

Biometric Recognition



Biometric recognition technology has advanced from fingerprint and voice recognition to palm, face, IRIS, and even vein recognition which is aided by government investments and increasing security concerns in devices



Biometrics is an automated recognition technology used to recognize individuals on their behavioural and biological characteristics and also regulates access to physical space, information, or services



Stringent security government protocols levied across various sectors to gain access rights to information or physical space

Increasing need of security in smart phones, wearable technology, and other portable devices

Huge investments from the government bodies towards development of security and surveillance infrastructure

Key Challenges



High initial investment cost for installation of Biometric devices and back-end infrastructure

Key Technologies



Fingerprint/Palm

Fingerprint sensors are the fastest and widely deployed technology due to its increasing demand in smartphones, government support for the adoption of fingerprint sensors and use of biometrics in mobile commerce



IRIS

Factors such as uniqueness, stability, and security are driving the demand for iris recognition market. Further, increasing adoption of multi factor authentication services in government organizations, aerospace, and defense is also aiding the market growth



Voice Recognition

Voice recognition development is gaining momentum due to the growing demand of virtual assistants coming with the popularity of Amazon Alexa and Google Assistant



Face Detection

The latest launched iPhone 8 and iPhone X are expected to make the facial recognition technology climb up the growth curve in the coming years



Vein Recognition

Vein recognition biometrics technology, still at nascent stage, relatively more efficient and accurate than the other types of biometric systems and exhibit lower False Acceptance Rate (FAR) and False Rejection Rate (FRR) which is a vital reason behind its increasing adoption in industries such as security, finance, electronics, gaming, and healthcare

Adoption of biometric system in BFSI sector for protected transaction, acceptance of advanced authentication and recognition systems in automobiles & increased concern regarding speedy identification are likely to drive the biometric market across different verticals

Biometric Recognition – Key Industry Served and Applications

Automotive
Chrysler has deployed face recognition technology to its infotainment system and personalized car settings (seat & mirror position)

Healthcare
Northwell Health, New York, utilizes IRIS scanning biometrics technology from Right Patient, in order to be assure of patients correct identity

Banking
Barclays Bank utilizes Hitachi Finger Vein Technology to corporate customers in order to authorize transactions

Transportation
HyreCar, a car sharing company deployed Mitek's selfie authentication technology, which is used to verify customer identity and rent a car with their mobile devices

Military & Defense
Biometrics plays an essential role in U.S. Army intelligence activities, to recognize anatomical, physiological, and behavioral characteristics of an individual

Key Torch Bearers...

	Finger	Palm	Vein	Voice	IRIS	Face
ASSA ABLOY	✓				✓	
FUJITSU		✓				
THALES				✓		
PRECISE BIOMETRICS	✓					
NEC	✓	✓	✓	✓	✓	✓
CROSSMATCH TECHNOLOGIES	✓	✓				

KEY INSIGHTS

In current scenario, facial, iris and fingerprint technologies are widely used across sectors; vein and voice sensor technologies are still at the nascent stage, expected to gain momentum in future.

Going forward, the integration of Artificial Intelligence with Biometric Recognition technology is expected to increase, further enhancing the security and surveillance infrastructure by providing end-users with best possible solutions.