



Real-time decisioning, real results

A Pega study on the competitive
advantage of real time



Table of contents

- 03 Foreword:** Why real-time decisioning matters to practitioners
- 05 Introduction:** What is real-time decisioning?
- 10 Tech:** Where are technology investments being made?
- 16 Use cases:** Get the most out of real-time decisioning
- 17 Results:** The true value of real time
- 18 Conclusion:** Reach customers – now or never

Why real-time decisioning matters to practitioners

Foreword by Accenture

Real-time isn't about tech

It's about people. Many companies had already been embarking on massive digital transformation efforts when COVID-19 hit. Suddenly, the importance of customer experience grew exponentially. Digital channels had to be the priority and each customer interaction needed to be relevant, empathetic and fast.

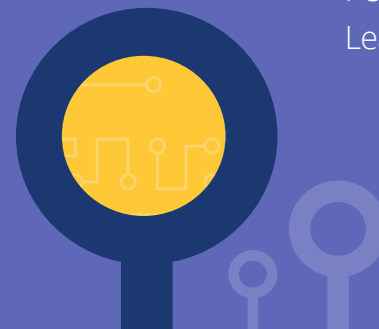
But how can an organization increase its speed and scale, while at the same time becoming more agile? The answer is centralized real-time decisioning, that factors context into every decision.

With a centralized approach, an organization can quickly add new messages or offers, and activate them across the organization in hours, not days or weeks. And with real-time capabilities, they can quickly pivot from selling, to serving, to retaining, based on the customer's context and intent. The key is to take a proactive approach and be ready to shift instantly as the customer emits signals, and changes direction.

“What do you know now that you didn't know a second or minute or an hour ago? How do you use that to make an interaction more relevant, and serve up something compelling and unique?

That's the question companies have to answer, and that will yield a different kind of messaging. That's what real time has to be.”

Brad Herndon, Managing Director,
Personalization, Data & Analytics Practice
Lead at Accenture Interactive



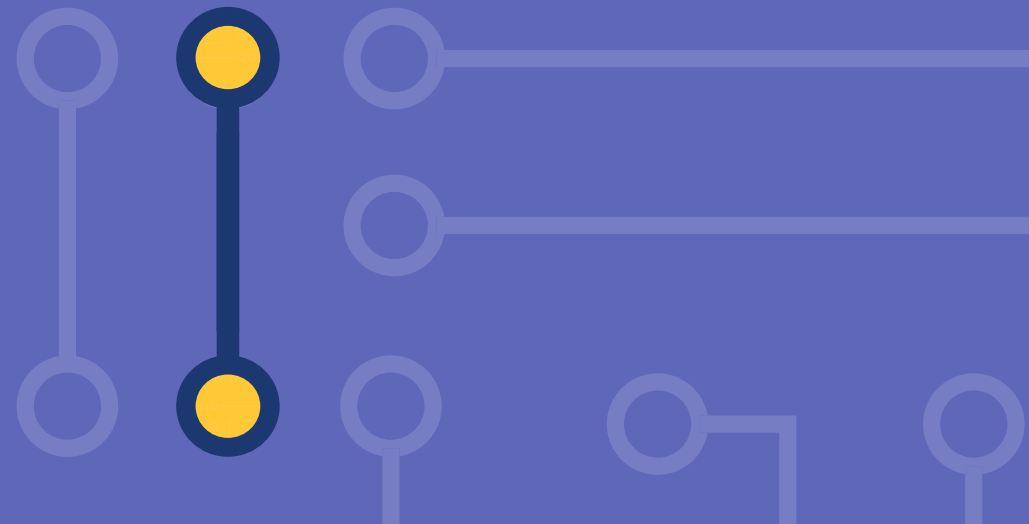
Real-time adds the color to the conversation

If you're looking for a way to differentiate your customer experience, the missing ingredients are real-time insights and decision-making.

The top performing data sources for companies in the survey were all forms of behavioral data, which makes sense; customer behavior provides tremendous insight into their current interests, propensities, and intent. But emotional context (e.g. sentiment) can be just as valuable, because it provides insight into an individual's feelings in a way their browsing habits don't. They help marketers answer tough questions like: is the customer struggling? Are they ready to cancel their subscription? Or are they just frustrated and looking for help using something they already have?

One of the most neglected data sources we see is product data. What products are you selling? How often are you presenting those to customers? On which channels, and with which treatments? And how are they responding across all your different categories and offers and creative? Developing a comprehensive, cross-channel interaction history is one of the best ways to help fuel a real-time decisioning engine. Tying product data to behavioral data and intent, for example, can help you determine a customer's needs and propensities, and figure out where the gaps are in your program, and customer experience.

The end goal of real time, why it's so important to make decisions fast and relevant decisions for customers, is to build lasting brand affinity. At Accenture, we have launch initiatives around this including 360-degree stakeholder views, value meters, and more. Companies need to think of how their entire digital ecosystem works in concert to achieve specific goals and build the kind of sustainable customer relationships they need to grow their business. Centralized, real-time decisioning has become a critical component of that vision.



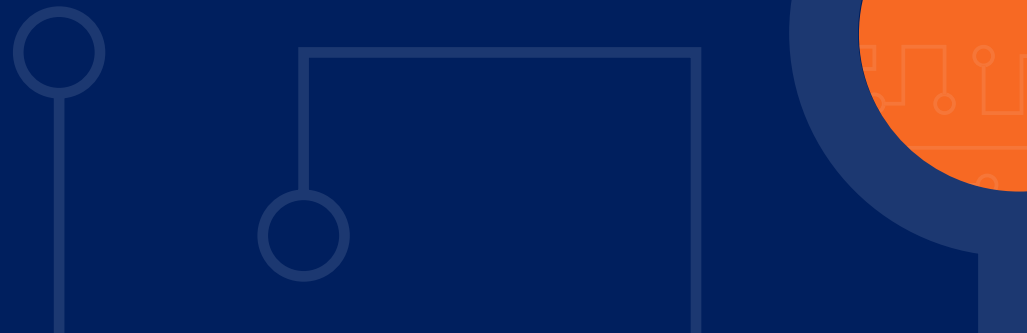
Introduction

The world is getting smaller every day. Today's open markets entice competition from all over the globe, with technology lowering traditional barriers to entry. While this creates massive growth opportunities, it also means competition from both new and existing companies. For many organizations, it has become very difficult to differentiate with the traditional "Four P's": unique products, better price point, place or location dominance, or via promotion. Customer experience (CX) has become a true competitive differentiator, giving brands a forum where they can still stand out in an increasingly crowded space. This has increased the value of CX exponentially, and it's become a cornerstone for many brands.

Delivering exceptional experiences at every interaction was already a monumental challenge; then COVID-19 hit. Businesses were suddenly forced to, at best, speed up any digital CX efforts they already had in progress, and at worst, completely reinvent themselves digitally. Retail traffic went from declining to nonexistent in the blink of an eye. In-person events were cancelled, postponed, or converted into virtual events. And much of the workforce began to work from home. However, many businesses rose to meet these challenges, even in the face of certain disaster.

Next, organizations need to thrive, not just survive. The value of each customer interaction cannot be overstated. If CX is the way to get ahead, delivering the exact right thing – action, offer, content, service, even creative treatment – at the precise moment is how it's done. At Pega, we believe the best method to achieve that level of CX success is through the use of real-time decisioning.

To understand how real-time decisioning is defined in the market and how organizations are tackling CX challenges in this new era, Pega conducted a global survey of over 3,500 participants in 11 countries and across six key industries. The results showed that CX is more important than ever, and organizations that have invested in real time are seeing remarkable value. However, the latter are the minority of respondents, as real-time decisioning has yet to see widespread adoption despite its many benefits.



What is real-time decisioning?

One of the top challenges facing real-time decisioning adoption is defining what it is exactly. Companies see the potential of real time, but the market has yet to coalesce around a formal definition – placing the burden on buyers to educate themselves and their organizations before making an investment. The definition can vary greatly from organization to organization, depending on their approach and use cases. Simply put, “real time” means different things to different people. We asked respondents to define “real time” in their own words. Here’s what they said:

26%

have an overly broad definition that’s difficult to convert into tangible actions:

“Real time is basically adjusting and adapting to the needs of the customer.”

8%

are looking at real time very narrowly, mainly through a channel perspective:

“Real time helps you make intelligent and sensitive decisions, collaborating with customers on the phone during the process.”

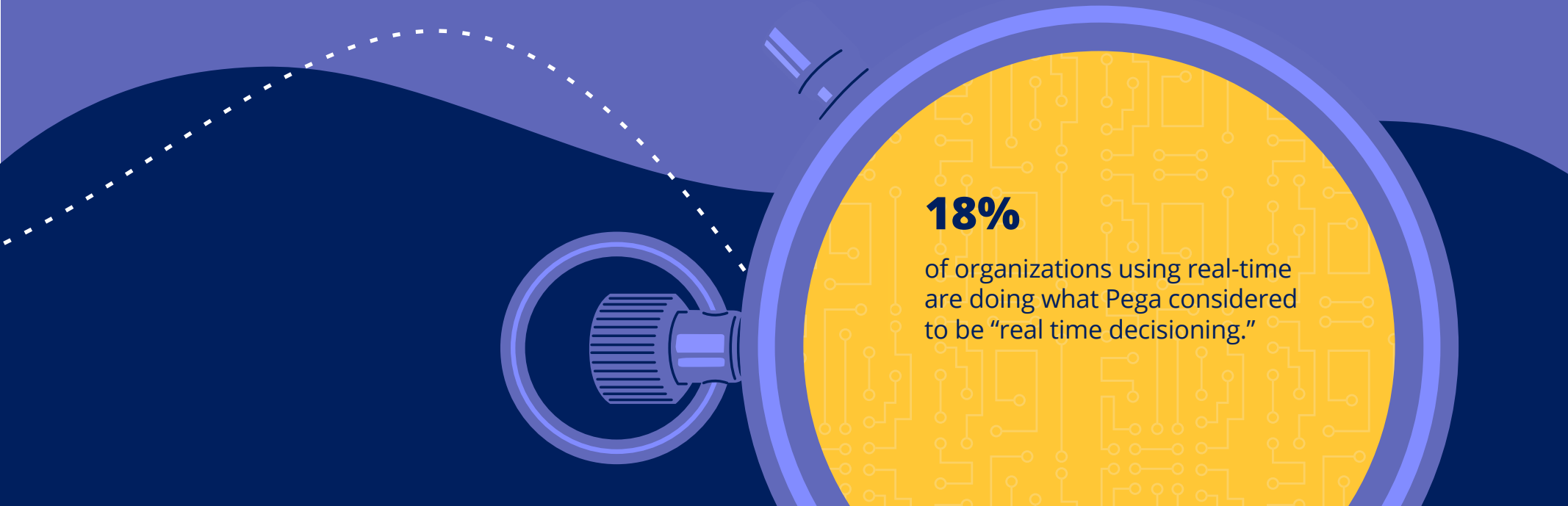
48%

underestimate the power and speed of the technology, which limits their vision:

“Real time is when you’re making decisions very quickly, anywhere from 20 to 60 minutes.”

18%

of organizations using real-time are doing what Pega considered to be “real time decisioning.”





Pega defines real-time decisioning as:

An analytical capability enabling a brand to analyze an individual's context "in the moment," using predictive models and business logic to select the most relevant action, then delivering the next best action to that person in-channel – **all while the customer interaction is actively taking place.**



As of 2021, we at Pega believe that real-time decisioning must happen in less than 200 milliseconds.

As real-time technologies continue to advance, decision speeds will likely increase. Many technology vendors claim to provide real-time capabilities, and organizations often invest in those solutions thinking that they're purchasing cutting-edge, scalable technology that will serve them well for years to come. But in reality, real-time decisioning technologies are new to most tech stacks. Real-time decisioning isn't a stagnant technology. Rather, it's constantly being driven forward by advancements in artificial intelligence (AI). And currently, there's a poor understanding of what real-time decisioning can do and what use cases it can support – even among technology suppliers.



How real time impacts CX

Companies know they need to develop more sustainable, two-way relationships with customers. “Feeling that the company cares” is now the #1 driver of a great customer experience and **63% of respondents agree that mass marketing to customers is a thing of the past**. Companies realize that poorly timed, one-size-fits-all, offer-driven marketing can annoy customers, and that customer engagement must become less sales-focused overall. The only way forward is to connect with customers emotionally and earn the right to expand each relationship.

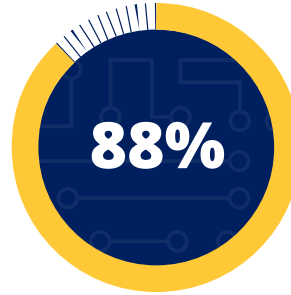
82% of respondents who previously knew about real-time decisioning agree that COVID-19 has increased its importance. The global pandemic has fundamentally changed the economic and social landscape. While delivering personalized, relevant experiences was important before, having a deep knowledge of what’s happening to each individual in real time has become mission critical. Companies may need to pivot their approach to that person drastically (from selling to serving and nurturing), based on that person’s rapidly changing context. Are they sick? Can they make their payments? Do they need to be educated on their options? Are there benefits or programs available to help them?

Real-time decisioning allows organizations to analyze each person’s context individually and sell during that narrow window of time when that person is truly in market – and to service, nurture, or retain them when they are not.



Where are technology investments being made?

The ambiguity around real time can lead organizations to make investment decisions that might seem wise at the time but will not support their goals long term. At times, the confusion around what exactly real-time decisioning is and how to use it can cause organizations to shy away from it entirely. **Only 39% of companies surveyed are investing in any real-time decisioning capabilities – even though the vast majority (88%) believe they’re vital to providing a great customer experience.** While organizations see the potential of real time, that doesn’t mean they know to invest in it. Instead, many are focusing on technology they’re already familiar with:



88% believe they’re vital to providing **a great customer experience.**



39% of companies surveyed are **investing in real-time decisioning capabilities.**

1. Data management platforms

Our survey showed that more organizations **(46%) are still investing in data management platforms (DMPs) than real-time decisioning (39%)** – even though cookie-based DMP technology is quickly being phased out. DMPs typically don't support real-time integration with modern advertising platforms like Facebook, Google, Instagram, or YouTube.

The understanding of where to invest usually trails behind what's happening in the market. Organizations tend to invest in DMPs simply because they always have in the past and are still considered a safe option. But technologies like DMPs are fading out and largely becoming irrelevant. The majority are built on outdated tech that can't easily complement a real-time investment going forward.

Google announced that it will begin blocking third-party cookies in the Chrome web browser in 2022, following the lead of other major browsers like Safari and Firefox. The move would severely limit advertisers' ability to use cross-site tracking for audience development and media buying – effectively rendering many existing cookie-based technologies obsolete.



Only 24% of those surveyed said they were prepared for this change.



29% didn't know about it at all.

Of those respondents who were aware of Google's changes to third-party cookies:



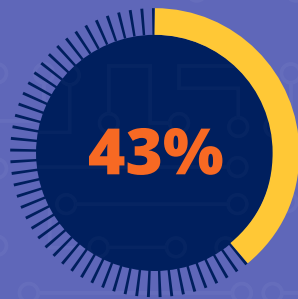
Only 24% of those surveyed said they were prepared for this change.



15% don't believe it will actually happen.



6% think it will happen but don't know what to do about it.



Only 43% of organizations surveyed are investing in CDPs.

2. Customer data platforms

The second highest technology investment was in customer data platforms (CDP), though only 43% of organizations surveyed are investing in them. In our opinion, that's a big miss, since CDPs are a key enabler and data provider for real-time decisioning solutions. The right CDP can be great for real time. With their first-party data capabilities, CDPs can add context to customer data and enable organizations to compile, analyze, and curate data dynamically – all while providing sophisticated toolsets for practitioners. If data is the fuel for a real-time engine, the CDP is the refinery.

So, why are organizations who have expressed interest in real-time decisioning investing in sometimes outdated technology? Organizations have traditionally purchased marketing and engagement technology for two reasons:

1

To solve for specific channel needs, through the purchase of campaign management apps, customer service desktops, content management systems, etc.

2

To achieve economies of scale, through the purchase of marketing, service, or sales clouds – including a large number of apps bundled together into a more fully integrated, cost-effective solution

Unfortunately, real-time techniques often run counter to the approaches adopted by popular cloud products, which are often derived from segmentation and batch-driven technologies. Vendors may attempt to package real-time add-ons into their solutions, but that's tough to do when the two sides utilize a holistically different approach to customer engagement.

3. Real-time decision engines

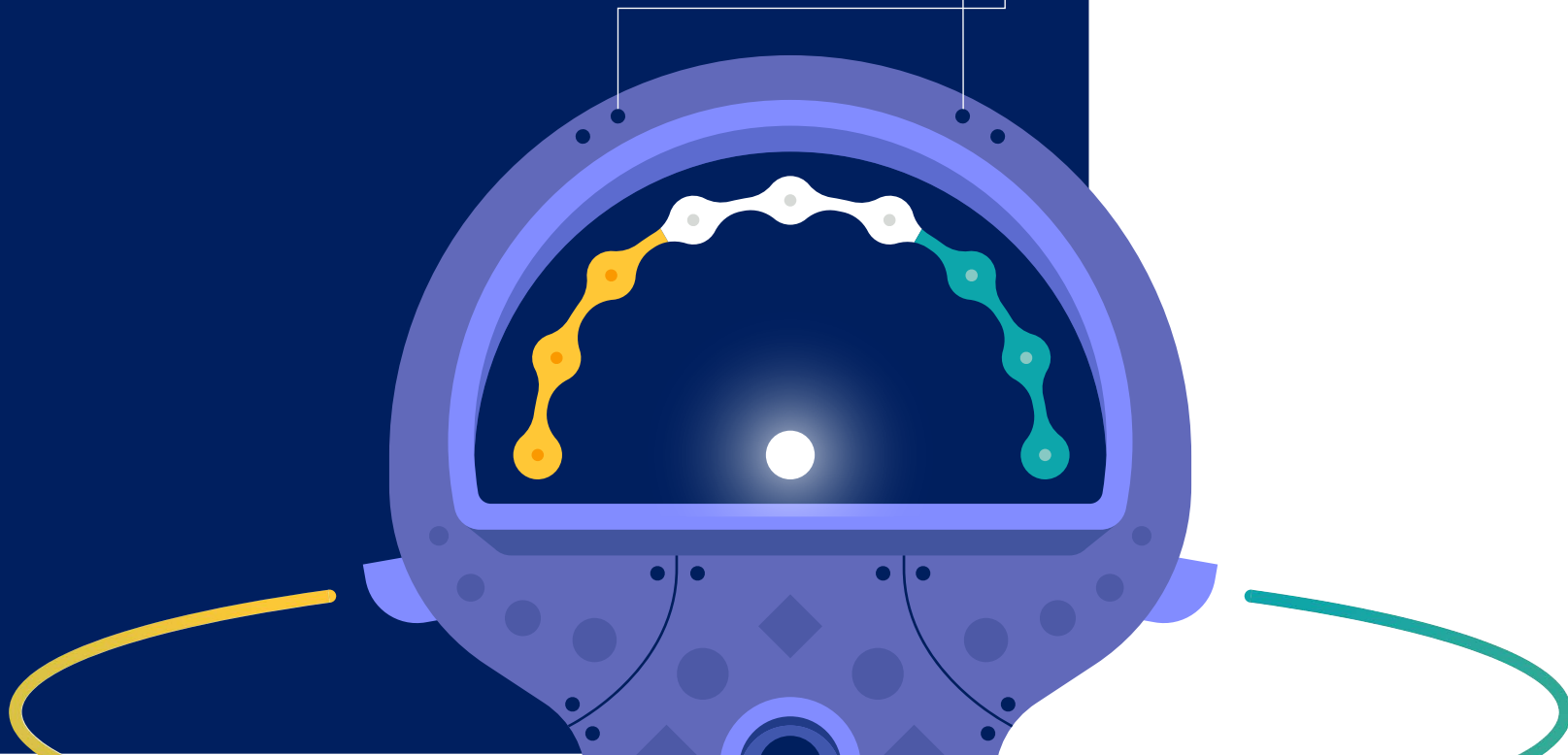
Decision engines enable companies to perform complex decision management, using rules and predictive analytics to recommend the best course of action for each customer. They can be highly effective and drive significant marketing and engagement performance. But adoption has been slowed by the influx of AI across the landscape of marketing tech solutions. **With each app or channel touting its own "brain," companies have been hesitant to make a stand-alone decision engine investment – that's likely why 61% of respondents have yet to integrate one.** But for an organization looking to standardize its engagement strategies and unify its approach across channels, a real-time decision engine is a must. The technology enables the organization to drive all customer conversations from a central brain – achieving a scale of both quality and performance that is impossible to gain using a siloed approach.

Though true real-time technologies haven't yet experienced widespread adoption, the pace is increasing – driven largely by the demands of early real-time adopters.

Real-time adopters:

- 1 Insist that their investments require a central role in the stack.
- 2 Are consistently demanding better integration between real time capabilities and marketing clouds.

Those enhancements are making it much easier for the early majority to bring their own real-time programs online.



Real-time data: What's fueling the engine?

Real-time decisioning can't happen without data – which is driving organizations to integrate a wide variety of high-value data sources. Those include behavioral data, cross-channel response history, and several different types of contextual information. But what data are organizations prioritizing to provide superior customer experiences?

The five most valuable categories of data being used by real-time decisioning programs are (in order of importance to respondents):

BEHAVIORAL DATA

An individual customer's actions and what they have done, including their purchase transactions, web browsing, mobile conversions, email opens, etc.

CROSS-CHANNEL INTERACTION HISTORY

Aggregations of an individual customer's promotion and response history, across channels, including what they saw, accepted, and rejected, as well as how often those actions were taken.

EMOTIONAL CONTEXT

Data showcasing how an individual currently feels, such as churn scores, propensity to call, and call dispositions.

ENVIRONMENTAL DATA

An individual's digital or physical location – like mobile locations, IP addresses, domain identifiers, and container IDs.

MOTIVATIONAL CONTEXT

Data showcasing the individual's intent and what they want to achieve. Examples include: IoT data, call reasons, and form submissions.

Real-time behavioral data (like website browsing) is always the top source of insight about an individual and their needs. It is an excellent source of fuel for propensity models that predict an individual's likelihood to purchase, churn, need service, etc. **It's the most powerful when it's fresh – the longer data is around, the better the chance that the person has consumed new information and changed their mind or shifted directions.**

Behavioral data can be rolled up into an interaction history across all channels and aggregated by category – giving the organization a view into that person's historical tendencies. Do they engage with sales offers? Do they accept them? How frequently? What categories of educational information do they respond to?

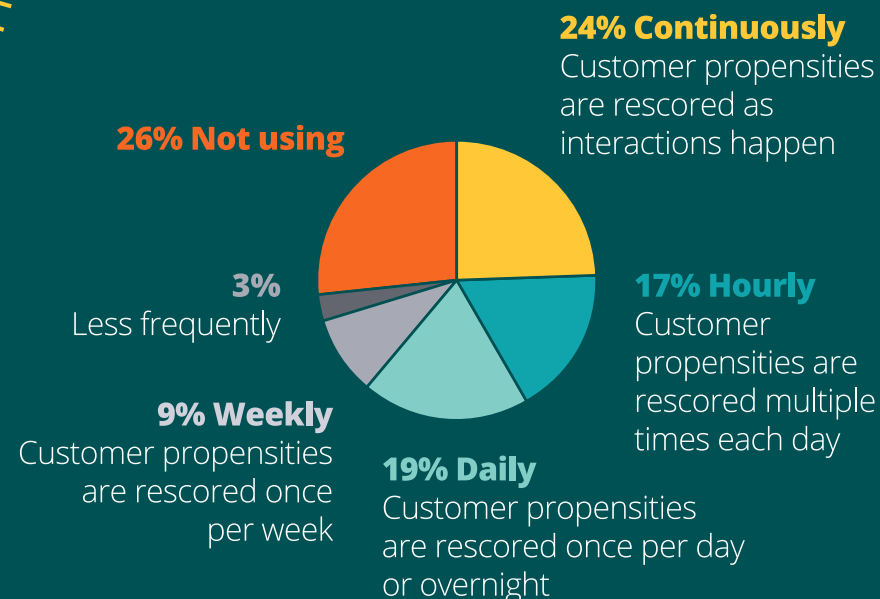
Other types of context (emotional, environmental, motivational, situational, etc.) provide specific contextual insights about what's going on with that person right now, but they typically stagnate quickly – that's why many of them never had a practical use in most marketing/engagement programs. You could use them to get insights (for example, if someone is likely to churn), but you wouldn't be able to action them quickly enough to make an impact. By the time you knew of that context, it would have already happened.

What is propensity modeling?

Propensity modeling uses statistical techniques to predict the likelihood that customers or prospects will perform certain actions – like clicking a link, accepting an offer, or leaving your business for a competitor. They can be created by either humans or machines and play a significant role in almost any form of AI.

Of those surveyed, 26% of respondents are not using predictive modeling at all. Only 24% are using it continuously, with customer propensities being rescored as interactions happen.

Regularity of using predictive modeling to guide customer communications:



Get the most out of real-time decisioning

One of the challenges around widespread adoption of real-time decisioning – along with the absence of a clear definition – is a lack of understanding around use cases for it. However, there are several instances where real-time decisioning can take an organization's CX to the next level.

Inbound digital channels provide the best use cases for real-time decisioning. Channels like the web, mobile apps, and email are usually the highest priority when organizations decide to invest in real time.

When asked about where organizations were using real-time decisioning, the most common use cases were digital in nature:

Mobile application optimization

Personalizing ad containers and experiences within the app, using contextual data

2

Website optimization

Personalizing ad containers across the site by using high propensity offers and actions



1

Triggered email messages

Dynamically triggering highly relevant messages to a single individual when their propensity to accept spikes, indicating a specific "need"

3

But inbound digital channels are usually the highest priority during an organization's real-time implementation for two reasons:

- 1) They provide a high volume of traffic that has historically been underserved and can easily be monetized by increasing engagement and conversion.
- 2) They provide a great source of behavioral data for a high percentage of customers. That data can be used to power the organization's real-time initiatives across other channels.

Inbound physical channels are also important for organizations for the same reasons, but they come at a higher cost, with more risk, and have lower interaction volumes. They're usually considered a secondary priority.

PRO-TIP: Many organizations want to start with triggered email messages, because they see email as a high potential channel. But that typically doesn't work well, because outbound communications have a much lower response rate and generate less high-quality behavioral data than inbound channels do. Real-time email benefits tremendously from having web and mobile programs already in place to generate trigger data when they go live.

The true value of real time

We've established that real-time decisioning is essential to delivering the customer experiences the market demands and that businesses need to set themselves apart. But that doesn't mean adoption is a simple decision for companies to make. In addition to not having the right technology to support real-time decisioning, many organizations don't understand how they can completely change the engagement equation by using them.

Once you've made an investment in real-time technology, that's where the hard work starts, not ends.

A real-time approach to customer engagement requires an organization to tackle big issues, but they might not be what you think. **While budget (22%) and technology (58%) were still noted as challenges, "people issues" (78%) were by far the biggest hurdle to real-time adoption.** Most companies aren't set up to engage in real time with a sophisticated AI guiding their efforts. They were designed to engage with batch technologies that the market has been built around. Most people who lack experience with real-time decisioning are comfortable with the status quo and have little incentive to change; they see major risk in this kind of investment instead of the value.

However, the advantages of real-time decisioning aren't just in theory; companies who have adopted them are seeing the return on their investment.

There are three key areas where businesses can see improvement:



Increased Net Promoter Scores (NPS): Interactions are much more personalized to the customer, and more aligned with that person's unique context – making the interactions feel more streamlined, human, and empathetic. **63% of real time early adopters saw an increase in NPS.**



Decreased customer churn rates: An organization can proactively detect customer issues as they occur, well before they escalate. And when retention incentives are required to save a customer, those incentives (offers and bundles) can be dynamically personalized for the customer's needs – making them much more likely to remain with the brand. **61% of early adopters saw reduced churn.**



Increased share of wallet: Most customers hate feeling sold to and actively avoid sales situations. But with real-time decisioning, they're only presented with sales offers when they actually appear to be in-market and are likely to accept a specific offer. That drastically increases conversion, which in turn increases the brand's share of wallet for that customer. **45% of early adopters saw increased share of wallet.**

The right technology can only take you so far. Most of the effort in a real-time initiative involves getting senior buy-in, winning people's hearts and minds, earning their trust, and getting them to adopt. But the rewards are worth it.

Reach customers – now or never

If there's one constant in marketing, it's that customer context (their situation, environment, emotions, motivations, and behaviors) is constantly changing. People are dynamic and their journeys are fluid – no matter how much you want to put them down a predetermined path. Moments of opportunity open – and close – within seconds. Competitive messages are becoming increasingly similar and hitting the same customers you're trying to acquire, nurture, and/or retain – all amid massive disruption. The challenges have increased substantially over the last year, but that is where the truly innovative and forward-thinking companies will shine. They will win the opportunity again and again, not just because their CX is better than their competitors' – but because they can move fast. The data shows that real-time decisioning allows brands to be truly in the right place at the right time for their customers – and at the top of their game within the global market.

The time to join them is right now.





About Pegasystems

Pega delivers innovative software that crushes business complexity. From increasing customer lifetime value to streamlining service to boosting efficiency, we help the world's leading brands solve problems fast and transform for tomorrow. Pega clients make better decisions and get work done with real-time AI and intelligent automation. And, since 1983, we've built our scalable architecture and low-code platform to stay ahead of rapid change. Our solutions save people time, so our clients' employees and customers can get back to what matters most.