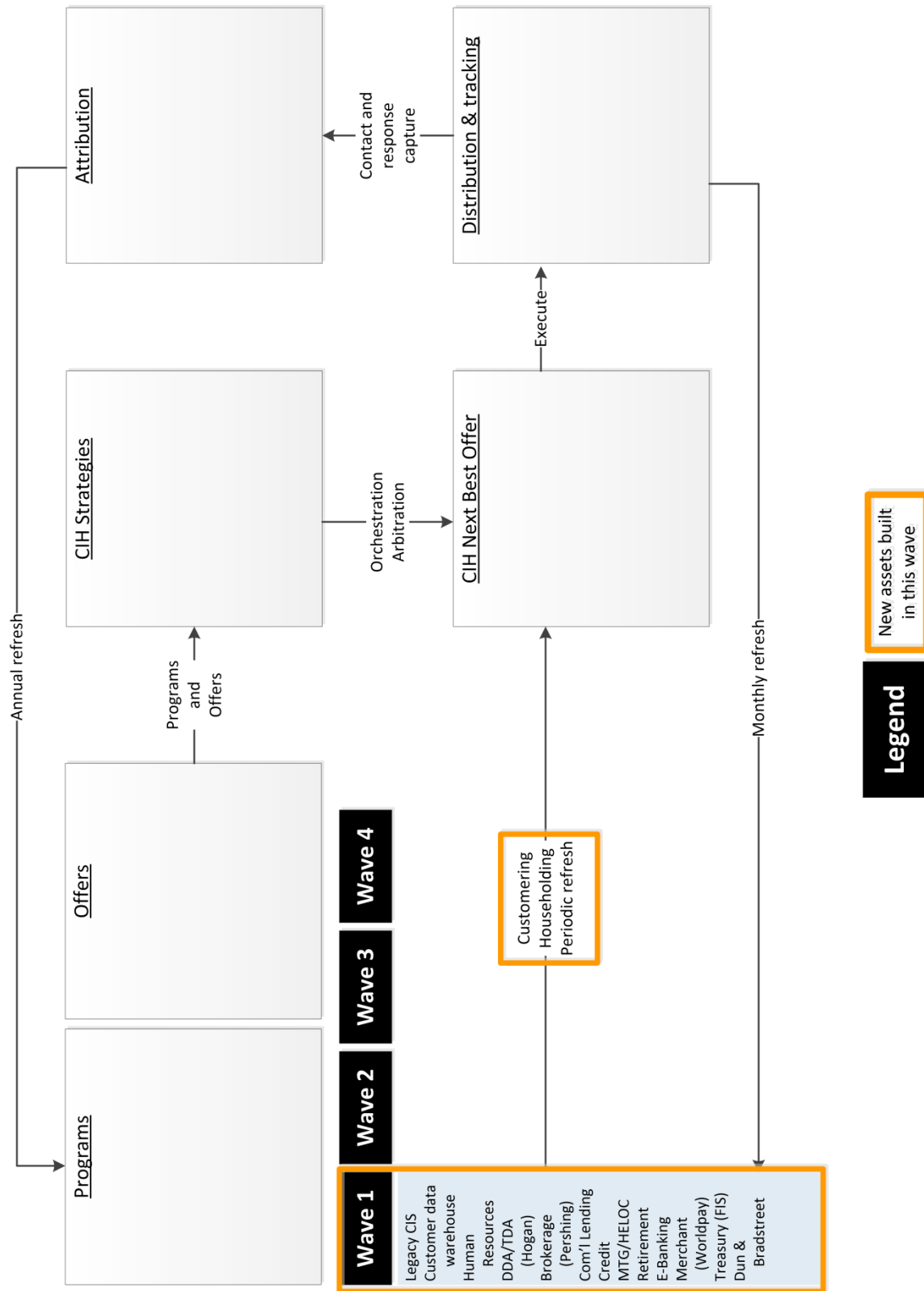


Figure 2: Phase 1 of the Hub: The first great single view of the customer relationship

PHASE 2: LAUNCHING CUSTOMER STRATEGIES AND CLOSING THE LOOP

Our client's **initial customer strategies** were focused on consumer customers and retail bank products. In particular, we wanted to drive more adoption of home equity lines of credit, given the growing economy and the bank's position of strength in that product category. We also wanted to automate the process the bank had developed for onboarding retail customers over their first few months' tenure. The onboarding strategy drives utilization of services associated with demand deposit and time deposit accounts, such as web and mobile banking, digital payments, e-statements and alerts.

We defined the **targeting, segmentation and measurement strategies** for these programs, and worked out the orchestration and offer allocation (i.e., arbitration) rules for which customers receive which offers. While at this point, the number of programs and offers was relatively manageable, we wanted to set this foundation in place for the time (in the next chapter) when offers would exceed 20-30 per week.

We integrated our feed of offer-per-customer with **outbound channels** for email and direct mail, and built the **attribution business rules** that tracked whether an offer drove a change in customer behavior. For instance, we wanted to ensure that the HELOC program would receive credit for HELOC-targeted customer conversions, subject to the response rate over and above the control groups. We also wanted to know whether our targeting was successful in driving not only response rates, but also activation and utilization rates of the HELOC product once the customer signed up for the product, relative to the control cell customers who signed up on their own volition. All of this attribution is only possible when we had instrumented the process to **track all activity in the core HELOC system as well as the customer contacts and responses**, all inside the Hub.

Closing the loop is challenging because there is constant change in the composition of data sources in the Hub, the relationships among and between customers, the presence of other offers that could be delivered to these customers, and the ongoing direct relationships between bankers and customers. That drove our intention to incorporate a robust CRM platform into our customer information hub, so we could track ongoing banker-to-customer interactions, as well as drive the behavior of the bankers as well as the clients—but more on that topic in Chapter 3.

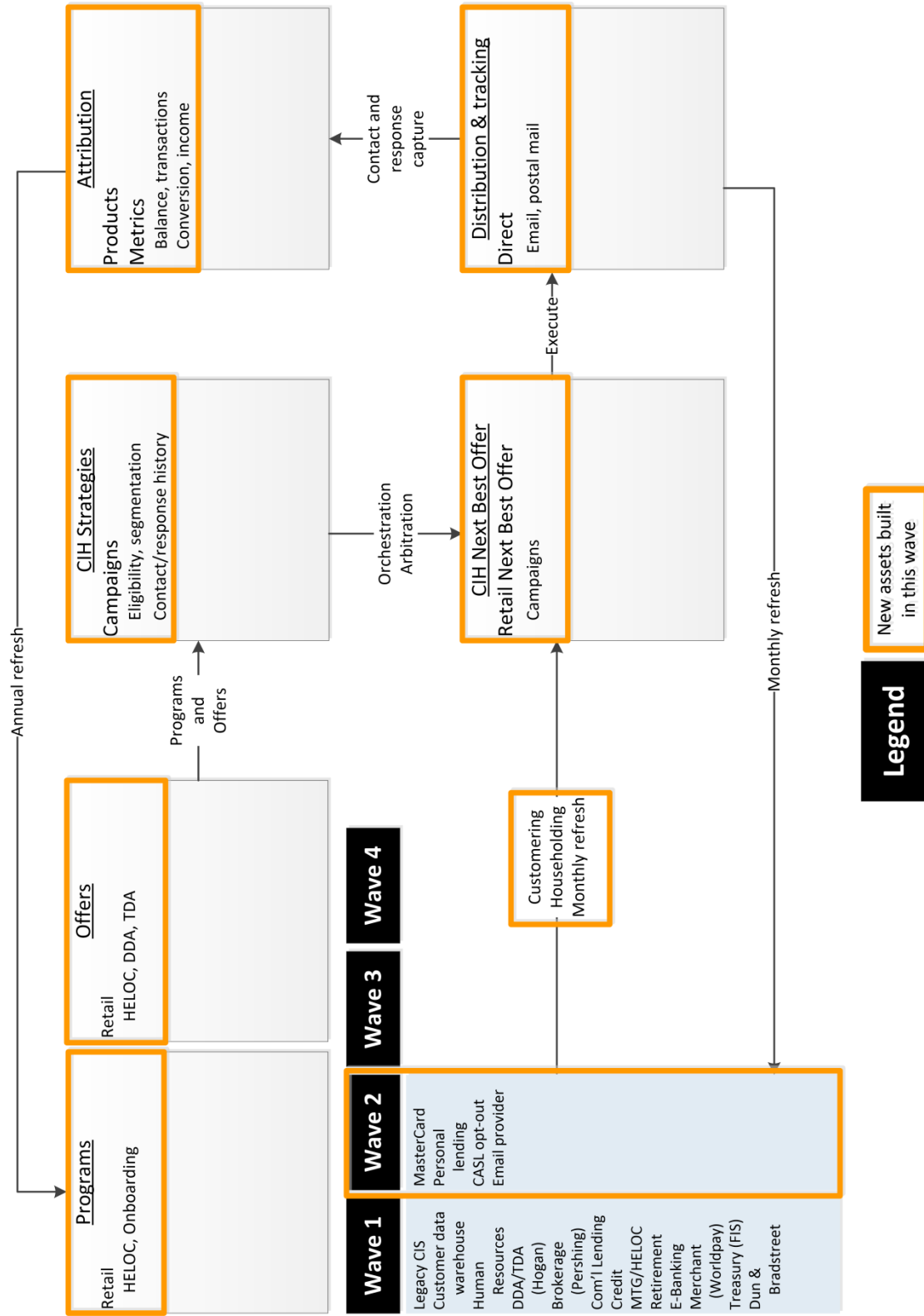


Figure 3: Phase 2 of the Hub: Launching customer strategies and closing the loop

PHASE 3: OUR FIRST ANALYTIC MODEL FACTORY AND NEXT BEST OFFER STRATEGIES

As the volume of customer strategies, programs and offers increases, the sheer combinatorics of customers, offers, opportunities, targeting rules, attribution rules, and contact policies can become overwhelming. A **new level of discipline** needs to be introduced into the Hub to avoid chaos.

We rely on two strategies to chart a clear path through the myriad of opportunities. The first is to construct an **analytic model factory** that uses machine learning and AI to score every customer for the degree of fit with every customer strategy. Some customers are a great fit for a strategy, others are a terrible fit, and most are somewhere in between. An analytic model factory automates the process of creating the machine learning catalog of scoring routines, and introduces vital standardization, transparency, documentation and monitoring into the analytics process. It also makes the analytic infrastructure easier to manage, and faster to deliver results. **Our research shows a 5:1 reduction in cost and time** relative to traditional analytics asset strategies by way of the analytics model factory approach.

Second, we vigorously advise our clients to develop a **Next Best Offer strategy** to arbitrate across all the potential customer-to-offer pairing possibilities. There might be multiple strategies that are a good fit for a given customer. There are finite corporate resources to deliver and reinforce those selected strategies with the targeted customers. There are tradeoffs in delivering one offer to a customer versus an alternative, and tradeoffs in selecting one customer over another, not to mention tradeoffs in timing, capacity and cost. A viable Next Best Offer strategy oversees all these tradeoffs to determine the optimal combinations to execute right now. Corios **NBO-based strategies routinely out-perform** alternative approaches by usually a 40-50% return on marketing investment.

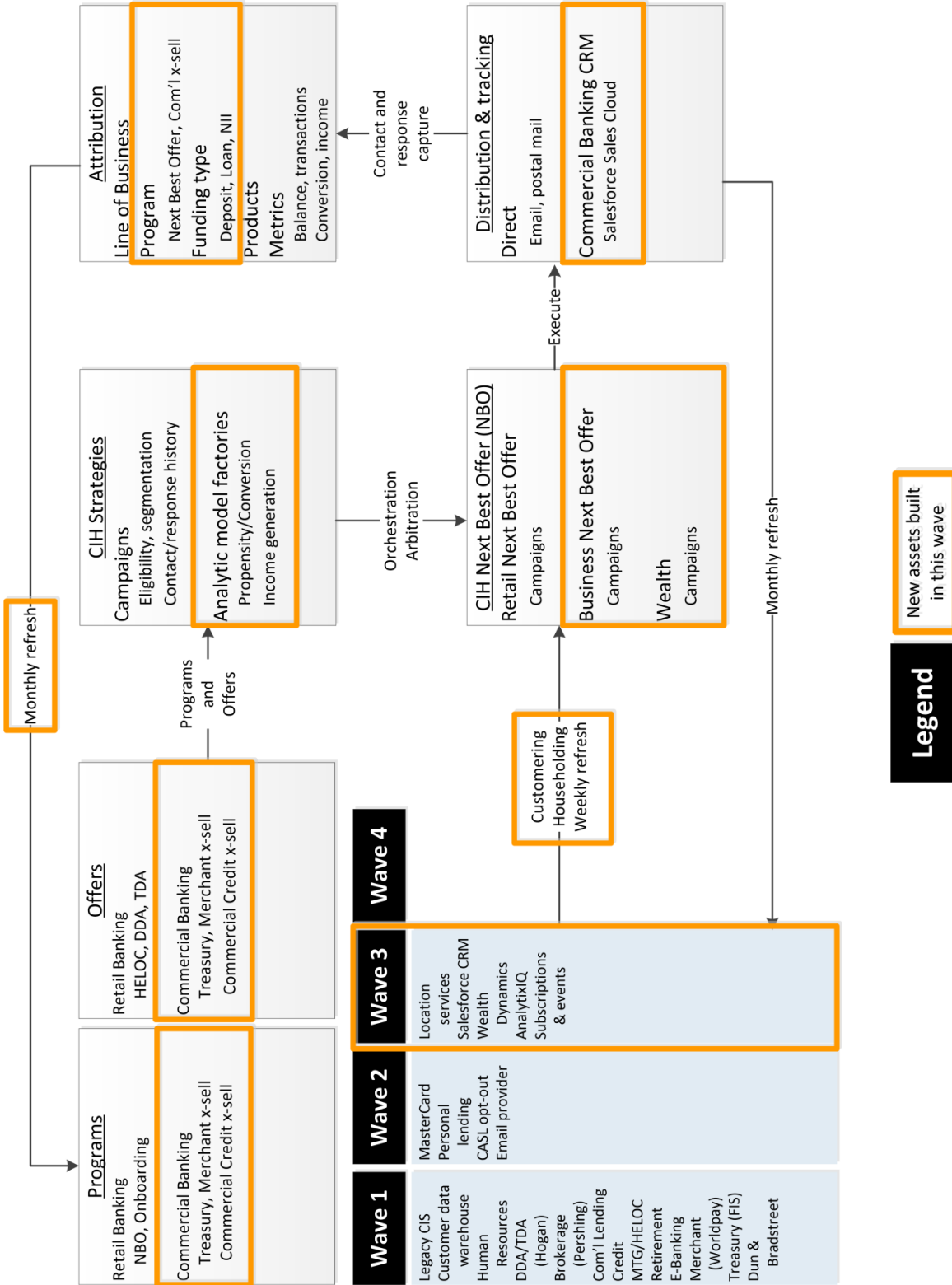


Figure 4: Phase 3 of the Hub: Analytic model factories and next best offers

PHASE 4: ACCELERATING CYCLE TIME AND RESPONSIVENESS

Through the first three chapters of our tale, our Customer Information Hub has acquired 5+ million customers and prospects, 30+ data sources, 20+ customer strategies, hundreds of millions of customer interactions, and hundreds of analytic / machine learning models.

Now our focus needs to shift to **making the entire process run faster**. Faster strategy development, faster refresh rates, faster attribution windows, and more timely targeting and delivery of offers to customers. This is because industry leadership is now all about identifying the **best time to engage with every customer**, using the information available, to understand when the customer is telling you (explicitly or implicitly) that they are ready to engage with you to resolve an unmet customer need.

Some of your legacy data sources will undoubtedly be constrained to only refresh on a periodic basis that is slower than the rest of the organization. There's often little to be done about this. However, customer interaction tracking systems are usually refreshable every day, and this information reveals a ton about **information-seeking goals** of the customer as well as **changes in their expected behavior**. Corios has witnessed that using this information to target specific customer strategies and offers, such as mortgage prequalification, can increase conversion yields by orders of magnitude.

Another part of your organization that moves on a daily basis are your relationship managers, who every day make active decisions about which customer to contact, and how to leverage the Hub to align with the other strategic contacts you are making with the customer over other channels. This is also where CRM integration is key, so that you can **encourage aligned behavior** with relationship managers to accelerate customer awareness and behavior in a mutually-beneficial direction.

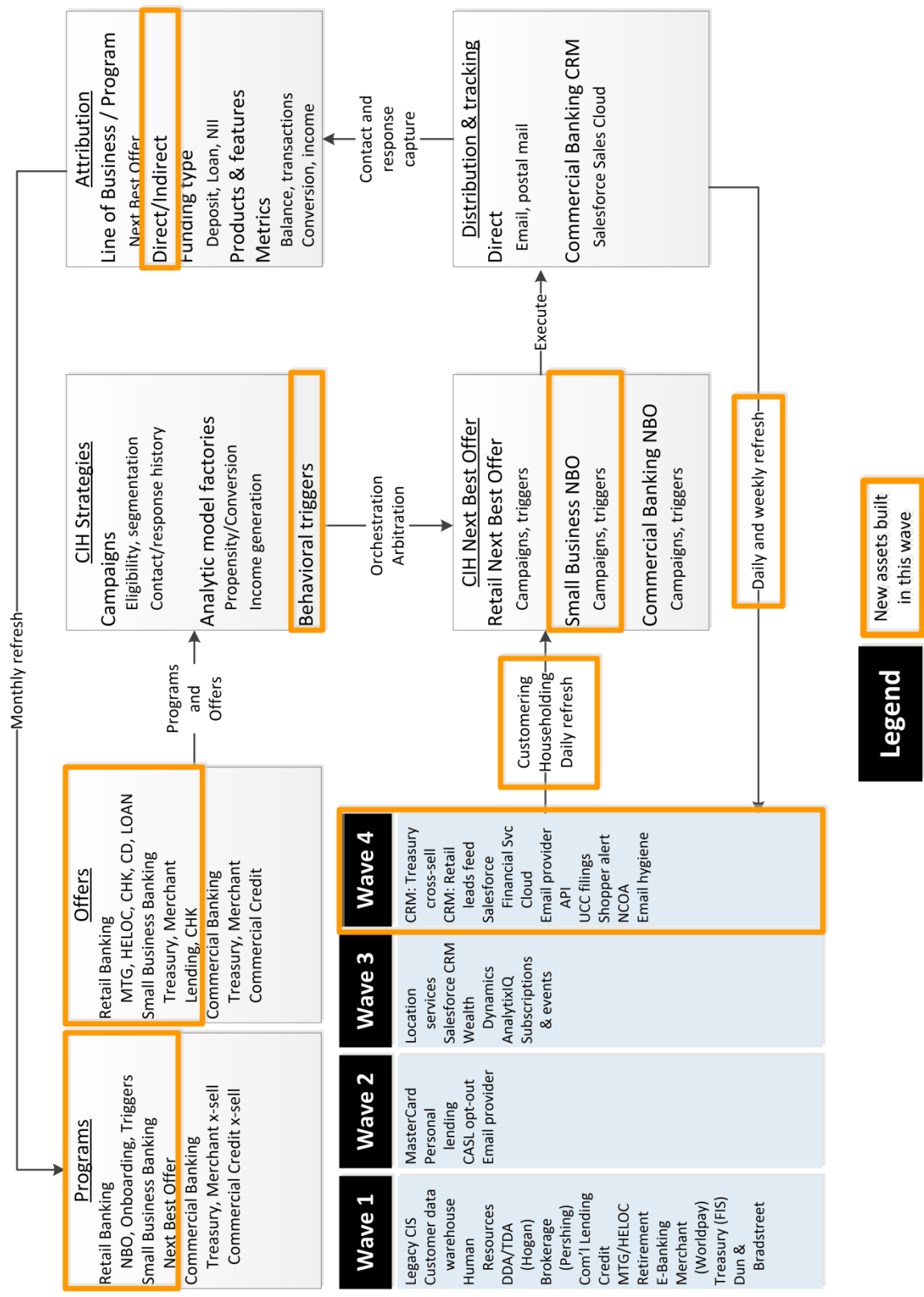


Figure 5: Phase 4 of the Hub: Accelerating our cycle time and responsiveness

Lessons Learned

Here are some lasting and reliable lessons that we've learned from decades of building Customer Information Hubs.

WORK BACKWARDS

Focus on how the Customer Information Hub will be used to allocate corporate resources to customer strategies and relationships. This is where decisions have weight. If a stakeholder is willing to commit people and resources to customer decisions, using the Customer Information Hub as the targeting and measurement system of record, then that stakeholder should be one of your key allies and internal clients. Working backwards from their goals, determine which information assets will make the difference between successful and efficient allocation of people and resources, and focus on putting those assets in the Hub first.

DON'T TRY TO PLEASE EVERYONE

Some stakeholders are patient, while others want instant results. Some stakeholders are disciplined, and recognize that an investment in information is an investment in learning and gradual improvement; others are attracted to shiny objects. Pick your allies well.

INFORMATION IS NOT A VECTOR, IT'S A LOOP

Information theory, as developed by **Claude Shannon**, relies on the comparison of good with bad, and decisions you could make with decisions you have actually made. Before you set your customer strategies in motion, you need to acknowledge the trade-offs in not being able to do everything you want. You also need to set measurable targets for what you think can be achieved, even if you don't have perfect information at the outset.

Every time you execute a customer strategy, and then measure it, compare it with the target, and use this to drive how you learn what works, what doesn't, the difference between these two outcomes, and why they occurred. This enables you to learn and improve over time. Only because the Customer Information Hub is itself designed as a loop, can it help you with this learning process.

THERE IS NO PERFECTION, ONLY GRADUAL IMPROVEMENT (WHERE IT COUNTS)

We've learned that no information is perfect. Our customer targeting and measurement processes are too, well, human, to permit everyone to agree about what gets measured and what it all means. Some information is more reliable than others. One of your goals ought to focus on identifying the information that matters most in the context of decision-making and resource allocation, and improve the reliability of those key information assets.

DON'T GET STUCK IN THE CHANNEL

The Customer Information Hub sends targeting information to customer channel system components, such as email, messaging, CRM, mobile apps and kiosks. And it receives in return the signals about customer behavior as monitored by the channel. We've found that channel systems perform best when we acknowledge that they are intentionally blind to the consolidated single view of the customer that resides in the Hub.

Conclusion

Do you need help with designing and building your Customer Information Hub? Give Robin a call at **503.295.1685** or email him at president@coriosgroup.com.

About the Author



Robin Way

Robin Way is Faculty Member at the International Institute of Analytics, and is the founder and CEO of the management analytics consultancy, Corios. He has over 25 years of experience in the design, development, execution, and improvement of applied analytics models for clients in the credit, payments, lending, brokerage, insurance and energy industries.

Robin's professional passion is devoted to democratizing and demystifying the science of applied analytics. His contributions to the field correspondingly emphasize statistical visualization, analytical data preparation, predictive modeling, time series forecasting, mathematical optimization applied to marketing, and risk management strategies. Robin's undergraduate degree from the University of

California at Berkeley and his subsequent graduate-level coursework emphasized the analytical modeling of human and consumer behavior.

About Corios

Corios is a leader in the discipline of management analytics consulting focused on helping clients across industries to bridge the gap between their data and their business decisions. The company's custom offerings provide analytical solutions for risk management and compliance, marketing, pricing, and big data initiatives. Corios' solutions have identified business improvements worth hundreds of millions of dollars for corporations across North America.

Corios believes that data-driven techniques are the key to making profitable business decisions, and that data should be simple, approachable, and implementable for both analysts and decision makers. The Corios team is persistent in their efforts to promote transparency and common process across the analytical discipline.

To learn more about how Corios is bridging the gap between data and business decisions, please visit coriosgroup.com.

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