

OCTOBER 2021

DIGITAL IDENTITY TRACKER[®]

DUMPLING ON FIGHTING FRAUD WITH PERSONALIZED SERVICE

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Data breaches rose to 5,258 in 2021, from 3,950 in 2020

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How food delivery services are losing billions of dollars to identity fraud and what they can do in response

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ACKNOWLEDGMENT

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WHAT'S INSIDE

A recent study [revealed](#) that consumers have been spending more on restaurant delivery and online grocery orders for delivery and pickup than on any other sector since the start of the pandemic. Many small restaurants and food vendors adopted online delivery services to stay afloat as in-store business vanished last year, but their operations subsequently faced mounting fraud threats. One of the most insidious forms affecting the sector is called friendly fraud and occurs when customers dispute legitimate charges, claiming orders were never received and seeking refunds from their credit card companies.

Restaurants and supermarkets are under pressure to deliver food quickly, making it essential to have accurate, real-time online fraud filters and payment security tools to verify customers' identities and keep bad actors out. Automating fraud decisions with solutions [powered](#) by artificial intelligence (AI) and machine learning (ML) can significantly protect online delivery and payment services. Removing any manual component

of fraud review reduces delays, and AI and ML systems improve accuracy while providing a more comprehensive approach to fraud. Other technologies, such as those that track delivery from order to drop-off, are also must-haves, as they can [serve](#) as evidence to challenge claims of friendly fraud and improve customer experience.

The diversity of fraud tactics affecting the food delivery sector requires a sophisticated and thorough approach. Merchants leveraging innovative technologies will stand the best chance of rebuffing fraudsters while delivering seamless experiences to legitimate customers.

Around the digital ID space

Cybercriminals have [made](#) it a stellar year for fraud thus far, largely due to the pandemic-influenced rise in remote work. Crimes included scams involving funds from the coronavirus relief bill, Paycheck Protection Program loan fraud, phishing schemes and a surge of ransomware and software supply chain attacks. New research has confirmed

WHAT'S INSIDE

that 5,258 data breaches occurred across 16 different industries in four regions of the world, a steep rise from the 3,950 confirmed breaches that happened a year ago. Analysts estimated that 86 percent of these breaches were financially motivated, and nearly half of security and IT executives polled said their top priority is protecting sensitive data. Threats are growing in scale and sophistication, highlighting an urgent need for more robust solutions across sectors.

Retailers looking to [safeguard](#) customer data should take a lesson from these challenges and craft stronger digital identities. The United States Federal Trade Commission [reported](#) that identity theft cases doubled in 2020 as fraudsters claimed billions of dollars in unemployment benefits in others' names. Governments that relied heavily on in-person verification methods found that last-minute remote solutions were not up to the task. Many retailers similarly found themselves unprepared for eCommerce security risks. Experts say that tapping a combination of AI-based analytics and biometric security is necessary to establish robust digital identities, yet businesses wishing to succeed will also need to eliminate the data silos in their organizations that hamper information sharing.

AI and ML are becoming the first line of defense in helping retailers and online platforms detect fraud risk. Cyberthieves have stepped up their games too, however, [using](#) increasingly sophisticated techniques such as deepfakes, images or videos manipulated with someone else's likeness and synthetic identities, fake credentials for nonexistent individuals. Passwords are becoming less effective, but merchants looking to protect their customers' data can turn to biometrics and location- and device-level data to enable repeat transactions without introducing too much friction. One-touch authentication can also extend legitimate credentials across devices.

For more on these stories and other digital ID headlines, read the Tracker's News and Trends section (p. 10).



Dumpling on keeping grocery delivery platform fraud to a minimum

Revenues have been soaring for grocery delivery services, and this growth even predates the onset of the pandemic. The accounts used to receive contactless deliveries are increasingly under attack from fraudsters, however. While customers want speedy service, delivery companies face the challenge of ensuring quick delivery without compromising security. In this month's Feature Story (p. 7), Joel Shapiro, co-founder of [Dumpling](#), discusses how the West Coast-based personal grocery shopping and delivery platform has managed to keep its fraud rate at 0.1 percent, one-third less than the industry average.

Deep Dive: How innovative digital ID verification tools can keep food delivery fraud at bay

Food service deliveries have soared since the pandemic began, resulting in skyrocketing fraud after cybercriminals followed the money. Consumers lost \$56 billion to identity fraud last year as crooks stole credentials from third-party delivery services DoorDash, Grubhub, Instacart and Uber Eats, but customers were not the only victims. Restaurants are also losing significant funds to "friendly fraudsters" via chargebacks. Food delivery offers attractive targets that can be hard to protect, as customers expect such services to be fast and friction-free. This month's Deep Dive (p. 14) explores how increasingly varied and sophisticated food delivery fraud calls for innovative solutions that provide a real-time, comprehensive approach to tackle the sector's unique vulnerabilities.



FIVE FAST FACTS

45%

Share of legacy firms that say digital tools are “more” or “much more” important to their authentication and verification requirements today

49%

Portion of big companies that say digital processes to authenticate and verify customers’ identities are “more” or “much more” important now

43%

Share of firms that plan to invest in digital authentication solutions to increase their volume of customers

44%

Portion of firms that plan to invest in digital authentication to improve their reputation around digital identity

58%

Share of banks and credit unions worried that customers lack the digital skills to navigate digital authentication and verification processes

Dumpling On Fighting Fraud With Personalized Service



FEATURE STORY

Consumers love getting groceries or meals dropped off at their doors. Nineteen months into the pandemic, meal delivery sales are still [setting](#) records: Sales for meal delivery services grew 17 percent year over year in September. Researchers have reported that 50 percent of the nation's consumers had ordered from DoorDash, Grubhub, Postmates, Uber Eats and smaller services, and online supermarket delivery continues to [rise](#) to historic levels.

The inevitable downside of these skyrocketing revenues is a commensurate increase in fraud. In August, the FBI [warned](#) that hackers are hijacking online accounts at restaurants, supermarkets and food delivery services to steal funds through fraudulent orders and seize personal or financial data. Customers insist on speedy service, so food deliverers face the challenge of providing a seamless customer experience without compromising security.



At least one national delivery firm said it has managed to keep its fraud rate at 0.1 percent, one-third less than the industry average. Joel Shapiro, co-founder of [Dumpling](#), a startup that enables entrepreneurs to personalize deliveries, said his West Coast firm that serves shoppers nationwide has managed to keep fraud at bay. The concept behind the company, he said, is to allow gig economy workers to build wealth in any industry and not just be cogs in the larger wheels.

“Lots of these [gig] companies are built on the backs of the workers, and there’s a lot of exploitation, lots of difficulties,” Shapiro told PYMNTS in a recent interview. “What drives me and my co-founders is [the desire] to provide a better way for people to be successful.”

Minimizing fraud risk

Since its founding, Dumpling has focused on the grocery delivery space. Its app makes it possible for entrepreneurs to establish grocery shopping and delivery services by providing the tools, technology and support to help them run their own businesses. What sets the firm apart from competitors and contributes to fewer incidents of fraud is the relationship it builds between personal shoppers and their customers, Shapiro said.

“We’ve found within the grocery delivery space that the person doing the grocery shopping really matters. It makes a huge difference [in] customer experience,” he said.

While other firms match a random client and a random shopper each time a customer requests groceries, Dumpling works by maintaining relationships with the same clients, reducing the chances of fraud.

“What we’ve seen in the gig economy and the on-demand space is that it’s completely abstract. The human connection has been removed, and a client is never going to see a shopper again,” Shapiro explained. “In the grocery delivery space, the person doing the shopping really matters [to] the customer, so we built a platform that’s really people-centered, and that really makes the difference.”

This personal touch minimizes the risk of so-called friendly fraud in particular.

“It’s unlikely a customer will call to say they never received the order when, more than likely, our shopper has been in their home,” he said.

Fraud levels in online grocery and restaurant ordering and delivery will continue to mirror these services’ growth in revenues. Fraudsters will find new ways to steal data, and companies must stay vigilant. Firms such as Dumpling, however, demonstrate the effectiveness of getting to know customers through one-on-one relationships to stamp out friendly fraud in the delivery space. This personalization, combined with robust tools and technologies for digital ID verification and data security, can help keep delivery services fraud-free.

NEWS & TRENDS

Digital ID verification upgrades

Microsoft seeking partners, hammering out standards for decentralized digital ID system

Some companies are looking to take decentralized approaches to digital identity that give consumers more control over when and how they share their personal data. One such firm is software giant Microsoft, which recently [announced](#) that it is seeking partners and establishing standards to advance its goal of implementing a decentralized digital ID system. The company unveiled a preview version of its Azure Active Directory Verifiable Credentials. It had also piloted a decentralized digital identity program with biometrics solutions providers, including Jumio.

Microsoft originally announced its intentions to create a decentralized digital ID system in 2018, aiming to shift away from the current status quo where consumers have less control over their digital identity data. This push would make it likelier for more consumers to trust the system and sign up to use it, and such an initiative could also reduce the amount of data processing the system requires.

UK plans \$550M budget for government digital identity update

Businesses are not the only entities looking to refresh their digital identity approaches, as governments are also getting in on the action. The United Kingdom recently noted that it is [prepared](#) to spend approximately £400 million (\$552 million USD) on its new digital identity system, One Login for Government. The single-sign-on system, which will be cloud-based and leverage Amazon Web Services, vows to provide a network that will allow users to access most government services offered via gov.uk.

The U.K. hopes to replace the government's Verify digital ID service, implemented in 2019 with lackluster reviews, with the new digital ID infrastructure. The Verify network was intended to allow users to prove their identities without sending in documents and to access services digitally without visiting government branches. Critics [pointed](#) to low utilization, however, noting that just 42 percent of attempts to create Verify accounts proved successful and that fewer than 6 million of the nation's 67 million consumers created a digital ID.

Food delivery platform and retail developments

DoorDash offers alcohol on-demand

Delivery services that offer age-restricted products are leaning on digital ID solutions to verify that their customers can legally purchase the items. Third-party delivery juggernaut DoorDash recently revealed that it will offer deliveries of beer, wine and spirits in 20 U.S. states as well as Washington, D.C., Canada and Australia. The San Francisco-based company's latest service follows a multi-year effort to provide alcohol delivery for merchants through their channels via DoorDash Drive, the company's fulfillment service. DoorDash noted that many cities eligible for the new service have amended legislation to allow for alcohol deliveries to homes, and it has an alcohol catalog with 30,000 choices from thousands of restaurants and retailers.

Digital ID verification is a cornerstone of DoorDash's new initiative, and the company stated that it will conduct rigorous ID checks at multiple points to ensure that it is complying with all legal requirements. Its verification solution [requires](#) customers to upload a photo of a valid ID that includes a date of birth, with just the photo and other relevant information being made available to delivery employees. Access to this information ends once a delivery has been completed, the company said.

Consumer identities must evolve with biometric security to curb retail fraud

If retailers want to successfully [fight](#) cybercrime and keep customer data safe, they should learn from the authentication challenges faced

by governments and craft stronger digital identity tools. Success will require a combination of AI-based analytics, biometric security and the consideration of eliminating business divisions that operate independently and do not share information.

Stolen identity cases [doubled](#) in 2020, according to the Federal Trade Commission, while scammers stole billions claiming unemployment benefits in other individuals' names. Rather than sending a one-time password to a mobile phone, which has contributed to malware attacks, one suggestion to curb ID theft was to confirm consumers' voices against their voiceprints. When a merchant knows a customer's voice, it can confirm they are who they say they are. If a retailer detects the voice is that of a professional fraudster, it can raise an alert as soon as they begin speaking to an agent.

Fraud and identity theft prevention

Security executives prioritize data protection as cybercriminals have a banner year with breaches

Cybercriminals are having a great year as they continue to exploit vulnerabilities created by the pandemic and remote work environments. The Verizon 2021 Data Breach Investigations Report (DBIR) recently [revealed](#) that 5,258 data breaches were confirmed across 16 different industries in four regions of the world. The report found that 86 percent of those data breaches were financially motivated. That is an increase of approximately one-third from the 3,950 confirmed breaches noted in the 2020 report. The thefts resulted from

fraud schemes involving funds from the coronavirus relief bill, Paycheck Protection Program loans and ransomware attacks. Nearly half of the security and IT executives polled in another [study](#) said protecting sensitive data is their top priority, however.

A second [survey](#) by the FBI said the Internet Crime Complaint Center (IC3) received more than 28,500 pandemic-related complaints in 2020. IC3 measured a 69 percent surge in complaints from 2019, receiving 791,790 complaints reflecting losses that exceeded \$4 billion. The costliest attacks are business email compromise (BEC) schemes, which accounted for 19,369 total complaints and a loss of \$1.8 billion, according to IC3.

Merchants invest in fraud prevention efforts including AI, ML to help detect risk

Artificial intelligence and machine learning are becoming the first line of defense when it comes to helping retailers and online platforms detect risk. Cybercriminals have stepped up their game with their own bag of tricks, however. Their latest techniques gaining ground are deepfakes, which replace parts of an image or video with someone else's likeness, as well as synthetic identities and fake credentials for a nonexistent person. PYMNTS' data [showed](#) that as many as two-thirds of consumers are likely to avoid a merchant following the first incident of fraud or data theft. As a result, merchants are investing tens of billions of dollars in fraud prevention efforts in the next five years.

PayPal's Arthi Rajan Makhija, senior vice president of global fraud risk, told PYMNTS that while traditional types of fraud may attack buy now, pay

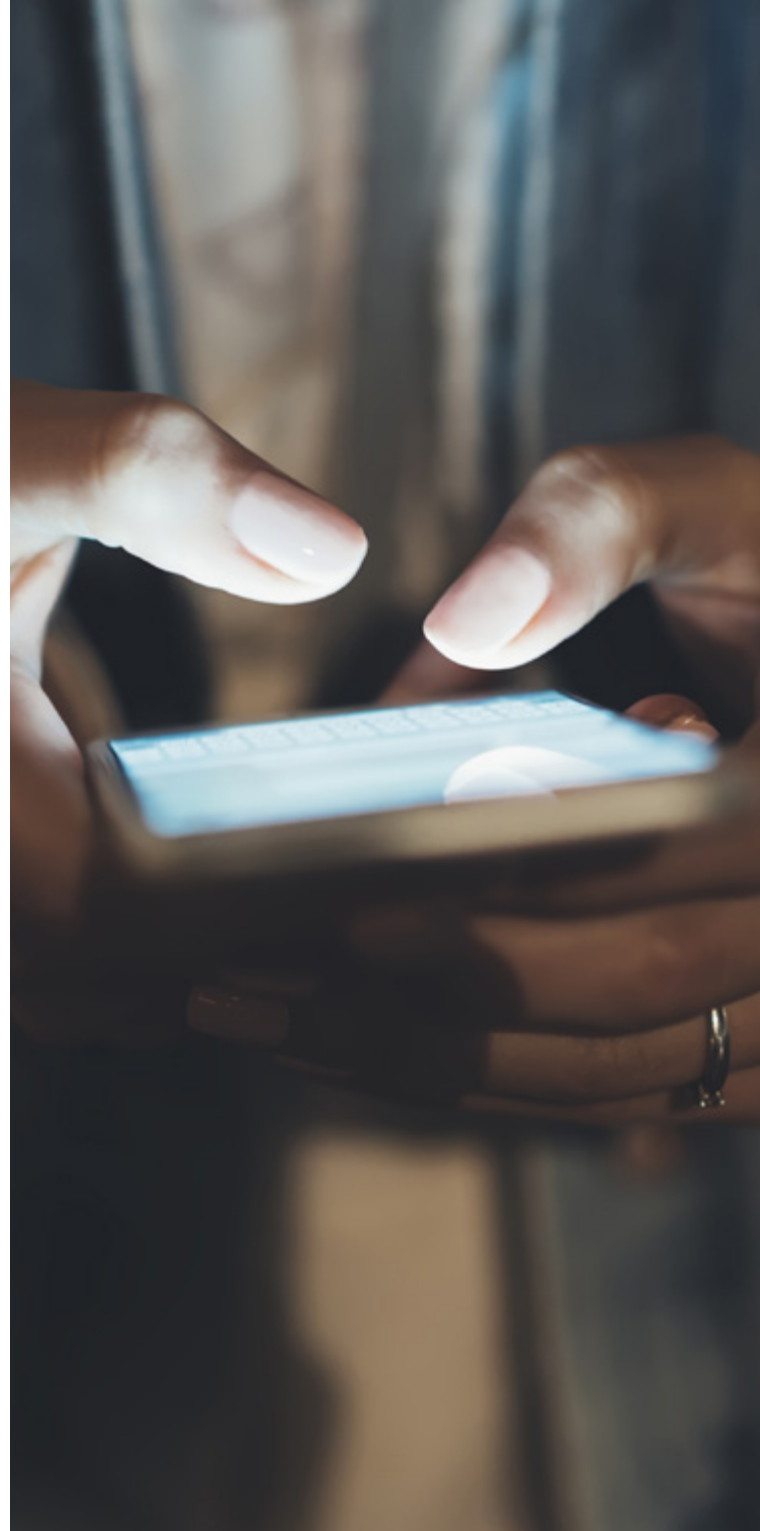


later transactions with account takeovers and fake IDs, for example, other worries must be studied from a credit underwriting perspective. If passwords are the source of the breach, Makhija said, fingerprint biometrics can enable customer transactions without introducing friction. Location data can also be helpful, as can one-touch authentication, which extends legitimate credentials across devices, she added.

Identity theft on the rise as consumers go digital

There was a time when the main defense against cybercrime was a reactive approach where companies learned from previous attacks. Businesses must [reexamine](#) how to increase their anti-fraud measures with consumers' increased use of banking apps, mobile wallets and digital solutions to manage transactions. The key, some say, is AI.

Marcin Nadolny, head of Europe, Middle East, and Africa banking and insurance fraud at North Carolina-based software analytics company SAS said that financial institutions have accelerated their digital transformations since the onset of the pandemic. He said consumers have embraced online channels for everything from loan applications to retail purchases and cash transfers. At the same time, he noted, branch visits and ATM use have fallen substantially in the past 18 months. As consumers go digital, payments fraud, employee embezzlement and identity theft are on the rise. Data and analytics have become essential tools to battle the escalation in financial crimes. AI and ML can provide banks with systematic algorithms that incorporate a comprehensive look into customer behavior, identify fraud trends and reduce false positives.



DEEP DIVE

How Innovative Digital ID Verification Can Keep Food Delivery Services Safe From Cybercriminals

The number of food deliveries soared during the pandemic as consumers sought safe and convenient ways to obtain groceries and meals despite social distancing orders and indoor dining restrictions. Two-thirds of consumers in a February 2021 [poll](#) reported ordering from third-party food delivery services, up from the 41 percent who did so before the pandemic. The share of diners using food delivery apps at least weekly has also nearly doubled since July 2020. Restaurants and supermarkets expanded their online offerings to stay afloat and meet the new demand, but the resulting increase in transactions also made them more vulnerable to fraud.

A recent [study](#) found that consumers lost \$56 billion to identity fraud last year as crooks stole credentials from third-party delivery services DoorDash, Grubhub, Instacart and Uber Eats. Delivery services accounted for 18 percent of identity fraud in nonfinancial accounts, exceeding the rates for mobile phones, social media platforms, emails and utilities.

Such fraud was predictable in the delivery sector, as wherever revenues rise, fraudsters are sure to [follow](#). Food delivery provides bad actors with attractive targets that are challenging for merchants to defend. Customers expect fast delivery without

friction, but if payment security is inadequate or relies on manual review for approval or decline, the potential for errors is high. When a fraudulent order slips through, the restaurant is typically on the hook for a customer refund.

The following Deep Dive examines the rise in various types of fraud affecting the food delivery sector. It also explores how digital ID verification innovations can keep these services, restaurants and their customers safe from cybercriminals.

Types of fraud affecting food delivery services

Food delivery fraud schemes can [go](#) well beyond the ordinary example of a malicious actor stealing credit card data and using it to place orders online. Food deliveries are particularly susceptible to account takeover attacks, which occur when fraudsters steal users' login credentials for delivery apps or restaurant websites. Many such sites have loyalty programs that allow customers to use points instead of cash to pay for meals or perks, and fraudsters can easily exploit these to get around requirements such as having to produce credit cards' billing addresses or card security codes.

Sophisticated cybercriminals are not the only ones committing fraud and customers are not the only victims. Business may be brisk for DoorDash,

Grubhub, Uber Eats and other third-party delivery aggregators, but restaurants are [losing](#) their shirts to chargeback fraud. Diners can be “friendly fraudsters” who use their own credentials but then claim their orders were never delivered and request refunds from their credit card companies. This type of fraud can be insidious, [eating](#) steadily into revenues one small order at a time before it becomes noticeable.

Several other factors can make food delivery especially [prone](#) to fraud. Customer satisfaction with food delivery often hinges on the experience being quick and hassle-free. This has led merchants that rely on time-consuming verification processes such as manual payment review to minimize friction by relaxing security.

How innovative digital ID verification can help

Automating fraud decisions is one way the food service sector can help safeguard online delivery and payment options from cybercriminals. Removing the manual component [offers](#) eateries a fraud solution that works consistently and instantly even at the busiest times, reducing the likelihood of an extended delivery wait that could frustrate legitimate customers. Fraud prevention software [powered](#) by AI and ML can identify orders that are likely fraudulent with greater accuracy and in real time. AI and ML systems also represent a more comprehensive approach to fraud, allowing the food services industry to tackle its particular problems with coupon and loyalty program abuses.



Merchants know they must act. A recent PYMNTS [study](#) found that more than 40 percent of surveyed businesses said they plan to invest in digital authentication solutions to protect themselves and their customers from growing security threats. These firms also see that investing in innovative authentication and verification solutions is vital to improving customer relationships and gaining their trust.

The complexity of fraud affecting the food delivery sector calls for a sophisticated and holistic approach. Merchants adopting AI- and ML-powered solutions will be in the best position to rebuff fraudsters while delivering seamless experiences to good customers.

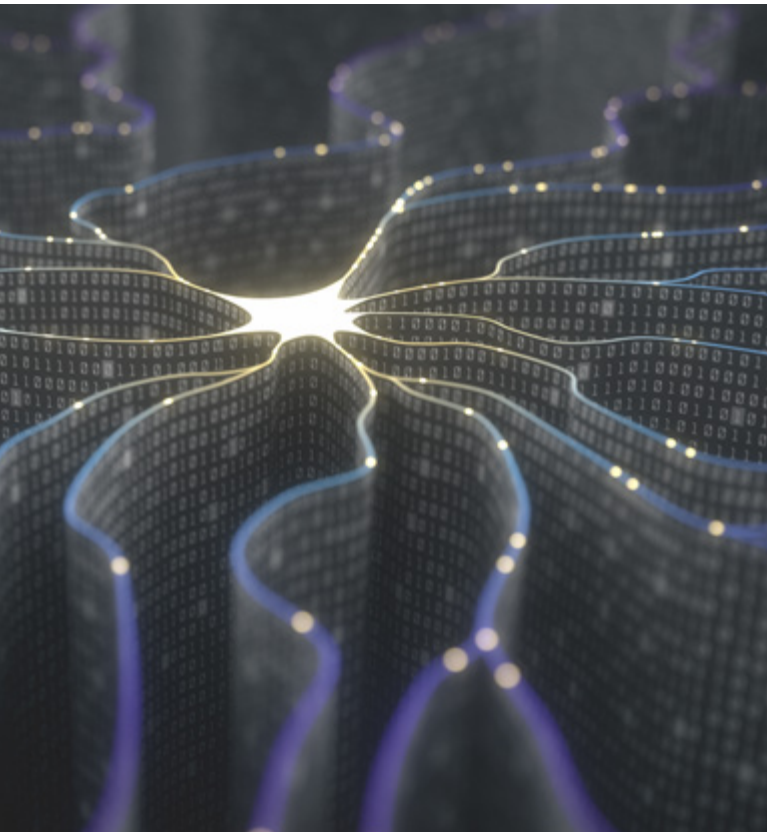
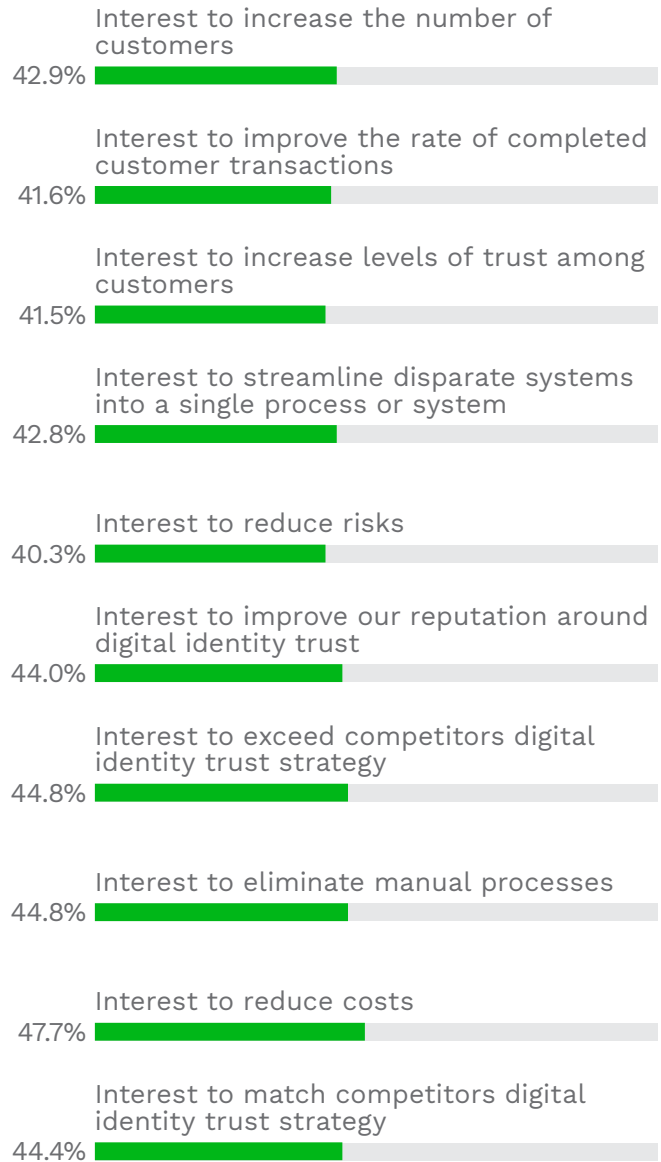


FIGURE 1:

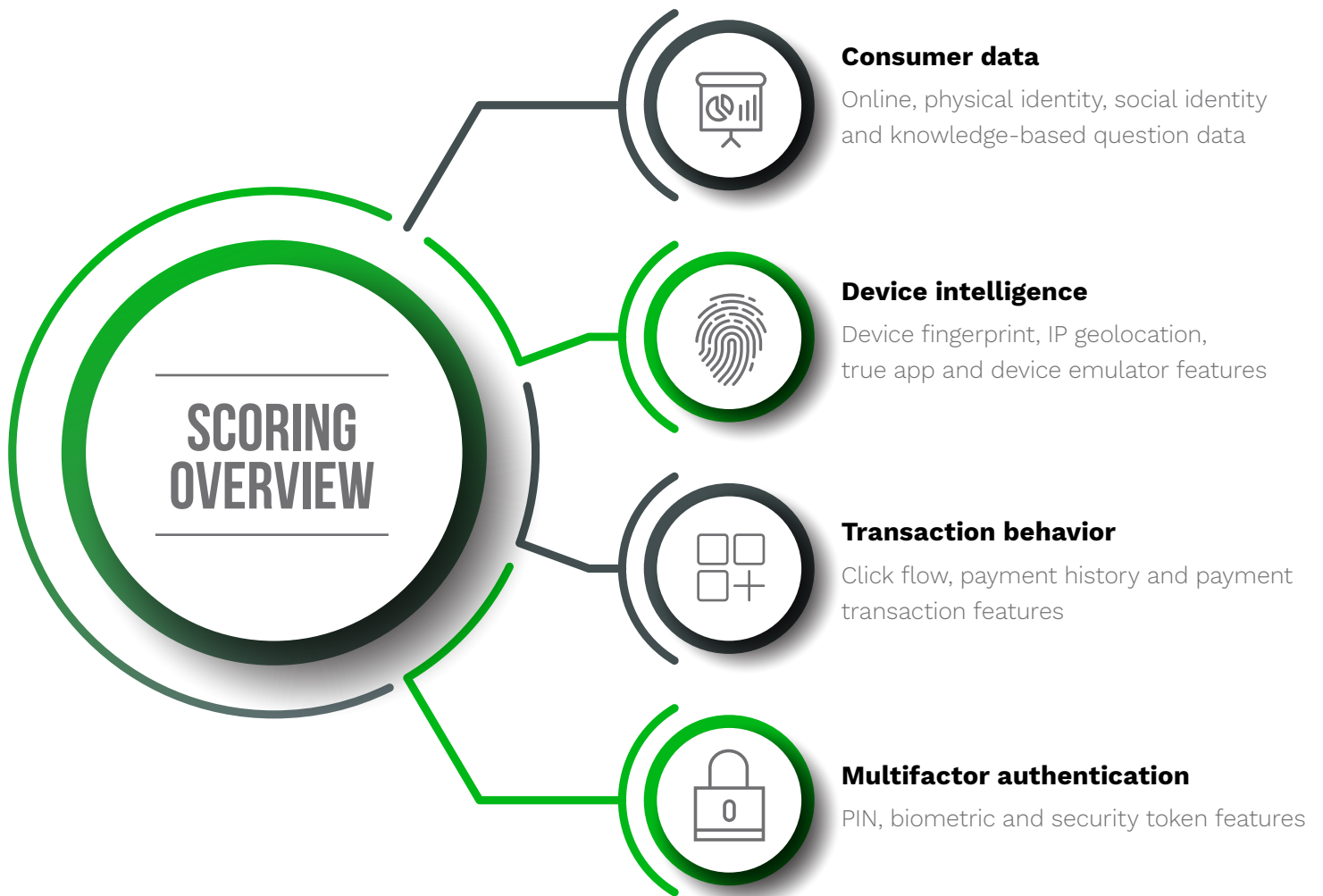
Firms' plans to invest in digital authentication solutions, by "very" or "extremely" important goals



METHODOLOGY

Scoring overview

Companies featured in the Tracker Scorecard have been evaluated based on four primary criteria:



If you would like your company to be considered for inclusion in the Tracker's Scorecard or wish to have an existing listing reconsidered for an update, please head over to our [profile submission/update page](#).

Consumer Data Scorecard – All players are listed in alphabetical order.



01 Systems is a software application and solution provider. Its products include signature management, biometric solutions, enterprise content management and digital vouchers.

Products: Biometric authentication, enterprise content management, signature management

Customer focus: Financial services

IDENTITY DATA					BIOMETRICS			
Online data	Physical	Social	Knowledge-based questions	PIN	Camera	Fingerprint	Microphone	Security tokens
	✓					✓		



ABBYY provides document conversion, optical character recognition, data capture and linguistic software and services.

Products: Identity document recognition

Customer focus: Business, information technology

IDENTITY DATA					BIOMETRICS			
Online data	Physical	Social	Knowledge-based questions	PIN	Camera	Fingerprint	Microphone	Security tokens
	✓				✓			



Acuant provides identity verification services. Its offerings include data capture, autofill, document authentication and facial recognition features.

Products: ePassport issuance, facial recognition match and liveness test, identity document authentication, intelligent data capture and autofill, know your business, know your customer, manual document review, quality control and authentication, sanctions screening transaction monitoring and no-code rapid-deploy ID verification and know your customer/anti-money laundering

Customer focus: Financial, government, healthcare, hospitality, security

IDENTITY DATA					BIOMETRICS			
Online data	Physical	Social	Knowledge-based questions	PIN	Camera	Fingerprint	Microphone	Security tokens
	✓				✓			

Consumer Data Scorecard – All players are listed in alphabetical order.



Akamai is a cybersecurity and cloud services firm that helps companies offer frictionless customer experiences, expand to new markets and prevent hacks.

Products: Application programming interfaces, bot management, customer identity, domain name system services, secure enterprise access, web applications, zero trust

Customer Focus: Business services, financial services, healthcare and life sciences, hotel and travel, manufacturing and automotive, media and entertainment, online gaming, public sector, retail and consumer goods, software and technology, software-as-a-service

IDENTITY DATA					BIOMETRICS			
Online data	Physical	Social	Knowledge-based questions	PIN	Camera	Fingerprint	Microphone	Security tokens
✓								✓



Applied Recognition offers face detection, recognition and authentication technology for consumers, enterprises and application developers. The company serves a range of verticals, including financial services, internet of things device manufacturers and software providers.

Products: Authenticator, Credentials SDK, Documents SDK, Person SDK

Customer focus: Enterprises

IDENTITY DATA					BIOMETRICS			
Online data	Physical	Social	Knowledge-based questions	PIN	Camera	Fingerprint	Microphone	Security tokens
✓	✓				✓			



Aratek is a biometrics solution provider and a member of China's 863 program. Aratek provides fingerprint image processing, matching and searching software and hardware products as well as middleware components.

Products: Fingerprint software systems, fingerprint tokenization, identity card fingerprint readers, scanners

Customer focus: Government, businesses and telecommunication

IDENTITY DATA					BIOMETRICS			
Online data	Physical	Social	Knowledge-based questions	PIN	Camera	Fingerprint	Microphone	Security tokens
	✓					✓		

Consumer Data Scorecard – All players are listed in alphabetical order.



Arcanum Technology helps banks, financial services firms and online merchants authenticate customers with innovative, token-based solutions.

Products: DARC, nKode

Customer focus: Banks, financial services organizations, online merchants

IDENTITY DATA					BIOMETRICS			
Online data	Physical	Social	Knowledge-based questions	PIN	Camera	Fingerprint	Microphone	Security tokens
✓								✓



A U 1 0 T I X

AU10TIX is a multichannel identification authentication and record generation solutions provider. The company develops and implements solutions that help automate the capture, authentication, validation and generation of digital records of identifying documents. AU10TIX is a subsidiary of ICTS International.

Products: Front-end solutions

Customer focus: Cryptocurrency, financial services, marketplaces, sharing economy, telecommunication

IDENTITY DATA					BIOMETRICS			
Online data	Physical	Social	Knowledge-based questions	PIN	Camera	Fingerprint	Microphone	Security tokens
	✓				✓			



Auraya Systems is a biometric voice verification technology provider that enables customers and businesses to interact and engage with security and convenience. Auraya's biometric voice verification engine, ArmorVox, is speaker-adaptive and constantly learns about customers' unique voices to improve security.

Products: ArmorVox, EVA

Customer focus: Financial services, government, healthcare, retail, telecommunications

IDENTITY DATA					BIOMETRICS			
Online data	Physical	Social	Knowledge-based questions	PIN	Camera	Fingerprint	Microphone	Security tokens
	✓						✓	

Consumer Data Scorecard – All players are listed in alphabetical order.



AuthenticID is an identity proofing provider that aims to deliver accuracy and improve processes, customer service and regulatory compliance for financial institutions, telecommunication companies and any businesses that are required to develop customer identification programs.

Products: Facial recognition, global document authentication
Customer focus: All industries

IDENTITY DATA					BIOMETRICS			
Online data	Physical	Social	Knowledge-based questions	PIN	Camera	Fingerprint	Microphone	Security tokens
	✓				✓			



Authentik Systems produces a remote access biometric time and attendance system that enables users to create a biometric time stamp via personal biometric keys and browser-enabled cellphones.

Products: Remote biometric timecard system
Customer focus: Agriculture; construction firms; heating, ventilation and air conditioning; home cleaning, home health, landscaping

IDENTITY DATA					BIOMETRICS			
Online data	Physical	Social	Knowledge-based questions	PIN	Camera	Fingerprint	Microphone	Security tokens
	✓					✓		



Aware is a global biometric software, services and solutions provider. Its modular software products include software development kits and subsystems that enable fingerprint, face and iris recognition. It also offers user interface applications for biometric enrollment and forensic analysis, software development kits for name matching and identity resolution, a biometric services platform and an automated biometric identification system.

Products: Authentication and payments, border management, citizen identification, defense, elections, fraud prevention, identity proofing, intelligence, investigation, law enforcement, visitor screening
Customer focus: Business, government, healthcare, human resources, law, payment processing

IDENTITY DATA					BIOMETRICS			
Online data	Physical	Social	Knowledge-based questions	PIN	Camera	Fingerprint	Microphone	Security tokens
	✓				✓	✓	✓	

Consumer Data Scorecard – All players are listed in alphabetical order.



BICS provides international mobile data services, enabling frictionless roaming and mobile connectivity as well as messaging and connection to the internet of things.

Products: Global cloud numbers, global internet of things connectivity, mobile virtual network operator solutions, telecommunication fraud prevention

Customer Focus: Businesses, communication firms, individuals

IDENTITY DATA					BIOMETRICS			
Online data	Physical	Social	Knowledge-based questions	PIN	Camera	Fingerprint	Microphone	Security tokens
✓								



BioConnect is an authentication tools provider. BioConnect’s core solutions include both physical and digital systems for enterprises of all sizes.

Products: Applications, hardware, identity platforms, software, terminals

Customer focus: Data centers, education, enterprises, financial services, healthcare, retail, public sector

IDENTITY DATA					BIOMETRICS			
Online data	Physical	Social	Knowledge-based questions	PIN	Camera	Fingerprint	Microphone	Security tokens
	✓	✓		✓	✓	✓	✓	



BioID is a cloud biometrics company. It offers facial and voice recognition capabilities for any mobile device.

Products: BioID mobile app, BioID web service, liveness detection, PhotoVerify

Customer focus: Car rental, education, financial services, government, healthcare

IDENTITY DATA					BIOMETRICS			
Online data	Physical	Social	Knowledge-based questions	PIN	Camera	Fingerprint	Microphone	Security tokens
	✓				✓		✓	

Consumer Data Scorecard – All players are listed in alphabetical order.



BIO-key is a fingerprint biometric identification, mobile credentialing and user identity verification solutions provider. BIO-key's products are software-based and compatible with various fingerprint readers.

Products: Fingerprint readers, software solutions

Customer focus: Education, enterprises, financial services, government, healthcare, manufacturers, retail

IDENTITY DATA					BIOMETRICS			
Online data	Physical	Social	Knowledge-based questions	PIN	Camera	Fingerprint	Microphone	Security tokens
	✓				✓	✓		



Biomatiques is an India-based manufacturer that provides compact iris scanner hardware and iris recognition software development kits as well as custom casing design solutions to meet various requirements for its range of products.

Products: Biomatiques® Iris Scanner, Biomatiques® IriDist®, security systems, software solutions

Customer focus: Government, large businesses, medical

IDENTITY DATA					BIOMETRICS			
Online data	Physical	Social	Knowledge-based questions	PIN	Camera	Fingerprint	Microphone	Security tokens
	✓				✓			



Bittium provides highly secure communications and connectivity solutions for the public safety and security, defense, healthcare and utility markets. Bittium's product portfolio covers mobile devices, cybersecurity solutions and easy-to-use remote access solutions for mobile workers.

Products: Medical technologies, research and development services, secure communications and connectivity, tactical communications

Customer focus: Connectivity solutions, defense and security, medical technologies

IDENTITY DATA					BIOMETRICS			
Online data	Physical	Social	Knowledge-based questions	PIN	Camera	Fingerprint	Microphone	Security tokens
✓		✓		✓				✓

Consumer Data Scorecard – All players are listed in alphabetical order.



Bluink is an enterprise security company focused on phone-as-a-token technology. Bluink enables multifactor authentication and single sign-on using smartphones as a key.

Products: Digital identity, identity verification, multifactor authentication, password-free login

Customer focus: Financial services, healthcare, government, legal and professional services, retail and eCommerce, sharing economy, travel and hospitality

IDENTITY DATA				BIOMETRICS				
Online data	Physical	Social	Knowledge-based questions	PIN	Camera	Fingerprint	Microphone	Security tokens
✓		✓		✓	✓			✓



Broadcom helps businesses keep up in the communications sector with semiconductor and infrastructure software offerings.

Products: Enterprise software, mainframe software, optical products, security, storage and systems, wired connectivity, wireless

Customer focus: Automotive, enterprise, financial institutions

IDENTITY DATA				BIOMETRICS				
Online data	Physical	Social	Knowledge-based questions	PIN	Camera	Fingerprint	Microphone	Security tokens
✓		✓	✓	✓				✓



B-Secur's electrocardiogram technology reads heartbeat patterns to verify identities, and the technology is used in a wide variety of applications for consumers and enterprises, including mobile banking, building access control and health and wellness.

Products: Electrocardiogram

Customer Focus: Automotive, healthcare, internet of things, manufacturers

IDENTITY DATA				BIOMETRICS				
Online data	Physical	Social	Knowledge-based questions	PIN	Camera	Fingerprint	Microphone	Security tokens
	✓							

Consumer Data Scorecard – All players are listed in alphabetical order.



Centrify’s identity-as-a-service solutions can be used to verify users, validate devices and put limits on access and privilege. It utilizes machine learning to discover risky user behaviors and apply conditional access without impacting user experience.

Products: Adaptive multifactor authentication, privileged access management, risk analytics, single sign-on

Customer focus: Automotive, banking, defense, education, government, internet, manufacturing, retail, pharmaceuticals, telecommunications

IDENTITY DATA					BIOMETRICS			
Online data	Physical	Social	Knowledge-based questions	PIN	Camera	Fingerprint	Microphone	Security tokens
✓		✓		✓				✓



Civic allows people to control their identity information by using blockchain identity verification technology to secure and protect personal information transfers. Civic aims to become a trusted third-party source for securing and verifying users’ identities. It is building partnerships with banks, credit card companies, online lenders, wireless and cable providers, employee verification services and other institutions that rely on users’ identities.

Products: Identity codes, identity theft protection, reusable know your customer solutions, secure identity platforms

Customer focus: Cryptocurrency companies, individuals, merchants

IDENTITY DATA					BIOMETRICS			
Online data	Physical	Social	Knowledge-based questions	PIN	Camera	Fingerprint	Microphone	Security tokens
✓		✓		✓	✓			✓



Cryptomathic provides security software solutions to businesses from a variety of industries. Its main product, Authenticator, utilizes tokenization to match security needs for services such as eBanking and eGovernment.

Products: Authentication and signing, EMV, key management, mobile app security core

Customer focus: Banking, cloud, government, manufacturing, mobile, technology

IDENTITY DATA					BIOMETRICS			
Online data	Physical	Social	Knowledge-based questions	PIN	Camera	Fingerprint	Microphone	Security tokens
✓		✓		✓				✓

Consumer Data Scorecard – All players are listed in alphabetical order.



Cryptovision provides cryptographic security technologies to help mitigate the risk of task fraud. The company aims to serve the digital security needs of businesses in the automotive, finance and insurance, energy, health, information technology and public administration industries worldwide.

Products: ID applications, infrastructure, encryption, token integration
Customer focus: Automotive, banking, defense, financial, government, industry, retail

IDENTITY DATA				BIOMETRICS				
Online data	Physical	Social	Knowledge-based questions	PIN	Camera	Fingerprint	Microphone	Security tokens
		✓						✓



Cryptsoft provides interoperable enterprise key management and encryption technology solutions. The company also offers key management interoperability protocol software development kits.

Products: Authentication token products, hardware security models, key management products
Customer focus: Security systems

IDENTITY DATA				BIOMETRICS				
Online data	Physical	Social	Knowledge-based questions	PIN	Camera	Fingerprint	Microphone	Security tokens
✓		✓		✓				✓



Daon is a biometric identity assurance software products and services provider focused on meeting the needs of governments and large commercial organizations worldwide. Daon supports customers and system integrators in building enterprise solutions.

Products: Biometrics, border management, employee credentialing, identity, immigration, mobile authentication, national identification
Customer focus: Commercial enterprises, financial institutions, government

IDENTITY DATA				BIOMETRICS				
Online data	Physical	Social	Knowledge-based questions	PIN	Camera	Fingerprint	Microphone	Security tokens
	✓	✓		✓	✓	✓	✓	✓

Consumer Data Scorecard – All players are listed in alphabetical order.



Dashlane is a password manager that is compatible with Mac, PC, iPhone, iPad and Android phones and tablets.

Products: Password manager, secure digital wallet

Customer focus: Businesses, internet users

IDENTITY DATA					BIOMETRICS			
Online data	Physical	Social	Knowledge-based questions	PIN	Camera	Fingerprint	Microphone	Security tokens
✓		✓	✓	✓		✓		



DIAMOND FORTRESS
TECHNOLOGIES

Diamond Fortress' software library is offered via a software development kit and allows developers quick access to the technology.

Products: ONYX

Customer focus: Financial institutions, security

IDENTITY DATA					BIOMETRICS			
Online data	Physical	Social	Knowledge-based questions	PIN	Camera	Fingerprint	Microphone	Security tokens
	✓					✓		



DigiFlak offers business solutions that secure workers' digital keys, passwords and certificates in a separate hardware environment. The company manufactures Flak security USB dongles, licenses its technologies and offers subscriptions to services and third-party applications.

Products: Flak Classic, Flak Classic Business edition, Flak Reference Board, original equipment manufacturer options

Customer focus: Businesses, private users

IDENTITY DATA					BIOMETRICS			
Online data	Physical	Social	Knowledge-based questions	PIN	Camera	Fingerprint	Microphone	Security tokens
✓								✓

Consumer Data Scorecard – All players are listed in alphabetical order.



Duo aims to protect organizations against data breaches by ensuring that only legitimate users and appropriate devices have access to sensitive data and applications.

Products: Identity verification, multifactor authentication

Customer focus: Education, financial, healthcare, legal, retail, technology

IDENTITY DATA					BIOMETRICS			
Online data	Physical	Social	Knowledge-based questions	PIN	Camera	Fingerprint	Microphone	Security tokens
✓		✓		✓				✓



Early Warning Services provides payment and risk solutions to financial institutions, government entities and payment companies. Its identity and authentication offerings improve account opening, simplify and unify authentication through a single application programming interface and fight fraud with behavioral biometrics.

Products: Authentication, payment, regulatory solutions

Customer focus: Financial institutions, government entities, payment companies

IDENTITY DATA					BIOMETRICS			
Online data	Physical	Social	Knowledge-based questions	PIN	Camera	Fingerprint	Microphone	Security tokens
✓		✓	✓	✓				



Entrust offers digital identity solutions to financial institutions, governments and corporate enterprises that conduct highly secure transactions. Some of its solutions include central card issuance systems, passport and identification cards, security certificates and communication channels.

Products: Authentication, border control, employee identification, identity credential management, mobile authentication, Secure Sockets Layer certificates

Customer focus: Corporate, education, financial, government, healthcare, retail, transit

IDENTITY DATA					BIOMETRICS			
Online data	Physical	Social	Knowledge-based questions	PIN	Camera	Fingerprint	Microphone	Security tokens
✓		✓	✓	✓	✓	✓		✓

Consumer Data Scorecard – All players are listed in alphabetical order.



ePortID provides biometric identity verification solutions. It delivers identity verification for a range of industries using palm vein scanning.

Products: Biometrics, palm vein scanners

Customer focus: Border security, commercial, government

IDENTITY DATA					BIOMETRICS			
Online data	Physical	Social	Knowledge-based questions	PIN	Camera	Fingerprint	Microphone	Security tokens
	✓					✓		



Equifax is a consumer, commercial and workforce information solutions provider that organizes, assimilates and analyzes data on consumers and businesses. Its identity authentication solution features a five-step process that works by asking intelligent questions related to applicants' histories.

Products: Identity authentication

Customer focus: Banks, credit unions, financial institutions, government, insurance firms, retail, utilities

IDENTITY DATA					BIOMETRICS			
Online data	Physical	Social	Knowledge-based questions	PIN	Camera	Fingerprint	Microphone	Security tokens
✓		✓		✓	✓	✓	✓	✓



Facebanx has developed an integrated facial recognition technology that utilizes webcams, mobile phones and tablets. It uses cloud-based technology to allow multiple users unlimited access wherever they are, manually or automatically. It provides an identity verification solution for the registration, single sign-on and know-your-customer processes.

Products: Document verification, facial recognition, video chat, voice recognition

Customer focus: Banking, gambling, insurance, local government, payments, police, security

IDENTITY DATA					BIOMETRICS			
Online data	Physical	Social	Knowledge-based questions	PIN	Camera	Fingerprint	Microphone	Security tokens
	✓				✓		✓	

Consumer Data Scorecard – All players are listed in alphabetical order.



FaceFirst is a real-time biometric facial recognition software provider. The company's solution matches users' live images with facial data stored in the system's database.

Products: Facial recognition

Customer focus: Airports, commercial security, gaming, law enforcement, retail, transportation

IDENTITY DATA					BIOMETRICS			
Online data	Physical	Social	Knowledge-based questions	PIN	Camera	Fingerprint	Microphone	Security tokens
	✓				✓			



FacePhi provides facial recognition technology that utilizes the camera on users' mobile devices to take selfies. Those photos then become their method of identification and interaction with banks' mobile applications.

Products: inPhinite, Look&Phi, PhiVox, Selphi, SelphiID, SignPhi

Customer focus: Financial institutions, government

IDENTITY DATA					BIOMETRICS			
Online data	Physical	Social	Knowledge-based questions	PIN	Camera	Fingerprint	Microphone	Security tokens
	✓				✓			



FICO is an analytics software company. Its solutions help businesses make better decisions through big data and mathematical algorithms to predict consumer behavior. FICO provides analytics software and tools used across multiple industries to manage risk, fight fraud, optimize operations and meet strict government regulations.

Products: Advanced analytics, credit risk scoring, customer engagement, customer management, debt collection and recovery, decisioning, financial crimes, fraud, industry risk scoring, marketing, optimization, origination, platform

Customer focus: Banking, collections agencies, energy and utilities, government, healthcare, insurance, manufacturing, media and entertainment, retail and eCommerce, telecommunications, transportation

IDENTITY DATA					BIOMETRICS			
Online data	Physical	Social	Knowledge-based questions	PIN	Camera	Fingerprint	Microphone	Security tokens
✓	✓	✓		✓	✓	✓	✓	

Consumer Data Scorecard – All players are listed in alphabetical order.



FINGERPRINTS

Fingerprint Cards AB markets, develops and produces biometric components and technologies that verify identities by matching individuals' fingerprints. The technologies consist of biometric sensors, processors, algorithms and modules that can be used separately or in combination with each other and can be implemented in volume products such as smart cards and mobile phones. The company's technologies can also be used in IT and internet security and access control.

Products: Area fingerprint sensors, swipe, touch

Customer focus: Automotive industry, internet of things, smart cards

IDENTITY DATA					BIOMETRICS			
Online data	Physical	Social	Knowledge-based questions	PIN	Camera	Fingerprint	Microphone	Security tokens
	✓					✓		



FinGo enables consumers to pay for goods and services, gain entry to events and manage payments online with their fingerprints.

Products: Access and security, age verification, identity schemes, membership schemes, payments and loyalty, transport ticketing

Customer focus: Financial services, retail

IDENTITY DATA					BIOMETRICS			
Online data	Physical	Social	Knowledge-based questions	PIN	Camera	Fingerprint	Microphone	Security tokens
	✓					✓		



Folio harnesses advanced biometrics, artificial intelligence and smartphone technology to analyze and verify users' identities through documents, photo identification and physical attributes. Encrypted credentials can be certified and issued directly via the Folio app and they are accessible only to registered, biometrically paired users. Folio gives users complete control over their data.

Products: Authentication, digital mobile wallet, issuance, platform, registration

Customer focus: Accounting, banking, central government, education, legal applications, local government, membership, organizations

IDENTITY DATA					BIOMETRICS			
Online data	Physical	Social	Knowledge-based questions	PIN	Camera	Fingerprint	Microphone	Security tokens
✓	✓				✓			✓

Consumer Data Scorecard – All players are listed in alphabetical order.



ForgeRock, an identity relationship management vendor, helps companies and governments build secure, customer-facing relationships across apps and devices. Its access management solution provides authentication possibilities with several out-of-the-box authentication modules to fit businesses' needs, including device fingerprinting, one-time passwords and adaptive risk authentication.

Products: Access management, directory services, identity gateways, identity management, user-managed access

Customer focus: Communications, digital health, financial services, government, media, omnichannel retail

IDENTITY DATA					BIOMETRICS			
Online data	Physical	Social	Knowledge-based questions	PIN	Camera	Fingerprint	Microphone	Security tokens
✓		✓		✓				✓



GlobalSign is an identity and security solutions provider aimed at helping businesses with digital processes and transactions.

Products: Access management, identity management, internet of things, public key infrastructure

Customer focus: Automotive companies, businesses, cloud service providers, internet of things, large enterprises, Fortune 100 companies, government, retail, telecommunication providers

IDENTITY DATA					BIOMETRICS			
Online data	Physical	Social	Knowledge-based questions	PIN	Camera	Fingerprint	Microphone	Security tokens
✓								✓



Goodix is devoted to the research and development of human-computer interaction technologies, including chip design, software development and touchscreen solutions.

Products: Audio amplifier, audio codec IC, fingerprint sensors, haptic drivers, health sensors, in-ear detection, low-energy Bluetooth, microcontroller, touch controllers, voice and audio software

Customer focus: Automotive industry, internet of things, smart home, smartphone and tablet manufacturers

IDENTITY DATA					BIOMETRICS			
Online data	Physical	Social	Knowledge-based questions	PIN	Camera	Fingerprint	Microphone	Security tokens
	✓					✓		

Consumer Data Scorecard – All players are listed in alphabetical order.



GoTrustID enables password-free login to computers and clouds with two-factor authentication.

Products: Phone Authenticator, Security Key

Customer focus: Consumers, enterprises, financial, government, military

IDENTITY DATA					BIOMETRICS			
Online data	Physical	Social	Knowledge-based questions	PIN	Camera	Fingerprint	Microphone	Security tokens
	✓				✓	✓		



HID Global produces products related to the creation, management, and use of secure identities. The company can confirm identities and combat counterfeiters with multifactor authentication, such as biometrics, tokens or digital certificates.

Products: Appliances, biometric readers and modules, cards and credentials, controllers, embedded modules, ePassports and eID cards, financial instant issuance, ID cards and badge printing, radio-frequency identification tags and software, readers

Customer focus: Banking, corporate, education, enterprise, financial, government, healthcare, sports and events, transportation, energy, defense, criminal justice

IDENTITY DATA					BIOMETRICS			
Online data	Physical	Social	Knowledge-based questions	PIN	Camera	Fingerprint	Microphone	Security tokens
	✓	✓		✓		✓		



HooYu is a global identity verification service. The company's software uses digital footprints, identity document authentication and facial biometrics to prove customers' identities.

Products: Identity verification

Customer focus: eCommerce, peer-to-peer sites, regulated companies

IDENTITY DATA					BIOMETRICS			
Online data	Physical	Social	Knowledge-based questions	PIN	Camera	Fingerprint	Microphone	Security tokens
	✓	✓			✓			

Consumer Data Scorecard – All players are listed in alphabetical order.



HYPR provides biometric authentication solutions that utilize existing cameras, fingerprint sensors and microphones on mobile devices.

Products: Biometric security software development kits, key password manager, tokenization

Customer focus: All industries

IDENTITY DATA					BIOMETRICS			
Online data	Physical	Social	Knowledge-based questions	PIN	Camera	Fingerprint	Microphone	Security tokens
	✓	✓		✓	✓			



IDEMIA is a digital identity service provider for companies in the payments, gaming, communication and commerce space.

Products: Access control, biometrics for identification and authentication

Customer focus: Corporates, financial institutions, government, internet of things, mobile networks, retail, transportation authorities

IDENTITY DATA					BIOMETRICS			
Online data	Physical	Social	Knowledge-based questions	PIN	Camera	Fingerprint	Microphone	Security tokens
	✓				✓	✓		



IDEX Biometrics has developed advanced fingerprint imaging, recognition and authentication technology. The company sells sensors or licenses its intellectual property to global original equipment manufacturers for use in biometric products.

Products: Touch sensors

Customer focus: Access control, healthcare, identification, internet of things, mobile, smart cards

IDENTITY DATA					BIOMETRICS			
Online data	Physical	Social	Knowledge-based questions	PIN	Camera	Fingerprint	Microphone	Security tokens
	✓					✓		

Consumer Data Scorecard – All players are listed in alphabetical order.



IDology, a GBG company, provides real-time technology solutions that verify the identities and ages of consumers who are not present.

Products: Age verification, compliance solutions, contact center solutions, customer-based authentication, dynamic knowledge-based authentication, ID document scan solutions, identity verification

Customer focus: Age-restricted markets, banking, distance learning, eCommerce financial services, FinTech, gaming, healthcare, insurance, retail, tax, telecommunications online learning

IDENTITY DATA					BIOMETRICS			
Online data	Physical	Social	Knowledge-based questions	PIN	Camera	Fingerprint	Microphone	Security tokens
✓	✓		✓	✓	✓			



ID R&D is a biometric solution provider that focuses on the development of new biometric solutions to increase security and enhance user experience. The company has developed a suite of core biometric technologies for mobile login, chatbots and virtual assistants, and its solutions utilize various data points and biometric modalities – including behavioral, voice and facial recognition – to create frictionless biometric authentication in emerging communication channels.

Products: iBeta ISO PAD Testing, IDFraud Contact Center, IDLive Face, IDLive Voice, IDSquared, IDVoice, IDVoice for WhatsApp, IDVoice Verified, SafeChat

Customer focus: Device manufacturers, enterprise customers, identity and biometric solution providers, integrators

IDENTITY DATA					BIOMETRICS			
Online data	Physical	Social	Knowledge-based questions	PIN	Camera	Fingerprint	Microphone	Security tokens
	✓				✓		✓	



ImageWare Systems provides identity management solutions driven by biometrics. Its solutions offer multimodal biometric authentication using voice, fingerprint and facial recognition and combine cloud and mobile technology to offer multifactor authentication for smartphone, tablet and desktop users.

Products: Biointellic, biometric engine, CloudID, credentialing, ImageWare Authenticate

Customer focus: Enterprise, financial, healthcare, law enforcement, retail

IDENTITY DATA					BIOMETRICS			
Online data	Physical	Social	Knowledge-based questions	PIN	Camera	Fingerprint	Microphone	Security tokens
	✓				✓	✓	✓	

Consumer Data Scorecard – All players are listed in alphabetical order.



Imprivata enables healthcare providers to access, communicate and transact patient information securely. The Imprivata platform addresses critical compliance and security challenges while improving productivity and patient experiences.

Products: Commercial solutions, enterprise single sign-on, identity governance, mobile identity access management and provisioning, multifactor authentication, positive patient identification, risk analytics and intelligence, secure healthcare communications

Customer focus: Healthcare

IDENTITY DATA					BIOMETRICS			
Online data	Physical	Social	Knowledge-based questions	PIN	Camera	Fingerprint	Microphone	Security tokens
✓	✓					✓		✓



Innovatrics offers biometric technologies for identity management. Its automated biometric identification system includes fingerprint identification, facial verification, facial identification and iris verification.

Products: ABIS, DOT, original equipment manufacturer solutions, SmartFace

Customer focus: Enterprises, governments

IDENTITY DATA					BIOMETRICS			
Online data	Physical	Social	Knowledge-based questions	PIN	Camera	Fingerprint	Microphone	Security tokens
	✓				✓	✓		



Integrated Biometrics develops fingerprint scanners. The company's FBI-certified fingerprint sensors use a light-emitting sensor film, enabling them to work in direct sunlight on dry or moist fingers and resist abrasion.

Products: FBI-certified fingerprint sensors

Customer focus: Commercial, government

IDENTITY DATA					BIOMETRICS			
Online data	Physical	Social	Knowledge-based questions	PIN	Camera	Fingerprint	Microphone	Security tokens
	✓					✓		

Consumer Data Scorecard – All players are listed in alphabetical order.



Intercede offers cybersecurity services and specializes in identity, credential management and secure mobility services. Its MyID products manage identities and credentials, enabling organizations to create and assign trusted digital identities to employees, citizens and machines. It also allows secure access to services, facilities, information and networks.

Products: MyID, platform solutions

Customer focus: Aerospace and defense, energy and utilities, finance and banking, government, healthcare, manufacturing and industry, military and police

IDENTITY DATA				BIOMETRICS				
Online data	Physical	Social	Knowledge-based questions	PIN	Camera	Fingerprint	Microphone	Security tokens
	✓	✓		✓	✓	✓		



INVISUS is a cybersecurity and cyber risk management firm that combats cybercrime with various business and personal products.

Products: Computer services, cybersecurity compliance, breach response solutions, business ID protection, employee ID protection, ID theft protection, technology support help desk

Customer Focus: eCommerce, financial, government, healthcare

IDENTITY DATA				BIOMETRICS				
Online data	Physical	Social	Knowledge-based questions	PIN	Camera	Fingerprint	Microphone	Security tokens
	✓	✓		✓	✓		✓	



Irisys uses smart technology, such as iris and facial recognition, to protect personal data from hacks and breaches.

Products: Irisys IFP 7070 PushPull Digital Lock, Irisys LOCKIT USB

Customer focus: Businesses, consumers

IDENTITY DATA				BIOMETRICS				
Online data	Physical	Social	Knowledge-based questions	PIN	Camera	Fingerprint	Microphone	Security tokens
	✓	✓		✓	✓			

Consumer Data Scorecard – All players are listed in alphabetical order.



IriTech provides iris biometric technology. The company offers compact iris camera modules and iris-based authentication solutions that can be integrated in any handheld device.

Products: Cloud-based solutions, iris recognition hardware, iris recognition software

Customer focus: Banking, eCommerce, education, healthcare, law enforcement, mobile, transportation

IDENTITY DATA					BIOMETRICS			
Online data	Physical	Social	Knowledge-based questions	PIN	Camera	Fingerprint	Microphone	Security tokens
	✓				✓			



Jumio uses artificial intelligence, biometrics, machine learning and liveness detection to stop cybercrime and help companies meet know your customer/anti-money laundering regulations.

Products: Jumio Address Services, Jumio Authentication, Jumio Case Management, Jumio Document Verification, Jumio Go, Jumio ID Verification, Jumio Identity Verification, Jumio Screening, Jumio Transaction Monitoring, Jumio Video Verification

Customer Focus: Education, financial services, gaming, healthcare, mobility, retail, travel

IDENTITY DATA					BIOMETRICS			
Online data	Physical	Social	Knowledge-based questions	PIN	Camera	Fingerprint	Microphone	Security tokens
✓	✓				✓			



LexisNexis Risk Solutions helps government and industry customers manage risk with analytics, decisioning tools and other innovative technologies.

Products: Collections and recovery

Customer focus: Automotive lending, communications, credit card companies, government, online lending, retail banking

IDENTITY DATA					BIOMETRICS			
Online data	Physical	Social	Knowledge-based questions	PIN	Camera	Fingerprint	Microphone	Security tokens
✓			✓					

Consumer Data Scorecard – All players are listed in alphabetical order.



LoginRadius is a customer identity management platform offering customer registration services, profile data storage, single sign-on and more.

Products: Authentication, Single Sign-on, Directory Service, Data Governance, User Management, Cloud Integrations

Customer focus: Business, information technology

IDENTITY DATA				BIOMETRICS				
Online data	Physical	Social	Knowledge-based questions	PIN	Camera	Fingerprint	Microphone	Security tokens
✓	✓	✓				✓		✓



LogMeIn, Inc. is a provider of software as a service (SaaS) and cloud-based remote work tools for collaboration, IT management and customer engagement, founded in 2003 and based in Boston, Massachusetts. The company's products give users and administrators access to remote computers.

Products: Cloud Applications, Federated Identity Management, Identity Management, Mobile Application, Password Management, Single Sign-On, Software-As-A-Service, Web Applications

Customer Focus: Individuals and Businesses, Software as a Service.

IDENTITY DATA				BIOMETRICS				
Online data	Physical	Social	Knowledge-based questions	PIN	Camera	Fingerprint	Microphone	Security tokens
✓			✓	✓		✓		



LumenVox is a speech automation and multi-factor biometric authentication solutions company providing core speech technologies.

Products: LumenVox Speech Recognizer, Text-to-Speech Engine, Call Progress Analysis, Speech Tuner, Natural language solutions support and Multifactor Biometric Authentication.

Customer Focus: Financial Services, Contact center, Healthcare.

IDENTITY DATA				BIOMETRICS				
Online data	Physical	Social	Knowledge-based questions	PIN	Camera	Fingerprint	Microphone	Security tokens
	✓		✓		✓		✓	

Consumer Data Scorecard – All players are listed in alphabetical order.



M2SYS Technology provides enterprise solutions that enable customers and partners to utilize or integrate biometric technology. It also offers a biometric software development kit that allows developers to add biometric recognition to any software application.

Products: Biometric hardware, biometric technology, cloud solutions
Customer focus: Banking, government, healthcare, workforce management

IDENTITY DATA					BIOMETRICS			
Online data	Physical	Social	Knowledge-based questions	PIN	Camera	Fingerprint	Microphone	Security tokens
	✓				✓	✓		



Microsoft's Azure Active Directory is a cloud-based directory and identity management service. It enables single sign-on and grants employees access to numerous software-as-a-service programs with multifactor authentication.

Products: Azure Active Directory
Customer focus: Communications, consumer products and services, financial services, manufacturing, media, retail

IDENTITY DATA					BIOMETRICS			
Online data	Physical	Social	Knowledge-based questions	PIN	Camera	Fingerprint	Microphone	Security tokens
✓		✓						✓



miniOrange offers security solutions in cloud security, identity and access management, mobile, and vulnerability management.

Products: Cloud identity broker service, fraud prevention, network security, single sign-on, social log-in, two-factor authentication
Customer focus: Government / Non-Profit Org, Media And Entertainment, Global Automobiles, Food And Beverages, Telecom And Internet Sector, and SMB Customers

IDENTITY DATA					BIOMETRICS			
Online data	Physical	Social	Knowledge-based questions	PIN	Camera	Fingerprint	Microphone	Security tokens
✓		✓	✓	✓			✓	✓

Consumer Data Scorecard – All players are listed in alphabetical order.



MIRACL is a London-based company that applies elliptic curve cryptography to ensure trusted business transactions between people, applications and devices. Its MIRACL Trust® multifactor authentication service integrates into web and mobile applications through a cloud-based service and complies with European Union requirements for financial services companies. The company's zero-knowledge proof, M-Pin, removes the need to send or store authentication credentials, eliminating password databases.

Products: Multifactor authentication
Customer focus: Banking, education, healthcare, government, subscription services, pharmaceuticals

IDENTITY DATA					BIOMETRICS			
Online data	Physical	Social	Knowledge-based questions	PIN	Camera	Fingerprint	Microphone	Security tokens
✓	✓	✓	✓	✓		✓		✓



Mitek provides mobile capture and identity verification software solutions. Mitek's identity document verification can enable enterprises to verify users' identities during mobile transactions, helping financial institutions, payments companies and other businesses operating in highly regulated markets transact business safely. Mitek also reduces the friction in mobile users' experiences with advanced data prefill.

Products: Deposit, mobile verify, prefill
Customer focus: Enterprises, financial institutions

IDENTITY DATA					BIOMETRICS			
Online data	Physical	Social	Knowledge-based questions	PIN	Camera	Fingerprint	Microphone	Security tokens
	✓				✓			



Mobile Authentication Technologies offers mobile security and authentication solutions using smartcards and biometrics for iOS and Android devices.

Products: AuthentiKey, FIDO Universal Second Factor, fingerprint biometric algorithms, AuthentiCase Smart Card Reader
Customer focus: Corporations, government

IDENTITY DATA					BIOMETRICS			
Online data	Physical	Social	Knowledge-based questions	PIN	Camera	Fingerprint	Microphone	Security tokens
	✓	✓				✓		✓

Consumer Data Scorecard – All players are listed in alphabetical order.



MYPINPAD enables secure multifactor authentication for unsecured touchscreen devices like smartphones and tablets. It provides a modular platforms-as-a-service or customer-hosted platforms that deliver security with familiar and user-friendly authentication interfaces, like biometrics and cardholder personal identification numbers.

Products: Face-to-face transactions, online transaction authentication

Customer focus: Banks, consumers merchants

IDENTITY DATA				BIOMETRICS				
Online data	Physical	Social	Knowledge-based questions	PIN	Camera	Fingerprint	Microphone	Security tokens
✓	✓	✓		✓	✓	✓		



Neustar provides identity resolution solutions designed for a variety of industries.

Products: Marketing Solutions, Communication Solutions, Security Solutions, Risk Solutions

Customer focus: Automotive, communications, consumer packaged goods, financial services, hospitality, retail, technology, travel

IDENTITY DATA				BIOMETRICS				
Online data	Physical	Social	Knowledge-based questions	PIN	Camera	Fingerprint	Microphone	Security tokens
✓	✓						✓	



Nok Nok Labs' ambition is to transform authentication by enabling end-to-end trust across the web using authentication methods that are natural to end-users and provide strong proof of identity. Its solutions remediate and unify authentication silos and provide organizations with greater flexibility to utilize strong authentication solutions in adaptable ways.

Products: S3 Authentication SDK, S3 Authentication Suite, Strong Authentication-As-A-Service, Nok Nok IoT SDK and Professional Services

Customer focus: Device manufacturers, first responders, government, identity service providers, mobile network operators, public safety, security vendors

IDENTITY DATA				BIOMETRICS				
Online data	Physical	Social	Knowledge-based questions	PIN	Camera	Fingerprint	Microphone	Security tokens
✓	✓	✓			✓	✓	✓	✓

Consumer Data Scorecard – All players are listed in alphabetical order.

NORDIC CAPITAL

Nordic Capital is a digital identity and signature solutions provider based in Europe.

Products: Advanced authentication, Digital Identity Hub, Digital Identity Service Provider, electronic signatures, Identity Assurance as a Service, identity verification, Preservation Archive

Customer focus: Financial service providers, from large banks to FinTech startups

IDENTITY DATA					BIOMETRICS			
Online data	Physical	Social	Knowledge-based questions	PIN	Camera	Fingerprint	Microphone	Security tokens
	✓	✓		✓	✓	✓	✓	✓



Nuance is an American multinational computer software technology corporation, headquartered in Burlington, Massachusetts, that provides speech recognition, and artificial intelligence.

Products: Healthcare AI solutions & services, Omni-channel customer engagement, Dragon consumer & enterprise

Customer Focus: Contact centers, enterprise security, financial services, governments, telecommunications, healthcare

IDENTITY DATA					BIOMETRICS			
Online data	Physical	Social	Knowledge-based questions	PIN	Camera	Fingerprint	Microphone	Security tokens
	✓						✓	



NtechLab is an intelligent security solutions and software provider. The company provides facial recognition software and a security software development kit for third-party developers.

Products: Facial authentication

Customer focus: Corporate, government, law enforcement

IDENTITY DATA					BIOMETRICS			
Online data	Physical	Social	Knowledge-based questions	PIN	Camera	Fingerprint	Microphone	Security tokens
	✓	✓			✓			

Consumer Data Scorecard – All players are listed in alphabetical order.



NXT-ID provides products that work with the internet of things. The company also has experience with identity verification and data protection and security.

Products: 3D-ID, biocloud, facematch, voicematch, Wocket
Customer focus: Enterprises, financial institutions, government

IDENTITY DATA					BIOMETRICS			
Online data	Physical	Social	Knowledge-based questions	PIN	Camera	Fingerprint	Microphone	Security tokens
	✓				✓	✓	✓	



Okta is an independent identity solutions provider for enterprises. Its Okta Identity Cloud includes workforce and customer identity solutions and developers can use Okta’s application programming interfaces to build customizable and secure user experiences.

Products: Adaptive multifactor authentication, application programming interface access management, life cycle management, secure server access, single sign-on, universal directory
Customer focus: Healthcare, Public Sector, Energy, Financial Services, Technology, Travel + Hospitality, and Nonprofit

IDENTITY DATA					BIOMETRICS			
Online data	Physical	Social	Knowledge-based questions	PIN	Camera	Fingerprint	Microphone	Security tokens
✓	✓			✓		✓		✓



OneLogin is an identity and access management provider that offers enterprise-level single sign-on and identity-management solutions that work in the cloud. The company is based in San Francisco, California, and its products are used by more than 2,000 enterprise customers.

Products: Adaptive authentication, mobile identity, single sign-on, web access management
Customer focus: Technology, Education, Federal Government, Financial Services, Law Firms, Manufacturing, Retail, and HR Integration

IDENTITY DATA					BIOMETRICS			
Online data	Physical	Social	Knowledge-based questions	PIN	Camera	Fingerprint	Microphone	Security tokens
✓		✓	✓	✓				

Consumer Data Scorecard – All players are listed in alphabetical order.



OneVisage provides a disruptive digital identity platform for financial services, identity and access management providers, integrators and mobile operators.

Products: Premier Face SDK, Premier Secret SDK, Premier Device SDK

Customer focus: Financial services, integrators, telecommunications, healthcare, gaming, retail & ecommerce, marketplace & communities, and transport.

IDENTITY DATA					BIOMETRICS			
Online data	Physical	Social	Knowledge-based questions	PIN	Camera	Fingerprint	Microphone	Security tokens
	✓				✓			



Onfido’s solutions are powered by machine learning, which validates identity documents by comparing them with facial biometrics. Users identities can be cross-referenced against international credit and watchlist databases.

Products: Document check, facial check, identity record check

Customer focus: Businesses

IDENTITY DATA					BIOMETRICS			
Online data	Physical	Social	Knowledge-based questions	PIN	Camera	Fingerprint	Microphone	Security tokens
✓	✓				✓			



Paycasso’s software verifies consumers’ identities when they are engaging in mobile, online or in-person transactions.

Products: DocuSure, IdentiSure, InstaSure, VeriSure

Customer focus: Financial services, healthcare, insurance, restricted goods and services, retail banking

IDENTITY DATA					BIOMETRICS			
Online data	Physical	Social	Knowledge-based questions	PIN	Camera	Fingerprint	Microphone	Security tokens
	✓				✓			

Consumer Data Scorecard – All players are listed in alphabetical order.



PointPredictive provides fraud solutions that enable lenders and online retailers to stop fraud and reduce first payment and early payment default at low positives via analytic and big data platforms.

Products: Artificial intelligence solutions, risk management

Customer focus: Auto finance, consumer lending, consumer rental, mortgage lending, online retail, real estate

IDENTITY DATA					BIOMETRICS			
Online data	Physical	Social	Knowledge-based questions	PIN	Camera	Fingerprint	Microphone	Security tokens
✓								



Precise Biometrics creates fingerprint recognition solutions that can be applied to identification cards, enterprise and bank cards, as well as to systems that control access to buildings, computers and networks.

Products: Fingerprint technology, smart card readers

Customer focus: Business, government

IDENTITY DATA					BIOMETRICS			
Online data	Physical	Social	Knowledge-based questions	PIN	Camera	Fingerprint	Microphone	Security tokens
	✓					✓		



Prove is a mobile and digital identity authentication provider. Its platform, Lotus, generates proprietary Trust Scores for mobile identities.

Products: Identity Certainty, Payments, and Mobile Authentication

Customer focus: Banks, brokerages, insurance, technology, retail and enterprise

IDENTITY DATA					BIOMETRICS			
Online data	Physical	Social	Knowledge-based questions	PIN	Camera	Fingerprint	Microphone	Security tokens
✓								✓

Consumer Data Scorecard – All players are listed in alphabetical order.



RCDevs is a security company specializing in multifactor authentication and public key infrastructure. Its OpenOTP is an enterprise-grade user authentication solution based on open standards. It supports single-factor and multifactor user access with one-time password technologies and Universal Second Factor.

Products: OpenOTP, TiQR Server

Customer focus: Financial, government, healthcare, information technology

IDENTITY DATA					BIOMETRICS			
Online data	Physical	Social	Knowledge-based questions	PIN	Camera	Fingerprint	Microphone	Security tokens
✓				✓		✓		✓



Redrock Biometrics provides authentication and security solutions for devices with cameras. Its offerings convert a users' palm images into unique signatures.

Products: Biometric authentication

Customer focus: Automotive, banking, enterprise security, healthcare, IoT, payments, virtual reality, wearables

IDENTITY DATA					BIOMETRICS			
Online data	Physical	Social	Knowledge-based questions	PIN	Camera	Fingerprint	Microphone	Security tokens
	✓					✓		



Risk Ident offers anti-fraud solutions used to prevent payment fraud, account takeovers and fraud within account and loan applications.

Products: DEVICE IDENT, FRIDA

Customer focus: eCommerce, financial, telecommunications

IDENTITY DATA					BIOMETRICS			
Online data	Physical	Social	Knowledge-based questions	PIN	Camera	Fingerprint	Microphone	Security tokens
✓								

Consumer Data Scorecard – All players are listed in alphabetical order.



SailPoint helps organizations manage user access from any device. Its solutions grant users transparency, enabling them to prevent fraud and mitigate risks.

Products: Identity governance platform

Customer focus: Enterprise software, identity management, risk management, software, software development

IDENTITY DATA					BIOMETRICS			
Online data	Physical	Social	Knowledge-based questions	PIN	Camera	Fingerprint	Microphone	Security tokens
	✓			✓				✓



SAP Customer Data Cloud solutions customer identity management platform is designed to identify customers, aggregate data into customer profiles and produce personalized campaigns. The platform helps companies build better customer relationships and turn visitors into known, loyal and engaged customers.

Products: Customer identity management

Customer focus: Brands, eCommerce, entertainment, leisure, media, organizations, publishing

IDENTITY DATA					BIOMETRICS			
Online data	Physical	Social	Knowledge-based questions	PIN	Camera	Fingerprint	Microphone	Security tokens
✓	✓	✓						✓



SecureAuth provides access control solutions, allowing organizations to determine identities. It provides authentication security, sign-in and self-service tools together in a single platform.

Products: Authentication security, single sign-on, user self-service, passwordless authentication

Customer focus: Financial institutions, government, healthcare, retail

IDENTITY DATA					BIOMETRICS			
Online data	Physical	Social	Knowledge-based questions	PIN	Camera	Fingerprint	Microphone	Security tokens
✓	✓	✓		✓	✓		✓	✓

Consumer Data Scorecard – All players are listed in alphabetical order.

SEKUR.me

SEKUR.me reduces online payment frictions for eCommerce sites with single-click technology and multifactor authentication.

Products: Branded mobile payments, frictionless payments

Customer focus: Mobile login and payment

IDENTITY DATA					BIOMETRICS			
Online data	Physical	Social	Knowledge-based questions	PIN	Camera	Fingerprint	Microphone	Security tokens
	✓			✓		✓		



Sensory offers fraud prevention solutions to improve consumer electronics user experiences through machine learning technologies. It enables safer experiences and specializes in deep net and learning technologies for speech recognition, machine vision and biometrics on embedded smaller footprint platforms.

Products: Audio technologies, hardware, software, speech technologies

Customer focus: Automotive, home electronics, internet of things, mobile devices, toys, wearables, baking, medical & enterprise

IDENTITY DATA					BIOMETRICS			
Online data	Physical	Social	Knowledge-based questions	PIN	Camera	Fingerprint	Microphone	Security tokens
	✓				✓		✓	



Shufti Pro is a digital verification software system. It seeks to create online marketplaces that do not have to worry about fraud and theft.

Products: Anti-money laundering, identity governance platform, identity verification, know your customer

IDENTITY DATA					BIOMETRICS			
Online data	Physical	Social	Knowledge-based questions	PIN	Camera	Fingerprint	Microphone	Security tokens
	✓			✓	✓			

Consumer Data Scorecard – All players are listed in alphabetical order.



Socure provides digital identity verification in over 180 countries. It assists enterprises with preventing fraud and account takeovers while increasing customer acceptance rates.

Products: ID+

Customer focus: Financial institutions, sharing economy

IDENTITY DATA					BIOMETRICS			
Online data	Physical	Social	Knowledge-based questions	PIN	Camera	Fingerprint	Microphone	Security tokens
✓	✓	✓			✓			



Sonavation provides authentication and protection services for digital and physical environments. It offers stand-alone products as well as embedded ones.

Products: Biometric sensor, sensor-under-glass technology, ultrasound biometrics

Customer focus: eCommerce, financial services, healthcare

IDENTITY DATA					BIOMETRICS			
Online data	Physical	Social	Knowledge-based questions	PIN	Camera	Fingerprint	Microphone	Security tokens
	✓					✓		



The Sovrin Network is a public service utility enabling online self-sovereign identities. Sovrin is open-source and offers the tools necessary to create secure data management solutions.

Products: Digital identity libraries and tools

Customer focus: Blockchain companies

IDENTITY DATA					BIOMETRICS			
Online data	Physical	Social	Knowledge-based questions	PIN	Camera	Fingerprint	Microphone	Security tokens
✓		✓		✓				✓

Consumer Data Scorecard – All players are listed in alphabetical order.



Speik's comprehensive voice security solutions deliver complete protection from the start to the end of every call. Whether PCI DSS, MiFID II, Dodd Frank, FCA or other, compliance can be complicated and expensive to attain and maintain, which is where we can help

Products: Call archive, call recording, payment card industry phone payments, phone fraud detection, speech analytics

Customer focus: Banking, telecommunications, insurance, utilities

IDENTITY DATA					BIOMETRICS			
Online data	Physical	Social	Knowledge-based questions	PIN	Camera	Fingerprint	Microphone	Security tokens
	✓						✓	



Synacts offers identity protection tools for consumers. The company develops online services to give internet users full control over their data. The solution is intended for use in digital onboarding, online checkouts, eSigning, secure messaging and payment.

Products: Digital identification

Customer focus: End users

IDENTITY DATA					BIOMETRICS			
Online data	Physical	Social	Knowledge-based questions	PIN	Camera	Fingerprint	Microphone	Security tokens
✓		✓		✓		✓		



Synaptics develops human interface solutions.

Products: Biometrics, display drivers, touch controllers, TouchPad

Customer focus: Automotive, technology, wearables

IDENTITY DATA					BIOMETRICS			
Online data	Physical	Social	Knowledge-based questions	PIN	Camera	Fingerprint	Microphone	Security tokens
	✓	✓			✓	✓		✓

Consumer Data Scorecard – All players are listed in alphabetical order.



Tascent develops biometric identity products and solutions with a focus on iris recognition and multimodal high-throughput and mobile biometrics.

Products: High throughput iris recognition, mobile identity

Customer focus: Borders, defense, humanitarian aid, identity, law enforcement, personal data, public safety

IDENTITY DATA					BIOMETRICS			
Online data	Physical	Social	Knowledge-based questions	PIN	Camera	Fingerprint	Microphone	Security tokens
	✓				✓	✓	✓	



Thales Group is a French multinational company that designs and builds electrical systems and provides services for the aerospace, defense, transportation and security markets.

Products: Tactical radios, Remote controlled weapon stations, radars, infantry mobility vehicles, aerospace electronics, Aeronautics

Customer Focus: Aerospace, Defense and security, Identity and Digital Security, Transport, Security, Electronics

IDENTITY DATA					BIOMETRICS			
Online data	Physical	Social	Knowledge-based questions	PIN	Camera	Fingerprint	Microphone	Security tokens
✓	✓	✓		✓	✓	✓		✓



TransUnion is a credit reporting agency that uses data identities to help companies make informed decisions and grant consumers personalized opportunities.

Products: Debt Recovery, Global Fraud Solutions

Customer Focus: Auto Lending, Capital Markets, Collections, Communications, Credit Unions, Financial Institutions, FinTech, Healthcare, Insurance, Media, Mortgage, Property Management, Public Sector, Retail/eCommerce, Short-term Lending

IDENTITY DATA					BIOMETRICS			
Online data	Physical	Social	Knowledge-based questions	PIN	Camera	Fingerprint	Microphone	Security tokens
✓		✓	✓	✓				✓

Consumer Data Scorecard – All players are listed in alphabetical order.



Trulioo is a global identity verification company that provides secure access to over 200 unique and reliable data sources worldwide to instantly verify identities.

Products: GlobalGateway

Customer focus: Banking, eCommerce, financial services, foreign exchange, online trading and lending, payments, remittance

IDENTITY DATA					BIOMETRICS			
Online data	Physical	Social	Knowledge-based questions	PIN	Camera	Fingerprint	Microphone	Security tokens
✓		✓			✓			



Trusona offers an insured digital identity authentication solution that does not require passwords. Instead, it relies on technology to analyze automated clearing house transactions to verify each digital interaction.

Products: Access management, consumer identity, identity proofing, multifactor authentication, workforce identity

Customer focus: eCommerce, education, financial services, government, healthcare

IDENTITY DATA					BIOMETRICS			
Online data	Physical	Social	Knowledge-based questions	PIN	Camera	Fingerprint	Microphone	Security tokens
✓	✓			✓		✓		



Ubisecure offers a digital identity and authentication services platform. It includes customer identity and access management and identity-as-a-service solutions, enabling businesses to determine and authenticate new customers' identities.

Products: Identity cloud, identity platform, identity server

Customer focus: Healthcare & eHealth, Governments and Public Sector, Financial Services, Higher Education, and Telecoms, Banking, eCommerce, eGovernment, insurance

IDENTITY DATA					BIOMETRICS			
Online data	Physical	Social	Knowledge-based questions	PIN	Camera	Fingerprint	Microphone	Security tokens
✓		✓		✓				✓

Consumer Data Scorecard – All players are listed in alphabetical order.



Veiris provides advanced computer vision technology for real-time identity verification, facial detection, facial recognition and facial analysis to address enterprises' know-your-customer needs.

Products: Face detection, identity verification

Customer focus: eCommerce, financial institutions, FinTechs, travel

IDENTITY DATA					BIOMETRICS			
Online data	Physical	Social	Knowledge-based questions	PIN	Camera	Fingerprint	Microphone	Security tokens
✓	✓				✓			



Veridium offers biometric authentication technologies that increase security, reduce fraud and cut costs associated with passwords and traditional multifactor authentication solutions. VeridiumID is a software-only platform for biometric authentication that works in conjunction with a front-end mobile software development kit to embed biometrics into mobile apps.

Products: VeridiumID, VeridiumAD

Customer focus: Enterprises, financial, government, healthcare, non-profits, insurance, y telecoms & mobile

IDENTITY DATA					BIOMETRICS			
Online data	Physical	Social	Knowledge-based questions	PIN	Camera	Fingerprint	Microphone	Security tokens
	✓					✓		



VerifyMe offers ID services to replace passwords and PINs with multifactor authentication. The company also authenticates individuals using facial recognition, fingerprint, voice and retina scanning, swipe pattern recognition, location detection and approved IP detection.

Products: Anti-counterfeiting, biometrics, identity protection

Customer focus: Individuals, industries, government

IDENTITY DATA					BIOMETRICS			
Online data	Physical	Social	Knowledge-based questions	PIN	Camera	Fingerprint	Microphone	Security tokens
	✓				✓	✓	✓	

Consumer Data Scorecard – All players are listed in alphabetical order.



VisionLabs
MACHINES CAN SEE

VisionLabs offers security and authentication products and solutions that utilize face recognition, object recognition, augmented reality and virtual reality.

Products: LUNA PLATFORM, LUNA SDK

Customer focus: Banking, construction, retail, security, transportation

IDENTITY DATA					BIOMETRICS			
Online data	Physical	Social	Knowledge-based questions	PIN	Camera	Fingerprint	Microphone	Security tokens
	✓				✓			



VoicePIN is a voice-based biometric system for user authentication that enables users to log into a system without having to remember passwords or PIN numbers.

Products: Voice authentication

Customer focus: Banking, eCommerce

IDENTITY DATA					BIOMETRICS			
Online data	Physical	Social	Knowledge-based questions	PIN	Camera	Fingerprint	Microphone	Security tokens
	✓						✓	



VoiceVault provides voice biometrics solutions that focus on ease of use along with convenience. Solutions are developed and delivered through partners or direct-to-client organizations, and can be deployed through a range of hosting models.

Products: Verint Vigo Mobile Identity Verification, Verint Voiceauth, & Verint Fusion

Customer focus: Healthcare, financial

IDENTITY DATA					BIOMETRICS			
Online data	Physical	Social	Knowledge-based questions	PIN	Camera	Fingerprint	Microphone	Security tokens
✓	✓						✓	

Consumer Data Scorecard – All players are listed in alphabetical order.



Vonage Verify application programming interface provides authentication by phone verification. Verify detects a phone number type and selects the appropriate channel for identification – either SMS or voice.

Products: Verify

Customer focus: Enterprises, FinTechs

IDENTITY DATA					BIOMETRICS			
Online data	Physical	Social	Knowledge-based questions	PIN	Camera	Fingerprint	Microphone	Security tokens
✓				✓			✓	



ZOLOZ™ provides global identity verification software, which incorporates Ant Group technologies and technologies developed by EyeVerify™.

Products: Connect, Real ID, Smile

Customer Focus: Banking & Financial, Criminal Justice, Defense, Oil & Gas, Enterprise & Corporate, Government, Healthcare, Sports & Events, Transportation

IDENTITY DATA					BIOMETRICS			
Online data	Physical	Social	Knowledge-based questions	PIN	Camera	Fingerprint	Microphone	Security tokens
	✓				✓			

Device Intelligence Scorecard – All players are listed in alphabetical order.



01Systems is a software application and solution provider. Its industry products are a portfolio offering arabization, signature management, a biometric solutions integrator (finger vein, fingerprint), ECM and digital vouchers.

Products: Signature Verification for Banks, Enterprise content management, BPM platform, Digital Voucher, Automatic Signature Verification, Digital Signature Verification, Biometric Hardware Devices

Customer focus: Financial services

Device fingerprinting	IP geolocation	True application	Device emulator /with malware	PIN	BIOMETRICS			
					Camera	Fingerprint	Microphone	Security tokens
✓	✓	✓	✓	✓	✓	✓	✓	✓



Accertify is the leading provider of frictionless digital identity, eCommerce fraud prevention, dispute management, intelligent authentication, and online payment gateway solutions to your industry.

Products: Digital Identity, Fraud Management, Chargeback Management, Payment Gateway, SCA Optimization, Device Intelligence

Customer focus: Ecommerce and Retail, Travel, Financial Institutions, iGaming

Device fingerprinting	IP geolocation	True application	Device emulator /with malware	PIN	BIOMETRICS			
					Camera	Fingerprint	Microphone	Security tokens
	✓							✓



BeyondTrust is a global cybersecurity company that prevents data breaches by exercising control over internal and external risks.

Products: Privilege Management for Windows and Mac, Privilege Management for Unix and Linux, Active Directory Bridge, Remote Support for IT Service Desks, Privileged Remote Access for Vendors, Password Safe, DevOps Secrets Safe, BeyondInsight

Customer focus: N/A

Device fingerprinting	IP geolocation	True application	Device emulator /with malware	PIN	BIOMETRICS			
					Camera	Fingerprint	Microphone	Security tokens
✓				✓				✓

Device Intelligence Scorecard – All players are listed in alphabetical order.



BioCatch provides behavioral biometric, authentication and malware detection solutions for mobile and web applications. It collects and analyzes cognitive parameters to generate user profiles.

Products: Account opening protection, account takeover protection, social engineering scam detection

Customer focus: e-government, online trading, gaming, enterprise, e-commerce, e-learning

Device fingerprinting	IP geolocation	True application	Device emulator /with malware	PIN	BIOMETRICS			
					Camera	Fingerprint	Microphone	Security tokens
✓	✓		✓					



Broadcom helps businesses keep up in the communications sector with semiconductor and infrastructure software offerings.

Products: Enterprise software, mainframe software, optical products, security, storage and systems, wired connectivity, wireless

Customer focus: Automotive, enterprise, financial institutions

Device fingerprinting	IP geolocation	True application	Device emulator /with malware	PIN	BIOMETRICS			
					Camera	Fingerprint	Microphone	Security tokens
✓	✓			✓				✓



Callsign offers Intelligence Driven Authentication, a software designed to enable informed and adaptive access control decisions via location and behavior analytics, biometrics and machine learning.

Products: Intelligence Driven Authentication

Customer focus: Banking, Healthcare, Enterprise, E-commerce, Media and subscriptions, Telecoms, Government, Insurance, Loyalty Programs, EGaming

Device fingerprinting	IP geolocation	True application	Device emulator /with malware	PIN	BIOMETRICS			
					Camera	Fingerprint	Microphone	Security tokens
	✓			✓	✓		✓	✓

Device Intelligence Scorecard – All players are listed in alphabetical order.



CardinalCommerce provides authenticated payments, secure transactions and alternative payments for both eCommerce and mobile commerce.

Products: Alternative payments, big data, consumer authentication, mobile, solution design

Customer focus: Merchants, issuers

Device fingerprinting	IP geolocation	True application	Device emulator /with malware	PIN	BIOMETRICS			
					Camera	Fingerprint	Microphone	Security tokens
✓	✓							✓



Centrify's identity-as-a-service solutions can be used to verify users, validate devices and put limits on access and privilege. It utilizes machine learning to discover risky user behavior and apply conditional access, and all without impacting user experience.

Products: Privileged Access service, Authentication Service, Privilege Elevation Service, Audit and Monitoring Service, Privilege Threat Analytics Service

Customer focus: Biotech and Pharmaceutical, Education, Energy and Utilities, Financial, Banking and Insurance, Government Agencies, Healthcare, High Tech, Manufacturing, Retail, Telecommunications

Device fingerprinting	IP geolocation	True application	Device emulator /with malware	PIN	BIOMETRICS			
					Camera	Fingerprint	Microphone	Security tokens
✓				✓	✓	✓	✓	✓



Cyxtera is focused on the detection and prevention of electronic fraud across devices, channels and clouds.

Products: Fraud intelligence, fraudulent transaction and activity detection, mobile anti-fraud protection suite, mobile authentication, safe browsing, strong authentication

Customer focus: Airlines, enterprises, financial services, infrastructure, retail, security

Device fingerprinting	IP geolocation	True application	Device emulator /with malware	PIN	BIOMETRICS			
					Camera	Fingerprint	Microphone	Security tokens
✓		✓						✓

Device Intelligence Scorecard – All players are listed in alphabetical order.



Duo Security aims to protect organizations against data breaches by ensuring that only legitimate users and appropriate devices have access to sensitive data and applications.

Products: Multi-factor authentication, Remote Access, Device Trust, Single Sign-on, Adaptive Access Policies

Customer focus: Education, financial, healthcare, legal, retail, technology

Device fingerprinting	IP geolocation	True application	Device emulator /with malware	PIN	BIOMETRICS			
					Camera	Fingerprint	Microphone	Security tokens
✓	✓			✓				✓



Encap Security offers strong authentication and eSignature solutions for the financial services industry. Its smarter authentication platform is integrated into individual customer infrastructures and delivers security and user experience across all applications, channels and devices. The platform supports Apple Touch ID and Samsung Fingerprint.

Products: Strong Customer authentication, mobile app security

Customer focus: Banking, enterprise, healthcare, identity providers

Device fingerprinting	IP geolocation	True application	Device emulator /with malware	PIN	BIOMETRICS			
					Camera	Fingerprint	Microphone	Security tokens
✓						✓		✓



Entersekt offers push-based authentication and app security with products that comply with most regulatory guidelines.

Products: customer registration, customer authentication, smart messaging, 3-D Secure, QR Payments, Tokenization, Digital Identity

Customer focus: Banking, healthcare, insurance, mobile

Device fingerprinting	IP geolocation	True application	Device emulator /with malware	PIN	BIOMETRICS			
					Camera	Fingerprint	Microphone	Security tokens
✓				✓	✓	✓		

Device Intelligence Scorecard – All players are listed in alphabetical order.



Entrust offers digital identity solutions to financial institutions, governments and corporate enterprises that conduct highly secure transactions. Some of its solutions include central card issuance systems, passport and identification cards, security certificates and communication channels.

Products: Authentication, border control, employee identification, identity credential management, mobile authentication, Secure Sockets Layer certificates

Customer focus: Corporate, education, financial, government, healthcare, retail, transit

Device fingerprinting	IP geolocation	True application	Device emulator /with malware	PIN	BIOMETRICS			
					Camera	Fingerprint	Microphone	Security tokens
✓	✓			✓	✓	✓		✓



Evernym provides data security solutions. It works with other organizations to create and deploy private-by-design solutions offering control and ownership of personal data.

Products: Mobile digital Wallet integration, digital wallet app, flagship digital credential platform

Customer focus: Commerce, education, finance, healthcare, travel

Device fingerprinting	IP geolocation	True application	Device emulator /with malware	PIN	BIOMETRICS			
					Camera	Fingerprint	Microphone	Security tokens
	✓	✓						✓



Folio harnesses advanced biometrics, artificial intelligence and smartphone technology to analyze and verify users' identities through documents, photo identification and physical attributes. Encrypted credentials can be certified and issued directly via the Folio app and they are accessible only to registered, biometrically paired users. Folio gives users complete control over their data.

Products: Authentication, digital mobile wallet, issuance, platform, registration

Customer focus: Accounting, banking, central government, education, legal applications, local government, membership, organizations

Device fingerprinting	IP geolocation	True application	Device emulator /with malware	PIN	BIOMETRICS			
					Camera	Fingerprint	Microphone	Security tokens
		✓			✓	✓		✓

Device Intelligence Scorecard – All players are listed in alphabetical order.



Products: Access management, directory services, identity gateways, identity management, user-managed access

Customer focus: Communications, digital health, financial services, government, media, omnichannel retail

ForgeRock, an identity relationship management vendor, helps companies and governments build secure, customer-facing relationships across apps and devices. Its access management solution provides authentication possibilities with several out-of-the-box authentication modules to fit businesses' needs, including device fingerprinting, one-time passwords and adaptive risk authentication.

Device fingerprinting	IP geolocation	True application	Device emulator /with malware	PIN	BIOMETRICS			
					Camera	Fingerprint	Microphone	Security tokens
✓				✓				✓



Products: Titan Managed Detection & Response, Next-Generation Antivirus, Endpoint Detection & Response, Network Detection & Response, Inbox Detection & Response, Insider Threat Detection & Response, Managed Firewall, Managed SIEM.

Customer Focus: Banking & Financial, Criminal Justice, Defense, Oil & Gas, Enterprise & Corporate, Government, Healthcare, Sports & Events, Transportation

GoSecure Titan Managed Detection and Response helps all organizations reduce dwell time by preventing breaches before they happen. GoSecure Titan MDR offers a market-leading portfolio of modular detection and response capabilities, delivered as a cloud service, to protect critical data and assets.

Device fingerprinting	IP geolocation	True application	Device emulator /with malware	PIN	BIOMETRICS			
					Camera	Fingerprint	Microphone	Security tokens
			✓					



Products: Age verification, compliance solutions, contact center solutions, customer-based authentication, dynamic knowledge-based authentication, ID document scan solutions, identity verification

Customer focus: Age-restricted markets, banking, distance learning, eCommerce financial services, FinTech, gaming, healthcare, insurance, retail, tax, telecommunications online learning

IDology, a GBG company, provides real-time technology solutions that verify the identities and ages of consumers who are not present.

Device fingerprinting	IP geolocation	True application	Device emulator /with malware	PIN	BIOMETRICS			
					Camera	Fingerprint	Microphone	Security tokens
✓				✓	✓			

Device Intelligence Scorecard – All players are listed in alphabetical order.



Kount helps online businesses increase sales by reducing fraud and allowing them to accept more orders. For each transaction, Kount’s decisioning engine analyzes hundreds of relevant variables and activity from across the globe in real time.

Products: Kount Command, Kount Control, Kount Central, Dispute and Chargeback management solution, Data on demand, kount professional and guarantee services

Customer focus: Oil & Gas, Food Services, Retail, Leisure & Entertainment, Travel, Financial Services, Gaming, Streaming, Telecomm, Health & Beauty

Device fingerprinting	IP geolocation	True application	Device emulator /with malware	PIN	BIOMETRICS			
					Camera	Fingerprint	Microphone	Security tokens
✓	✓							



LexisNexis Risk Solutions helps government and industry customers manage risk with analytics, decisioning tools and other innovative technologies.

Products: Collections and recovery

Customer focus: Automotive lending, communications, credit card companies, government, online lending, retail banking

Device fingerprinting	IP geolocation	True application	Device emulator /with malware	PIN	BIOMETRICS			
					Camera	Fingerprint	Microphone	Security tokens
	✓							



LiveEnsure is an interactive authentication company with solutions that authenticate users, mobile devices, sessions, locations and behavior contexts with app-to-app rollover or touch-to-tap engagement. LiveEnsure offers mobile security solutions for cloud, web and apps on iOS, Android and Windows.

Products: Four factors of authentication

Customer focus: eCommerce, financial services, telecommunications, web developers

Device fingerprinting	IP geolocation	True application	Device emulator /with malware	PIN	BIOMETRICS			
					Camera	Fingerprint	Microphone	Security tokens
✓	✓			✓	✓	✓		

Device Intelligence Scorecard – All players are listed in alphabetical order.



LogMeIn, Inc. is a provider of software as a service (SaaS) and cloud-based remote work tools for collaboration, IT management and customer engagement, founded in 2003 and based in Boston, Massachusetts. The company's products give users and administrators access to remote computers.

Products: Cloud Applications, Federated Identity Management, Identity Management, Mobile Application, Password Management, Single Sign-On, Software-As-A-Service, Web Applications

Customer Focus: Individuals and Businesses, Software as a Service.

Device fingerprinting	IP geolocation	True application	Device emulator /with malware	PIN	BIOMETRICS			
					Camera	Fingerprint	Microphone	Security tokens
✓		✓		✓	✓	✓		



MaxMind's GeolIP data is used to locate internet visitors and show them relevant content and ads, prevent fraudulent online transactions and reduce manual review.

Products: miniFraud services, GeolIP2 Anonymous IP Database, GeolIP2 Enterprise database, GeolIP2 Precision Web services, GeolIP2 Databases, GeoLite2 Free Geolocation Data

Customer focus: eCommerce

Device fingerprinting	IP geolocation	True application	Device emulator /with malware	PIN	BIOMETRICS			
					Camera	Fingerprint	Microphone	Security tokens
✓	✓							



miniOrange offers security solutions in cloud security, identity and access management, mobile, and vulnerability management.

Products: Cloud identity broker service, fraud prevention, network security, single sign-on, social log-in, two-factor authentication

Customer focus: Government / Non-Profit Org, Media And Entertainment, Global Automobiles, Food And Beverages, Telecom And Internet Sector, and SMB Customers

Device fingerprinting	IP geolocation	True application	Device emulator /with malware	PIN	BIOMETRICS			
					Camera	Fingerprint	Microphone	Security tokens
✓	✓			✓			✓	✓

Device Intelligence Scorecard – All players are listed in alphabetical order.



mSIGNIA offers mobile authentication and device recognition solutions. The company's software helps businesses limit risk, reduce fraud and enhance customer experiences within fast-growing digital channels. mSignia uses authentication, intelligent behavior data analytics and biometric authentication.

Products: 3DS Merchant With Data Gateway, EMV 3DS Compliancy Platform, USDK And SDK Manager

Customer focus: Banking, eCommerce, gaming, healthcare, payments

Device fingerprinting	IP geolocation	True application	Device emulator /with malware	PIN	BIOMETRICS			
					Camera	Fingerprint	Microphone	Security tokens
✓	✓	✓	✓	✓		✓		



Neustar provides identity resolution solutions designed for a variety of industries.

Products: Marketing Solutions, Communication Solutions, Security Solutions, Risk Solutions

Customer focus: Automotive, communications, consumer packaged goods, financial services, hospitality, retail, technology, travel

Device fingerprinting	IP geolocation	True application	Device emulator /with malware	PIN	BIOMETRICS			
					Camera	Fingerprint	Microphone	Security tokens
	✓							



Okta is an independent identity solutions provider for enterprises. Its Okta Identity Cloud includes workforce and customer identity solutions and developers can use Okta's application programming interfaces to build customizable and secure user experiences.

Products: Adaptive multifactor authentication, application programming interface access management, life cycle management, secure server access, single sign-on, universal directory

Customer focus: Healthcare, Public Sector, Energy, Financial Services, Technology, Travel + Hospitality, and Nonprofit

Device fingerprinting	IP geolocation	True application	Device emulator /with malware	PIN	BIOMETRICS			
					Camera	Fingerprint	Microphone	Security tokens
✓		✓		✓		✓	✓	✓

Device Intelligence Scorecard – All players are listed in alphabetical order.



OneLogin is a cloud-based identity and access management provider that offers enterprise-level single sign-on and identity-management solutions. The company's solution is used by more than 2,000 enterprise customers for securing and managing identities in cloud, legacy and hybrid environments.

Products: Adaptive authentication, mobile identity, single sign-on, web access management

Customer focus: Education, finance, government healthcare, high-tech, insurance, manufacturing, media, nonprofit, professional services and retail services

Device fingerprinting	IP geolocation	True application	Device emulator /with malware	PIN	BIOMETRICS			
					Camera	Fingerprint	Microphone	Security tokens
✓	✓			✓				



Privakey offers multifactor authentication without requiring passwords, password managers, SMS messages, out-of-band codes or other protocols. It allows users to use personal devices like phones, tablets or computers with a PIN or biometrics as the unstored second factor. This protects against phishing, keylogging, device cloning, account takeover and other common attacks.

Products: Single Sign-On, Universal Directory, Advanced Server Access, API Access Management, Authentication, User Management, B2B Integration, Adaptive Multi-Factor Authentication, Lifecycle Management, Access Gateway

Customer focus: Financial services

Device fingerprinting	IP geolocation	True application	Device emulator /with malware	PIN	BIOMETRICS			
					Camera	Fingerprint	Microphone	Security tokens
✓				✓		✓		



RCDevs is a security company specializing in multifactor authentication and public key infrastructure. Its OpenOTP is an enterprise-grade user authentication solution based on open standards. It supports single-factor and multifactor user access with one-time password technologies and Universal Second Factor.

Products: OpenOTP, TIQR Server

Customer focus: Financial, government, healthcare, information technology

Device fingerprinting	IP geolocation	True application	Device emulator /with malware	PIN	BIOMETRICS			
					Camera	Fingerprint	Microphone	Security tokens
	✓			✓		✓	✓	✓

Device Intelligence Scorecard – All players are listed in alphabetical order.



Risk Ident offers anti-fraud solutions used to prevent payment fraud, account takeovers and fraud within account and loan applications.

Products: DEVICE IDENT, FRIDA

Customer focus: eCommerce, financial, telecommunications

Device fingerprinting	IP geolocation	True application	Device emulator /with malware	PIN	BIOMETRICS			
					Camera	Fingerprint	Microphone	Security tokens
✓	✓		✓			✓		



RSA provides business-driven solutions for advanced threat detection, cyber incident response, identity and access management and governance, risk management and compliance.

Products: Identity and Access Management, Integrated Risk Management, Omnichannel Fraud Prevention, Threat Detection and Response

Customer focus: Education, Financial Services, Healthcare, Retail, Services, Technology, Telecom, Travel and Hospitality

Device fingerprinting	IP geolocation	True application	Device emulator /with malware	PIN	BIOMETRICS			
					Camera	Fingerprint	Microphone	Security tokens
✓	✓	✓		✓	✓	✓		✓



SecureAuth provides access control solutions, allowing organizations to determine identities. It provides authentication security, sign-in and self-service tools together in a single platform.

Products: Authentication security, single sign-on, user self-service, passwordless authentication

Customer focus: Financial institutions, government, healthcare, retail

Device fingerprinting	IP geolocation	True application	Device emulator /with malware	PIN	BIOMETRICS			
					Camera	Fingerprint	Microphone	Security tokens
✓	✓			✓				✓

Device Intelligence Scorecard – All players are listed in alphabetical order.



Sift offers fraud detection systems, using large-scale machine learning technology to predict fraudulent behavior. The solution catches fraud that is unique to different businesses and stops fraudsters in real time.

Products: Payment Protection, Content Integrity, Account Defense

Customer focus: Classifieds, Dating, E-Commerce, Digital Goods, On Demand, Travel, Ticketing, Remittance, Payment Gateways, SaaS, Marketplaces & Communities

Device fingerprinting	IP geolocation	True application	Device emulator /with malware	PIN	BIOMETRICS			
					Camera	Fingerprint	Microphone	Security tokens
	✓							



Socure provides digital identity verification in over 180 countries. It assists enterprises with preventing fraud and account takeovers while increasing customer acceptance rates.

Products: ID+

Customer focus: Financial institutions, sharing economy

Device fingerprinting	IP geolocation	True application	Device emulator /with malware	PIN	BIOMETRICS			
					Camera	Fingerprint	Microphone	Security tokens
✓	✓				✓			



TransUnion is a credit reporting agency that uses data identities to help companies make informed decisions and grant consumers personalized opportunities.

Products: Debt Recovery, Global Fraud Solutions

Customer Focus: Auto Lending, Capital Markets, Collections, Communications, Credit Unions, Financial Institutions, FinTech, Healthcare, Insurance, Media, Mortgage, Property Management, Public Sector, Retail/eCommerce, Short-term Lending

Device fingerprinting	IP geolocation	True application	Device emulator /with malware	PIN	BIOMETRICS			
					Camera	Fingerprint	Microphone	Security tokens
✓	✓		✓	✓		✓		

Device Intelligence Scorecard – All players are listed in alphabetical order.



Products: VeridiumID, VeridiumAD

Customer focus: Enterprises, financial, government, healthcare, non-profits, insurance, y telecoms & mobile

Veridium offers biometric authentication technologies that increase security, reduce fraud and cut costs associated with passwords and traditional multifactor authentication solutions. VeridiumID is a software-only platform for biometric authentication that works in conjunction with a front-end mobile software development kit to embed biometrics into mobile apps.

Device fingerprinting	IP geolocation	True application	Device emulator /with malware	PIN	BIOMETRICS			
					Camera	Fingerprint	Microphone	Security tokens
✓						✓		



Products: Anti-counterfeiting, biometrics, identity protection

Customer focus: Individuals, industries, government

VerifyMe offers ID services to replace passwords and PINs with multifactor authentication. The company also authenticates individuals using facial recognition, fingerprint, voice and retina scanning, swipe pattern recognition, location detection and approved IP detection.

Device fingerprinting	IP geolocation	True application	Device emulator /with malware	PIN	BIOMETRICS			
					Camera	Fingerprint	Microphone	Security tokens
	✓	✓			✓	✓	✓	

Transaction Behavior Scorecard – All players are listed in alphabetical order.



Acuant provides identity verification services. Its offerings include data capture, autofill, document authentication and facial recognition features.

Products: ePassport issuance, facial recognition match and liveness test, identity document authentication, intelligent data capture and autofill, know your business, know your customer, manual document review, quality control and authentication, sanctions screening transaction monitoring and no-code rapid-deploy ID verification and know your customer/anti-money laundering
Customer focus: Financial, government, healthcare, hospitality, security

PAYMENTS				BIOMETRICS			
Click flow	History	Transaction	PIN	Camera	Fingerprint	Microphone	Security tokens
				✓	✓		



Adjust is the industry leader in mobile measurement and fraud prevention. By making marketing simpler, smarter, and more secure, we empower data-driven marketers to succeed.

Products: Attribution, Analytics, Automate, Audience Builder, Fraud Prevention, Unbotify
Customer focus: Ecommerce, Travel, Finance, Gaming, Finance, Subscription

PAYMENTS				BIOMETRICS			
Click flow	History	Transaction	PIN	Camera	Fingerprint	Microphone	Security tokens
✓							



BehavioSec offers Behaviometric solutions for risk-based authentication of end users. Behaviometrics identifies unauthorized users by detecting anomalies in keyboard/mouse or environment behavior and creates digital fingerprints from user behaviors.

Products: Account Takeover, New Account, Fraud, Checkout Fraud, Risk Based, Authentication, PSD2 & Strong Customer Authentication
Customer focus: Financial, information technology, online services

PAYMENTS				BIOMETRICS			
Click flow	History	Transaction	PIN	Camera	Fingerprint	Microphone	Security tokens
✓							

Transaction Behavior Scorecard – All players are listed in alphabetical order.



BioCatch provides behavioral biometric, authentication and malware detection solutions for mobile and web applications. Available as a cloud-based solution, BioCatch collects and analyzes cognitive parameters to generate a user profile.

Products: Account opening protection, account takeover protection, social engineering scam detection

Customer focus: e-government, online trading, gaming, enterprise, e-commerce, e-learning

PAYMENTS				BIOMETRICS			
Click flow	History	Transaction	PIN	Camera	Fingerprint	Microphone	Security tokens
✓							



Biometric Signature ID develops biometric ID verification software solutions that use multifactor authentication. The company helps organizations control risk, reduce fraud, manage security and maintain compliance.

Products: BioSight ID, BioSig ID, BioProof ID, BioTect ID

Customer focus: eCommerce, education, enterprise, financial, healthcare

PAYMENTS				BIOMETRICS			
Click flow	History	Transaction	PIN	Camera	Fingerprint	Microphone	Security tokens
✓				✓			



Broadcom helps businesses keep up in the communications sector with semiconductor and infrastructure software offerings.

Products: Enterprise software, mainframe software, optical products, security, storage and systems, wired connectivity, wireless

Customer focus: Automotive, enterprise, financial institutions

PAYMENTS				BIOMETRICS			
Click flow	History	Transaction	PIN	Camera	Fingerprint	Microphone	Security tokens
			✓				

Transaction Behavior Scorecard – All players are listed in alphabetical order.



Credence ID offers biometric authentication tools, including mobile fingerprint, iris and facial recognition technologies.

Products: CredenceCONNECT, CredenceTWO-R, CredenceTAB, Trident, CredenceONE-MRZ

Customer focus: Biometrics, enterprise, ePayments, government, identity

PAYMENTS				BIOMETRICS			
Click flow	History	Transaction	PIN	Camera	Fingerprint	Microphone	Security tokens
✓				✓	✓		



Cyxtera is focused on the detection and prevention of electronic fraud across devices, channels and clouds. Easy Solutions products range from fraud intelligence and secure browsing to multifactor authentication and transaction anomaly detection.

Products: Mobile anti-fraud protection suite, fraudulent transaction and activity detection, fraud intelligence, strong authentication, save browsing for any environment, mobile authentication

Customer focus: Financial services, security firms, retailers, airlines

PAYMENTS				BIOMETRICS			
Click flow	History	Transaction	PIN	Camera	Fingerprint	Microphone	Security tokens
	✓		✓				



Early Warning Services provides payment and risk solutions to financial institutions, government entities and payment companies. Its identity and authentication offerings improve account opening, simplify and unify authentication through a single application programming interface and fight fraud with behavioral biometrics.

Products: Authentication, payment, regulatory solutions

Customer focus: Financial institutions, government entities, payment companies

PAYMENTS				BIOMETRICS			
Click flow	History	Transaction	PIN	Camera	Fingerprint	Microphone	Security tokens
	✓		✓				

Transaction Behavior Scorecard – All players are listed in alphabetical order.



Products: Advanced analytics, credit risk scoring, customer engagement, customer management, debit collection and recovery, decisioning, financial crimes, fraud, industry risk scoring, marketing, optimization, origination, platform

Customer focus: Banking, collections agencies, energy and utilities, government, healthcare, insurance, manufacturing, media and entertainment, retail and eCommerce, telecommunications, transportation

FICO is an analytics software company. Its solutions help businesses make better decisions through big data and mathematical algorithms to predict consumer behavior. FICO provides analytics software and tools used across multiple industries to manage risk, fight fraud, optimize operations and meet strict government regulations.

PAYMENTS				BIOMETRICS			
Click flow	History	Transaction	PIN	Camera	Fingerprint	Microphone	Security tokens
✓	✓	✓					



Products: Payment Protection, PSD2 Solution, Policy Abuse Protection, Account Protection, Smart Routing, PSP Fraud Protection

Customer focus: fashion and Beauty, Travel, Food and Beverage, Home and Garden, Electronics, Physical Goods & Digital Services

Forter’s decision-as-a-service system eliminates fraud prevention frictions, such as the need for rules, scores or manual reviews. The company’s machine learning technology combines cyber intelligence with behavioral and identity analysis to create a multilayered fraud detection mechanism.

PAYMENTS				BIOMETRICS			
Click flow	History	Transaction	PIN	Camera	Fingerprint	Microphone	Security tokens
	✓	✓					



Products: Appliances, biometric readers and modules, cards and credentials, controllers, embedded modules, ePassports and eID cards, financial instant issuance, ID cards and badge printing, readers, radio-frequency identification tags and software

Customer focus: Banking, corporate, education, enterprise, financial, government, healthcare, sports and events, transportation, energy, defense, criminal justice

HID Global produces products related to the creation, management, and use of secure identities. The company can confirm identities and combat counterfeiters with multifactor authentication, such as biometrics, tokens or digital certificates.

PAYMENTS				BIOMETRICS			
Click flow	History	Transaction	PIN	Camera	Fingerprint	Microphone	Security tokens
✓			✓		✓		

Transaction Behavior Scorecard – All players are listed in alphabetical order.



IBM, in full International Business Machines Corporation, leading American computer manufacturer, with a major share of the market both in the United States and abroad. Its headquarters are in Armonk, New York.

Products: Titan Managed Detection & Response, Next-Generation Antivirus, Endpoint Detection & Response, Network Detection & Response, Inbox Detection & Response, Insider Threat Detection & Response, Managed Firewall, Managed SIEM.

Customer focus: Banking & Financial, Criminal Justice, Defense, Oil & Gas, Enterprise & Corporate, Government, Healthcare, Sports & Events, Transportation

PAYMENTS

BIOMETRICS

Click flow

History

Transaction

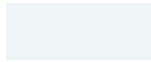
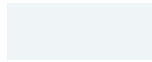
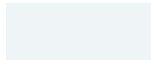
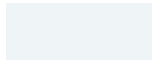
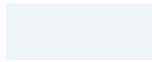
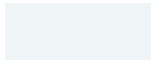
PIN

Camera

Fingerprint

Microphone

Security tokens



ID R&D is a biometric solution provider that focuses on the development of new biometric solutions to increase security and enhance user experience. The company has developed a suite of core biometric technologies for mobile login, chatbots and virtual assistants, and its solutions utilize various data points and biometric modalities – including behavioral, voice and facial recognition – to create frictionless biometric authentication in emerging communication channels.

Products: iBeta ISO PAD Testing, IDFraud Contact Center, IDLive Face, IDLive Voice, IDSquared, IDVoice, IDVoice for WhatsApp, IDVoice Verified, SafeChat

Customer focus: Device manufacturers, enterprise customers, identity and biometric solution providers, integrators

PAYMENTS

BIOMETRICS

Click flow

History

Transaction

PIN

Camera

Fingerprint

Microphone

Security tokens



KeyTrac provides companies with biometric solutions to identify users. Its offerings can be accessed using a common and commercially available computer keyboard.

Products: Keystroke biometrics

Customer focus: eLearning, financial, legal, online services, startups, universities

PAYMENTS

BIOMETRICS

Click flow

History

Transaction

PIN

Camera

Fingerprint

Microphone

Security tokens



Transaction Behavior Scorecard – All players are listed in alphabetical order.



LexisNexis Risk Solutions helps government and industry customers manage risk with analytics, decisioning tools and other innovative technologies.

Products: Collections and recovery

Customer focus: Automotive lending, communications, credit card companies, government, online lending, retail banking

PAYMENTS				BIOMETRICS			
Click flow	History	Transaction	PIN	Camera	Fingerprint	Microphone	Security tokens
		✓	✓	✓			



LogMeIn, Inc. is a provider of software as a service (SaaS) and cloud-based remote work tools for collaboration, IT management and customer engagement, founded in 2003 and based in Boston, Massachusetts. The company's products give users and administrators access to remote computers.

Products: Cloud Applications, Federated Identity Management, Identity Management, Mobile Application, Password Management, Single Sign-On, Software-As-A-Service, Web Applications

Customer Focus: Individuals and Businesses, Software as a Service.

PAYMENTS				BIOMETRICS			
Click flow	History	Transaction	PIN	Camera	Fingerprint	Microphone	Security tokens
			✓				



miniOrange offers security solutions in cloud security, identity and access management, mobile, and vulnerability management.

Products: Cloud identity broker service, fraud prevention, network security, single sign-on, social log-in, two-factor authentication

Customer focus: Government / Non-Profit Org, Media And Entertainment, Global Automobiles, Food And Beverages, Telecom And Internet Sector, and SMB Customers

PAYMENTS				BIOMETRICS			
Click flow	History	Transaction	PIN	Camera	Fingerprint	Microphone	Security tokens
			✓				✓

Transaction Behavior Scorecard – All players are listed in alphabetical order.



NetGuardians provides software that uses data to correlate and analyze behaviors across an entire bank system. The solution allows banks to target specific anti-fraud or regulatory requirements.

Products: Fraud protection

Customer focus: Private banking, Retail banking, digital banking

PAYMENTS				BIOMETRICS			
Click flow	History	Transaction	PIN	Camera	Fingerprint	Microphone	Security tokens
	✓						



NuData Security positively verifies users online with real-time passive biometrics and behavioral analytics.

Products: Continuous Validation, Good User Validation, NuDetect for Account Takeover, Card Testing, Online Account Origination (OAO), Smart Interface

Customer focus: Banking and Financial, eCommerce, Digital Goods, Healthcare

PAYMENTS				BIOMETRICS			
Click flow	History	Transaction	PIN	Camera	Fingerprint	Microphone	Security tokens
✓	✓	✓					



One Identity helps organizations establish an identity-centric security strategy with Identity Governance and Administration (IGA), AD Account Lifecycle Management and Privileged Access Management (PAM) solutions

Products: Identity Governance and Administration, AD Account Lifecycle Management, Privilege Access Management, Cloud/SaaS, Access Control

Customer focus: Banking & Financial, Criminal Justice, Defense, Oil & Gas, Enterprise & Corporate, Government, Healthcare, Sports & Events, Transportation

PAYMENTS				BIOMETRICS			
Click flow	History	Transaction	PIN	Camera	Fingerprint	Microphone	Security tokens
			✓				

Transaction Behavior Scorecard – All players are listed in alphabetical order.



Plurilock's solutions use artificial intelligence to identify, prevent and eliminate insider threats.

Products: Plurilock Adapt, Plurilock Defend

Customer focus: Banks, critical infrastructure, financial, government, healthcare, military

PAYMENTS				BIOMETRICS			
Click flow	History	Transaction	PIN	Camera	Fingerprint	Microphone	Security tokens
✓							



SecureAuth provides access control solutions, allowing organizations to determine identities. It provides authentication security, sign-in and self-service tools together in a single platform.

Products: Authentication security, single sign-on, user self-service, passwordless authentication

Customer focus: Financial institutions, government, healthcare, retail

PAYMENTS				BIOMETRICS			
Click flow	History	Transaction	PIN	Camera	Fingerprint	Microphone	Security tokens
✓			✓	✓	✓		✓



SECUREDTOUCH

SecuredTouch offers behavioral biometrics for mobile devices. The company collects and analyzes different behavioral parameters to create a unique user behavioral profile to authenticate transactions. The company offers both application- and device-based solutions.

Products: New Account Fraud, Account Takeover, Checkout Fraud, Bot & Emulator Detection, User Validation, Inventory Hoarding, Checkout Abuse

Customer focus: Travel, Retail, Digital Goods

PAYMENTS				BIOMETRICS			
Click flow	History	Transaction	PIN	Camera	Fingerprint	Microphone	Security tokens
✓	✓						

Transaction Behavior Scorecard – All players are listed in alphabetical order.



Sift offers fraud detection systems, using large-scale machine learning technology to predict fraudulent behavior, leveraging a global network of fraud data. The solution is intended to catch fraud that is unique to different businesses and to train specific customer customized models to stop fraudsters in real time.

Products: Payment Protection, Content Integrity, Account Defense

Customer focus: Classifieds, Dating, E-Commerce, Digital Goods, On Demand, Travel, Ticketing, Remittance, Payment Gateways, SaaS, Marketplaces & Communities

PAYMENTS				BIOMETRICS			
Click flow	History	Transaction	PIN	Camera	Fingerprint	Microphone	Security tokens
	✓						



Solus Connect's platform uses multifactor authentication and biometrics to verify users with no hardware necessary

Products: Behavioral authentication, eyeprint, multifactor authentication

Customer focus: Corporate, IT/ITES, TelecomBanking & Finance, Pharma & R&D Labs, ManufacturingServices & Retail, Logistics & Shipping, Government & Defence, Power & Energy, Oil & Gas, Rail, Air & Sea Ports, Hotels & Spas, Hospitals / Healthcare, Education, Residential

PAYMENTS				BIOMETRICS			
Click flow	History	Transaction	PIN	Camera	Fingerprint	Microphone	Security tokens
✓			✓	✓			



TeleSign is a provider of mobile identity solutions and offers account security and fraud prevention with two-factor authentication, based on each user's mobile identity (phone number, device and behavior), which is driven by real-time global intelligence, including reputation scoring and device data.

Products: Digital Identity, Programmable Communication

Customer focus: Financial Services, Gaming, eCommerce, Social Networking, On-demand Services

PAYMENTS				BIOMETRICS			
Click flow	History	Transaction	PIN	Camera	Fingerprint	Microphone	Security tokens
✓			✓	✓	✓		✓

Transaction Behavior Scorecard – All players are listed in alphabetical order.



Trustev, owned by Transunion, is a fraud prevention solution powered by technology that uses information surrounding a user’s behavior, device, email and social media when attempting to determine identity. Trustev provides services to retail, banking, digital goods, insurance, airlines and other travel-related companies.

Products: ID checks, digital data

Customer focus: Retail, banking, digital goods, airlines & travel, insurance

PAYMENTS				BIOMETRICS			
Click flow	History	Transaction	PIN	Camera	Fingerprint	Microphone	Security tokens
✓							



Twosense provides a mobile software development kit that offers continuous, invisible user authentication practices through behavioral biometrics. It can be integrated with a few lines of code, and observes and models authorized users’ behavioral fingerprints to deny entry to attackers. The solution also applies deep learning tools to reduce fraud and improve user experiences.

Products: Automate User Authentication

Customer focus: Call centers, mobile banking, mobile payments

PAYMENTS				BIOMETRICS			
Click flow	History	Transaction	PIN	Camera	Fingerprint	Microphone	Security tokens
✓							



TypingDNA provides biometric technology. It offers proprietary artificial intelligence software to identify users by the way they type on their keyboards. The solution also provides quick integration via application program interfaces.

Products: Authentication solutions

Customer focus: Financial

PAYMENTS				BIOMETRICS			
Click flow	History	Transaction	PIN	Camera	Fingerprint	Microphone	Security tokens
✓							

Transaction Behavior Scorecard – All players are listed in alphabetical order.



UnifyID offers authentication services with solutions that rely on implicit authentication and are based on location, technology usage habits and sensor technology. The company also offers machine learning software.

Products: Multi-Factor Authentication Solution

Customer focus: All industries

PAYMENTS				BIOMETRICS			
Click flow	History	Transaction	PIN	Camera	Fingerprint	Microphone	Security tokens
✓							



Zighra's provides user recognition by adding an invisible biometric layer to mobile and internet of things authentication. Zighra applies the intelligence of biological systems to security to deliver continuous authentication to mobile transactions.

Products: SensifyID

Customer focus: Mobile financial services, retail

PAYMENTS				BIOMETRICS			
Click flow	History	Transaction	PIN	Camera	Fingerprint	Microphone	Security tokens
✓					✓		

ABOUT

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PYMNTS.com

[PYMNTS.com](#) is where the best minds and the best content meet on the web to learn about “What's Next” in payments and commerce. Our interactive platform is reinventing the way in which companies in payments share relevant information about the initiatives that shape the future of this dynamic sector and make news. Our data and analytics team includes economists, data scientists and industry analysts who work with companies to measure and quantify the innovation that is at the cutting edge of this new world.

jumio

When identity matters, trust Jumio. Jumio's mission is to make the internet a safer place by protecting the ecosystems of businesses through cutting-edge online identity verification and authentication services that quickly and accurately connect a person's online and real-world identities. Jumio's end-to-end identity verification solutions fight fraud, maintain compliance and onboard good customers faster.

Leveraging advanced technology including informed AI, biometrics, machine learning, certified 3D liveness detection and human review, Jumio helps organizations meet regulatory compliance including KYC, AML and GDPR and definitively establish the digital identity of their customers. Jumio has verified more than 225 million identities issued by over 200 countries and territories from real-time web and mobile transactions. Jumio's solutions are used by leading companies in the financial services, sharing economy, digital currency, retail, travel and online gaming sectors. Based in Palo Alto, California, Jumio operates globally with offices in North America, Latin America, Europe and Asia-Pacific and has been the recipient of numerous awards for innovation. For more information, please visit www.jumio.com.

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