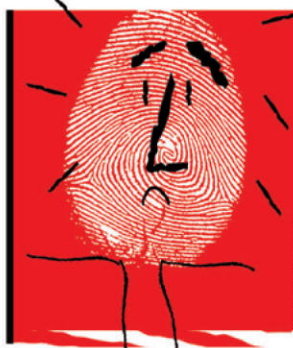


RULE OF THUMB IN IDENTITY

What started as a first-of-its-kind biometrics-based unique identity to eradicate the menace of duplication, frauds and fakes (PAN, driving licence, passports, ration cards et al) is now being used for almost everything. Transferring subsidy benefits, availing pensions, quick issuance of passports, registering marriages and the latest, linking Aadhaar to PAN cards, mobile SIMs and driving licences. A look at how Aadhaar has become hydra-headed, and the most used identity in the world



ANIRBAN BORA

Benefits of Aadhaar – from targeted subsidies to universal verification – are real, but so are fears of biometric theft. So be careful when flashing that victory sign at cameras

Shelley Singh

As far as identification technology for citizens goes, nothing in the world rivals or even comes close to Aadhaar. The biometric-based (fingerprints and iris scans) 12-digit unique identity, now used by almost 1.1 billion Indians, is the most advanced of its kind. Jaijit Bhattacharya, partner, strategy and economics, KPMG India says, “India is at least a decade ahead of any other country in terms of using biometrics as an identity.”

The US and other countries use biometrics at immigration. Australia and Canada use biometric-based checks for border control. Israel also has Aadhaar-like biometric database of all Israeli residents. However, “no country is using biometric-based systems in as wide range of applications as India is envisaging,” says Madhur Singhal, partner, Bain & Company.

Plagued as India is by the menace of duplicate cards—random estimates suggest many citizens have anywhere from two to five driving licences, ration cards and the like—Aadhaar is the only one that evidently can’t be duplicated. And the government is pushing Aadhaar for almost everything—marriage certificates, passports, pension claims, opening bank accounts and now for mobile connections and also to be linked to PAN cards.

Neel Ratan, leader, government and public sector, PricewaterhouseCoopers (PwC) India, says, “It makes immense sense to use Aadhaar to solve numerous problems in society—like targeting subsidies to right people. Ghost beneficiaries have disappeared with its use.”

Aadhaar is already being used in multiple places (see graphic). Its biggest benefit is universal and trusted verification of any individual and, as a result, Aadhaar

is being used to acquire and authenticate customers faster in businesses like financial services or banking by doing eKYC (electronic Know Your Customer), eSigning of documents and so on. Besides, “the government is linking transfer of subsidies and other benefits through Aadhaar. This ensures transparency. Aadhaar will form the basis for digital storage of documents as well, very soon,” says Singhal. Even as the Aadhaar world expands,

As the Aadhaar world expands, there are noises on why it is being made mandatory for so many schemes and how secure it is

there have been noises about why it is being made mandatory for multiple government schemes and how secure it is. The Supreme Court has already noted that not having Aadhaar cannot be the basis for denying services. Certain groups have questioned security and raised privacy concerns. Recently, even former cricket captain MS Dhoni’s personal details were made public by a private Aadhaar enrolment centre, which has now been banned for 10 years.

BIOMETRICS AREN’T IMPREGNABLE Aadhaar looks super hi-tech and impregnable today. But technology itself could make it vulnerable. Aadhaar needs to be further strengthened as devices can be compromised to extract biometrics if the target is high value. Bhattacharya says, “Also, biometrics such as fingerprints have been shown

to be compromised by taking a high resolution picture of the fingers and converting it into fingerprint gloves.”

Be careful when you pose with the victory sign or a thumbs up ‘like’ sign before cameras. Fears of biometric theft are real and now the Japanese have reportedly started using skin-coloured gloves when being photographed so fingerprints can’t be lifted, which is possible via high-resolution photographs taken from a distance of 10 metres or less.

Researchers at Japan’s National Institute of Informatics (NII) were able to copy fingerprints based on photos taken by digital cameras. “Just by casually making a peace sign in front of a camera, fingerprints can become widely available,” NII researcher Isao Echizen was quoted in a January 11 post. He added that anyone can easily copy fingerprints. “Similarly, iris scans can be compromised. It’s possible to wear silicone implants with someone else fingerprints to access, say bank account, if that’s the only mode of access,” says Bhattacharya.

Adds Pradeep Dubey, Intel Fellow, Intel Labs director, parallel computing lab, “Biometrics has its own unique domain specific algorithms. The new trend is multi-modal—combine multiple forms of biometric features such as fingerprints, voice, iris and gait to improve recognition and resilience.”

Dubey believes the way out is to combine biometrics with non-biometric identification approaches, like one-time passwords. Some biometric hacking techniques are expensive and futuristic. Ratan feels “security fears are being overplayed.”

Eventually, though, nothing is 100% secure, particularly any computer-based system. Ratan says, “Aadhaar has the best possible security at present. Criticism comes from people who don’t get any benefit from Aadhaar. Ask the poor and those who benefit and it’s a different story.”

THE SPECS

LAUNCHED ON
January 18, 2009
FIRST AADHAAR ID ISSUED ON
Sept 29, 2010

Unique Identification Authority of India (UIDAI) set up in July 2016 under ministry of electronics and information technology. UIDAI issues Aadhaar numbers

AADHAAR DATA CENTRE LOCATION:
Industrial Model Township (IMT) Manesar, Gurgaon

NUMBER OF PEOPLE ENROLED
1.13 billion as on March 31, 2017
BUDGET \$1.27b up to Nov 2016

MAY 2012 Aadhaar linked to Mahatma Gandhi National Rural Employment Guarantee Scheme (MGNREGS). In Jan 2017 Aadhaar made mandatory for MGNREGS
OBJECTIVE: To remove ghost beneficiaries

FEB 2013 Direct Benefit Transfer of LPG (DBTL) started. Relunched in Nov 2014
OBJECTIVE: Only those in need get subsidised gas
IMPACT: 24% reduction in sale of subsidized LPG. Total savings ₹15,000 cr as on March 2016



2016: Aadhaar (Targetted Delivery of Financial and other Subsidies, Benefits & Services) Act 2016 passed by Parliament. Aadhaar gets statutory backing for transfer of subsidies

SEPT 2015: Direct Benefits Transfer rolled out for Public Distribution System (PDS)

MARCH 2015: Election Commission plans to link voter IDs to Aadhaar

2017 Aadhaar made mandatory for availing benefits under National Food Security Act (NFSA). Will help 800 million people get subsidized food.

TILL MARCH 2017, 72% beneficiary households had linked Aadhaar to ration cards

Aadhaar made mandatory for defence pensioners. Have time till June, 2017 to enroll

FROM JULY 1 Aadhaar must be linked to PAN cards. Objective: keep tabs on taxable transactions

1.08 cr assesses have Aadhaar linked PAN. There are 25 crore PAN card holders &

1.13 b Aadhaar card holders. Less than 6 crore people file income tax returns

Motor Vehicles Amendment Bill 2016 links Aadhaar to Driving Licences & vehicle registration



Banks to enable Aadhaar Pay. This will help those who don’t have debit cards, mobile wallets or smartphones to go cashless

Telcos asked to re-verify existing mobile phone users via Aadhaar. This will cost ₹2,500 cr and has to be completed by early 2018. Aadhaar KYC mandatory for new SIMs



Other Uses

Only document needed to open a Jan Dhan account

Getting linked to salary, provident fund disbursements, property registration

Some matrimonial websites also insisting on Aadhaar

The quickest way to get passport; in just 10 days if you have Aadhaar

Can get married anytime, but can’t register marriage without Aadhaar

In 2013, card machines were enabled to read both chip and input PIN. Now they will have to be Aadhaar enabled as well

Aadhaar Spends

Fiscal Year	Expenditure (\$ million)
2009-10	3.9
2010-11	40
2011-12	180
2012-13	200
2013-14	230
2014-15	240
2015-16	250
2016-17	130

Total: \$1.27 billion