FRICTIONLESS MEDIA CREATES NEW OPPORTUNITY FOR CARRIERS

Predictive Tech and New UI/UX Lead the Way

White Paper by
Roger Entner,
Analyst and Founder of Recon Analytics, Inc.

SUMMARY OF THE FRICTIONLESS MEDIA MARKET

The Disruptive Category That Is Changing How We Discover and Consume the Media We Love

There is a major societal trend underway: Convenience takes precedence over everything else. Whether it's shopping, buying food, having prepared food delivered and ready to eat—Americans are spending more for the convenience of having what they want faster and with less effort. Some people think that if it takes longer to make food than it does to eat it, it's not worth it. Americans spend more money on restaurants than they do on groceries.

Removing friction has affected other industries as well. Uber and Lyft have fully automated the taxi experience. Match and Tinder have changed the experience for people looking for love. Amazon has completely upended retailing. PayPal, Apple Pay, and Venmo have transformed the payments industry. All of these dramatic shifts have one thing in common—they offer the consumer convenience.

These same convenience trends are affecting the way people consume media. They don't want to type, swipe, tap, search, and browse to find media that they desire. People want what they want when they want it: Now! So, media companies are transforming the way they produce and distribute media to cater to Americans' desire for convenience.

There are many disruptive companies in the Frictionless Media category, each using Predictive Technologies and UI/UXs to revolutionize consumer media engagement:

Predictive Tech companies get to know consumers by employing artificial intelligence and machine learning. Utilizing that technology, they understand:

- *What you like* and make recommendations just for you (players in this space include Taboola and Netflix)

- *When to present* content to enhance your search (like Google Feed) and at unlock on the first screen (like Mobile Posse)

New user interface and user experience (UI/UX) approaches are reinventing the user experience with convenient and simple ways to interact, including:

- *Voice agents* (like Alexa, Siri, Google Assistant) is transforming the way we communicate—requiring zero clicks

- *Streamlining interaction* (like Spotify and Apple News) saves time and presents content faster than ever, and delivers the right content at the right time—which is typically now

RECON
ANALYTICS

WHY THE INDUSTRY NEEDS A FRICTIONLESS MEDIA CATEGORY

Categorization of companies in the media space is broken. In today's world of multiple channels competing over our scarce time, players and technologies need to be recategorized.

Have you ever considered how the media you engage with in the morning can drastically impact how consume media later in the day? Consider how getting your breaking news from Alexa in the morning would mitigate the need from visiting your favorite smartphone news app later in the day. Despite this, we don't consider Alexa to be a competitor of Apple News. But it should be. Media properties are constantly stealing away time and attention from one another. This is why categorizing them separately misses the big picture.

Today's technology in media actually compete across several key dimensions: improving search, better discovery, more relevant curation, better snackability, and wider accessibility. By optimizing to improve these dimensions, winners will be separated from losers. Alexa's streaming voice agent in the morning makes it more accessible to certain consumers. Netflix curation abilities makes it easier to find what we love than channel surfing on our TV. And snackable content in our favorite social media platform is more easily digested than reading editorials in a news app.

This creates an intermodal competition for the best way to access the right media in the right moment. The fast-moving developments across these different dimensions can be hard to understand and keep track of. However, if we can understand what is happening, how all these converging mediums intertwine, we can understand what is going on and the true opportunity that exists.

By segmenting the marketing and categorizing them as "Frictionless Media," we can see what different approaches exist. All of these different approaches compete with one another by how they take out "friction" from our media consumption. Whomever can make it as simple and easy for people to get what they want, when they want, and in the form that fits the amount of time that they have . . . will be the winners.

Breaking Apart Today's Media Friction

Given how and where we consume our media, there are five key dimensions of media friction: Search, Discovery, Recommendations/Curation, Snackability, and Accessibility.

Search: For years, searching has been associated with empty boxes filled in by typing, visually scanning to make a selection, then finally having to read the desired results. All of this is pretty inefficient when the specificity of the search is low. "Who won the game last night?", "What's the weather today?", "What's in the news?", What is my horoscope?", etc. For these and scads of other daily queries, finding a search box to type these queries can be very tedious. There are a number of companies focusing on enabling voice search to further streamline the process.

Discovery: What if you could get what you want without having to look for it? Say you have a few minutes of whitespace in between meetings during the day. Your boss is late, and you're sitting by yourself in an empty conference room. You pick up your smartphone, enter your passcode, open up a browser, think about what you what might interest you, then type it in. That kind of

RECON
ANALYTICS

search often leads to a dead end. And those few minutes of free time for entertainment are quickly over. What if you could eliminate the middleman in this scenario? Instead, what if content was presented to you immediately after unlock or on the search page itself? A number of companies and products are doing just that—making search easier, typing unnecessary, and waiting and hoping a thing of the past.

Accessibility: At the same time, we're interchangeably moving from one device to another with the expectation that the experience will be consistent. We expect that we can continue content, where we left off, as we move from one device to another. There are a number of companies and products with offerings that aim to make access universal and easy, with no commitment to device, time, wire, or plan. Others are making cheap, efficient devices that bring "cloud content" to every room in your house.

Curation/Recommendations: Another challenge is the endless (or as our autocorrect insists: needless) flood of content barraging us. What we need is a way to make sense of all the choices we're given—eliminating the irrelevant ones and focusing on the content that probably will interest us. In a nutshell: better curation. There are companies and products that are improving curation to make recommendations so that the user experience is personalized.

Snackability: The size or length of the content should match the time we have. On a weekend or vacation, we might have plenty of time to binge-watch a series on Netflix. But during the week, we might have short snackable moments. So we're looking for smaller bites of content. There is a rise in the number of smaller sessions, with a median length of 30 seconds, so time spent finding and consuming can mean the difference between a happy consumer and a missed engagement opportunity. A number of companies and products are looking to create media experiences tailored to today's growing quick-fix media obsession.

Frictionless Media Market Players

We've outlined the players in the frictionless media market. Every behemoth from Google and Amazon to Apple and Netflix is competing in the market—along with ambitious insurgents looking to grab a share of a burgeoning market.

In Table 1 below, we have broken the market down into the focus areas of the companies and products and the aspects of media friction they remove.

This list is not comprehensive, but inclusive of representative or novel solutions.

Table 1: Representative Frictionless Media Players by Category and Focus

	EASIER SEARCH	SIMPLIFIED DISCOVERY	BETTER CURATION	BETTER SNACKABILITY	WIDER ACCESSIBILITY
MOBILE SOLUTIONS					
Bixby	✓	✓	✓	✓	
Mobile Posse	✓	✓	✓	✓	
Apple News	✓	✓	✓	✓	
AppFlash	✓	✓	✓	✓	
Samsung Briefing		✓	✓	✓	
VOICE AGENT SOLUTIONS					
Alexa	✓				✓
Siri	✓				✓
Cortana	✓				✓
Google Assistant	✓				✓
CONTENT DISCOVERY SOLUTIONS					
Taboola		✓	✓	✓	
Outbrain		✓	✓	✓	
AOL Gravity		✓	✓	✓	
SOCIAL MEDIA SOLUTIONS					
Facebook		✓	✓	✓	
Pinterest		✓	✓	✓	
Instagram		✓	✓	✓	
Snapchat		✓	✓	✓	
STREAMING SOLUTIONS					
Hulu		✓	✓		✓
Netflix		✓	✓		✓
Amazon Video		✓	✓		✓
Apple Music		✓	✓		

Note: Check marks represent presence of functionality/focus, however capabilities vary widely across competitors with checks in similar areas.

RECON ANALYTICS

Frictionless Content and the Mobile Phone

The mobile phone has revolutionized the world. Downtime doesn't really exist anymore, with our constant companions buzzing in our pockets, ringing in our ears, and lighting up our eyes.

The mobile phone has changed Newton's First Law of Motion. Objects at rest no longer stay at rest. Rather, they pick up their smartphones, looking for content, in snackable bites, at their fingertips.

As a result, a new frictionless media market is rising, seemingly overnight. Utilizing AI, machine learning, and predictive analytics, frictionless media is transforming the legacy smartphone experience into a customized, time-sensitive delivery mechanism for the content users want when they want it.

The Driving Force: Unlimited Plans

Mobile phones were once used sparingly—only for tasks that were deemed essential. With expensive and limited data plans, they were often left in a briefcase or on a desk while the user went about other tasks. The advent of unlimited data plans changed all of that.

Phones are now with us wherever we go—often literally in the palm of our hand, and we turn to them to fill in the whitespaces in our days. Whether in line at Starbucks, waiting for a train, sitting in a conference room before a meeting starts or going to the bathroom, we're constantly in search of snackable content. And the content has to be there when we need it.

Having content, in snackable bites, right as we go to unlock our phones, is the most important factor in successful consumption. The content doesn't have to be perfect, but it does have to be there at the right time. Think about it. Research from 2017 shows that 47% of the time when people open their phones, they don't really have a specific task in mind—up from 37% the year before. We know we want to use our phones, but we're not sure what we want to do. That's how snackable content can play a role.

Frictionless Rising

Looking to fill those whitespaces in their days, consumers have flocked to frictionless media experiences like Pandora, Netflix, Spotify, and Alexa. These experiences, which use predictive technologies to enable the discovery and consumption of content, have forever changed entertainment.

In the frictionless content market, the mobile phone lock screen and unlock process will be ground zero for content discovery and customer engagement. To enhance discovery and engagement, searching will become easier, discovery faster, curation more appealing, and accessibility ubiquitous.

Today, more than any other mobile application, Facebook fills the transitional moments in our days with content. The content it presents might be interesting, or it might not be. But, nonetheless, Facebook fills those moments. And, based on the trends it revealed in its latest earnings release, users respond well to the content. However, all those taps, types, swipes, and waits add up to a frustrating experience when you've got a few minutes to fill, and Facebook presents an infinite variety of content. Facebook itself says it is looking to move to more

meaningful interactions. Surely, searching or scrolling through hundreds of posts is not meaningful.

Research from Phoenix Marketing International showed in 2017 that Facebook is the media app most commonly found first when a phone unlocks. And people tend to stay in Facebook rather than closing it and moving on. In fact, the same research showed that 19% of time spent on Facebook was because it was there when the phone was unlocked—up from 15% in 2016. It went on to estimate that this accounts for upwards of $2.5 billion of Facebook's ad revenue, which shows the true power of frictionless media experiences.

The Power of Intelligent Delivery

To capitalize on this trend, a number of players are utilizing AI and machine learning to figure out not just what content to deliver, but exactly when and where to deliver it. The right content is important, but delivering it at the wrong time—perhaps when an appointment has already started—is not very useful. If a meeting starts at the top of the hour, maybe you have three minutes beforehand to snack on some content.

That's when a smart, snackable media product should target delivery. Or maybe the meeting ran short (it's always possible)—and as that sliver of whitespace in the day opens up, snackable content appears right on the lock screen. The content would be visible as soon as someone wakes up their phone—no searching, no swiping, no typing needed.

The Future of Frictionless Content on Mobile

Here are a few specific things to look as Frictionless Content becomes more prevalent:

- First, the unlock experience will become more intelligent and dynamic. The screen will understand the user's life and the patterns of the day. It will know the who, what, when, where, and how of a person. As a result, the unlock screen will deliver content at precisely the right time.

- Second, with a smarter, more focused unlock experience, we'll be less likely to dismiss the first screen we see. Engagement with the item on the lock screen will rise because the right content will be there at the right time.

- Third, engagement on the smartphone will focus on snackable moments—those times when we have a few minutes to spare as we transition between daily activities—whether going from meeting to meeting, waiting in a doctor's office, or sitting at a child's soccer match.

- Fourth, the smarter, more focused unlock experience will virtually eliminate the taps, types, swipes, searches, and waits that clog up our daily mobile experience. Instead, right at unlock, we'll immediately see content for frictionless consumption and enjoyment.

Conclusion: The Frictionless Opportunity for the Wireless Carrier

The frictionless media market has materialized in front of our eyes. It is transforming content from a fragmented, overwhelming avalanche to an intelligent delivery of just the right content—when and where it's needed.

The market is developing because convenience is at the core of American society. With phones in our pockets or hands all day, every day, having content when and where we want it, in snackable bites, has a magnetic appeal to the American consumer.

Further advances of predictive technology, driven by artificial intelligence, will drive more innovation in UI and UX. Our discovery and consumption of media will continue to become more convenient and intelligent.

Telecom and cable providers are well positioned to take advantage of these changes. They have the opportunity to integrate the media experience better than anybody else. They have an ongoing customer relationship that often spans multiple devices—including mobile phones, internet, and TV experiences. As a result, they can remove the current media friction and take advantage of a golden opportunity to engage their subscribers and improve brand loyalty. In addition, they have the ability to market it and provide customer service at scale to ensure the experience meets expectations.

This approach opens up new revenue streams as the TV, cable, internet, and mobile spheres collide, enabling them to compete in the mobile ad game with goliaths Google and Facebook.

RECON
ANALYTICS

About Roger Entner, Founder, Recon Analytics LLC

Roger Entner is the Founder and Lead Analyst of Recon Analytics.

He is known around the globe as one of the most respected telecom experts. Over the last decade, he has been frequently quoted by the world's most prestigious media outlets. In the last year alone, he was referenced more than 2,000 times. In addition, Roger's research has been cited in six Annual Mobile Wireless Competition Reports to Congress, making him one of the most quoted analysts in the history of these highly influential reports. His research around wireless spectrum has been cited by the White House's Council of Economic Advisors. Among his influential work over the last two decades, Roger has written four reports for CTIA documenting the increasing impact of the wireless industry on the US economy. Roger has a weekly video show with Wireless Week, and is a regular contributor to Fierce Wireless as well as commentator on RCR video shows, where he analyzes and comments about customer and industry trends in the connected world. At age 45, Heriot-Watt University bestowed on him an Honorary Doctorate of Science for his contributions to the advancements in research of the telecommunications market making him one of the youngest Heriot-Watt University graduates to receive this honor. Roger has also testified before Congress on the impact of the wireless industry on the US economy, the demand for spectrum and issues around the deployment of wireless infrastructure.

Before starting Recon Analytics in January 2011, Roger was the Senior Vice President, Head of Research and Insights for the Telecom Practice of The Nielsen Company. He came to Nielsen through the acquisition of IAG Research, where he headed the telecom business unit. Roger made IAG Research products a core component of how all nationwide wireless operators are buying their TV advertising time as well as determining which and how long advertising spots are aired. Roger also worked on new product development of ad effectiveness services for mobile advertising and radio advertising. Before was Ovum's Vice President for North American Telecoms, expanding Ovum research practice in North America by more than 600% in two years to include all major operators and vendors. Before that Roger ran the Yankee Group's US carrier practice launching Yankee Group's Wireless Carrier Summit conference series with C-Level keynote speakers from major operators and vendors. Roger also launched the Yankee Group's first quantitative product line. He was also Strategic Marketing Manager for LCC, a wireless design and deployment company and Managing Analyst for Markowitz & McNaughton, a decision support consulting firm.

Roger is the President of the American Friends of Heriot-Watt University, the official fundraising arm of Heriot-Watt University in the United States. He has been an advisor to the National Science Foundation and currently active on the advisory board for Danal Inc. Roger is also a member of the American Council on Germany.

Roger received a Bachelor of Arts in Business Organization, from the Heriot-Watt University in Edinburgh, United Kingdom, and Master of Business Administration from the George Washington University in Washington, DC and an Honorary Doctorate of Science from the Heriot-Watt University.