Tamil Nadu Chief minister Edappadi K Palaniswami - announced in the assembly on July 12 the government’s plan to maintain a ‘virtual vault’ for each citizen.

The vault will electronically store and deliver on people’s mobile phones their birth certificates, death certificates and everything in between.

- The project will cost ₹90 crore.
- At present, e-governance tools allow citizens to apply for documents like licences and clearance certificates.
- Now, the government plans to employ blockchain technology to deliver the goods without being asked.
- Enabling this will be a unique number for each citizen (‘makkal’ number) which the Tamil Nadu e-Governance Agency (TNe-GA) has created for more than seven crore people of the state.
- The software used for issuing certificates will be modified so that every document generated will move to the vault with reference to the ‘makkal’ number.
- Every citizen can view the documents in his vault on his mobile phone by verifying his identity through an OTP.
✓ Government agencies and private employers can verify the genuineness of qualifications electronically with the consent of the applicant
✓ TNeGA will build a blockchain platform for the state at ₹40.8 crore, which will be offered as a service to all government departments without them having to maintain a blockchain node
✓ A blockchain is a digital, public ledger that records online transactions permanently, which is managed by cluster of computers not owned by any single entity
✓ The data stored using blockchain technology cannot be altered and it does not carry any transaction cost
✓ As the blockchain network has no central authority, the information in it is ‘transparent’, i.e. it is open for anyone to see
✓ Blockchain is the core technology for cryptocurrencies like bitcoin
✓ It is typically managed by a peer-to-peer network collectively adhering to a protocol for communication and validating new blocks.
✓ Once recorded, the data cannot be altered without the consensus of the network majority
✓ So, in case of fake data or information, it cannot be reversed

**Chennai - received its first water train of 50 wagons, after a gap of 18 years, from Vellore district on July 12**

✓ Nearly 2.75 million litres of water was transported by the train, covering over 200-km distance from Jolarpet to Villivakkam railway station in four hours.
✓ A 600m pipeline will carry the water from the train to Kilpauk water station where it will be treated before being pumped to households in the city
✓ The much-awaited water special consisting of 50 wagons was received by Local Administration Minister S.P. Velumani near the Villivakkam railway station.
✓ A total of 10 mld of water is to be brought from Jolarpet in four such dedicated trains daily to tide over the city’s water crisis.
✓ Each wagon has a capacity to carry 50,000 litres of water.
✓ The water train was flagged off by Tamil Nadu Water Supply and Drainage (TWAD) Board Managing Director C.N. Mahesvaran at Jolarpet
✓ The surplus water supplied from Mettur to various places in Vellore district under the Vellore Combined Water Supply Scheme was being diverted to Chennai.
✓ Other places which are benefiting from the scheme include Ambur, Salem, Gudiyatham and Arakkonam.
✓ The required infrastructure was built at a cost of ₹5 crore near Jolarpet railway station in one week to fill the wagons.
It will take nearly 12 hours for one train to complete a round trip, including loading and unloading of water.

This water will enable Metrowater to sustain supply to Chennai city at 525 mld (million litres a day).

This special wagon rakes were made at the wagon repair shop at Kota in Rajasthan.

The Kota workshop, primarily tasked with making wagons for transporting edible oil, began work on the water wagons on June 25 after a rake arrived from Karchhia in Vadodara, also in Western Railway.

INDIA AND OTHER COUNTRIES

The United States - will consider a “301 investigation” against India if the trade issues between the two countries are not resolved quickly.

'301 investigation' is a probe employed as a precursor to tariffs and other trade measures against a country.

Section 301 of the U.S. Trade Act (1974) was also to authorise a 2017 probe that resulted in tariffs on Chinese exports to the U.S. from July 2018.

Earlier this week, the USTR announced a 301 probe against France on a digital services tax.

SCIENCE, TECHNOLOGY & ENVIRONMENT

An international flight crew, known collectively as ‘One More Orbit’ - has broken a world record after flying around the world in 46 hours, 39 minutes, and 38 seconds via north and south poles.

The team, which flew in a Qatar Executive Gulfstream G650ER ultra long-range business jet, managed to beat the world record by 5 hours, 51 minutes, and 26 seconds.

One More Orbit’s flight also broke two previous records.

The first, for the quickest overall time to fly around the world was set in 1977 by Captain Walter Mullikin, while the second, for the fastest average speed, was set by Captain Aziz Ojeh in 2008.

The total route spanned about 22,328 nautical miles (41,351 km) with the average speed of about 861 kmph.
The pilots attempted the flight to celebrate the 50th anniversary of the Apollo 11’s first moon landing on July 20, 1969, which saw humans go to the moon for the first time.

It started and ended its mission at NASA’s Kennedy Space Center in Florida—exactly where the Apollo 11 crew took off almost 50 years ago.

**India’s first ethanol-powered motorcycle — Apache RTR 200 Fi E100** was launched by Chennai-based TVS Motor.

- It was unveiled by Union Minister for Road Transport and Highways, Nitin Gadkari.
- Priced at ₹1.20 lakh, the green-energy two-wheeler will be available in Maharashtra, Uttar Pradesh and Karnataka.
- The company had first showcased the concept in Auto Expo 2018.
- Ethanol is domestically produced from renewable plant sources.
- It is non-toxic, biodegradable, as well as safe to handle, store and transport.
- Ethanol is an oxygenated fuel that contains 35% oxygen.
- It reduces nitrogen oxide emissions from combustion apart from helping to reduce carbon monoxide emissions, particulate matter and sulphur-di-oxide.
- However, there are no ethanol fuel stations in the country right now.

**ECONOMY**

**State Bank of India** - has waived charges on most electronic fund transfer modes to encourage customers to make digital payments.
- The completely withdrawn charges include those on Real Time Gross Settlement (RTGS) and National Electronic Fund Transfer (NEFT) using internet and mobile banking as well as on the bank’s YONO app from July 1, 2019.
- In addition to this, charges on Immediate Payment Service (IMPS) have been fully waived on all mobile phone transactions with effect from August 1, 2019.
- IMPS is also free for branch transactions for amounts up to ₹1,000.
- It has also reduced charges for electronic fund transfers at the branch by 20%.
- Last month, the RBI had waived charges on banks for processing RTGS and NEFT payments.
- SBI accounts for 18% of all mobile banking transactions in the country.

**APPOINTMENTS**

**Anshula Kant, SBI managing director** - has been appointed MD and CFO of World Bank.
- Ms. Kant will be the first woman CFO of the bank.
Kant will be responsible for financial and risk management of the WB Group.

She holds an Honours degree in Economics from Lady Shri Ram College and is a post-graduate in Economics from the Delhi School of Economics.

**SPORTS**

- **Table tennis stalwarts hailing from Chennai, G Sathiyan and Anthony Amalraj - ended their World Tour Platinum Australian Open with a bronze medal on July 12 in Geelong, Australia**

  - This was the first ever medal for India in the Australian Open, which is a Platinum event.
  - The Indian pair lost out to the top-seeded Korean pair of Jeoung Youngsik and Lee Sangsu in straight sets.

- **Ajay Singh - rewrote Commonwealth records in clean and jerk and total - to take the men’s 81kg gold medal in the Commonwealth weightlifting championships in Apia, Samoa**

  - Ajay did 190kg in clean and jerk and 338kg in total to better Canadian Alex Bellemarre’s records of 183kg and 337kg, respectively.

- **The Indian Olympic Association (IOA) - has taken over the control of the derecognised Indian Golf Union (IGU)**

  - It has formed a five-member ‘golf governance committee’ which will oversee all aspects concerning the “participation of athletes and officials in the Tokyo Olympic qualifiers/ events” until IGU’s fresh election takes place.
  - The committee will have Kavita Singh as chairperson, with Mukesh Kumar, Onkar Singh, Vir Srivastava and a nominee of the International Golf Federation (IGF) as its four other members.
  - The Sports Ministry has derecognized IGU for failing to oblige its March 8, 2019 letter and removed its name from the list of recognised national sports federations (NSFs) from its website.
  - The March 8 communication from the ministry had directed the IGU to conduct its Annual General Meeting (AGM) and hold the elections as per the national sports code, 2011 on or before the June 30 deadline.
CHANDRAYAAN-2’S TAMILNADU CONNECTION – A REPORT

✶ Isro – had conducted the dry run of Chandrayaan-2’s lander and rover using the soil from Tamil Nadu’s Sithampooandi and Kunnamalai villages near Salem, whose ‘anorthosite’ rock had ‘similar’ features and composition of the Lunar soil

- It turned out to be a ₹25-crore project with the experts from the National Institute of Technology in Tiruchiri, Periyar University in Salem, and the Indian Institute of Science, Bengaluru, joining in, working without any fee
- Isro had created a proto-Lunar Terrain Test Facility (LTTF) at its advanced satellite testing unit, ISITE, in Bengaluru for Chandrayaan-1 orbiter mission of 2008
- For recreating the terrain, an option was to import simulated lunar soil from the U.S. — at an exorbitant $150 a kg (the then prevailing price).
- The facility needed about 60-70 tonnes of soil.
- However, for Chandrayaan-2, ISITE’s parent, the U.R. Rao Satellite Centre, or URSC (it was called the ISRO Satellite Centre or ISAC at the time) decided to find its own ‘soil’ solution at a lower cost
- At the Lunar Terrain Test Facility (LTTF), the team spread the soil trucked in from Salem up to a height of about 2 metre
UN’s MULTIDIMENSIONAL POVERTY INDEX – A REPORT

UN’s Multidimensional Poverty Index is a comprehensive measure that tracks various kinds of deprivations to define poverty, unlike India’s national poverty line based on nutritional intake, or the income-based international poverty line (income below $1.90-PPP a day). In the 2019 index, UN notes that 271 million Indians escaped poverty over a period of 10 years. A look at how the numbers stack up for India.

How Has India Improved

The report shows that India has improved quite significantly in the use of cooking fuel and sanitation. Other deprivations that also saw big improvements were housing, asset ownership and nutrition.

Bangladesh, Pakistan Too Saw Good Improvement

While our neighboring countries clocked significant positive change over the previous survey, among more populous African countries, Nigeria and Ethiopia both saw absolute numbers of their poor go up.

What is Poverty: The UN Multidimensional Poverty Index Measures It in Respect of Certain Deprivations...

The global Multidimensional Poverty Index (MPI) is calculated by identifying multiple deprivations. These deprivations are divided into three broad categories – health, education and standard of living – each with 33.3% weighting.

<table>
<thead>
<tr>
<th>Dimensions of Poverty</th>
<th>Indicator</th>
<th>Deprived if living in a household where...</th>
<th>Weight</th>
</tr>
</thead>
<tbody>
<tr>
<td>Health</td>
<td>Nutrition</td>
<td>Any person under 70 years is undernourished</td>
<td>16.7</td>
</tr>
<tr>
<td></td>
<td>Child mortality</td>
<td>There was death of an under-18 child in five years leading up to survey</td>
<td>16.7</td>
</tr>
<tr>
<td></td>
<td>Years of schooling</td>
<td>No member 10 years or older has studied beyond primary school</td>
<td>16.7</td>
</tr>
<tr>
<td></td>
<td>School attendance</td>
<td>Any child eligible up to middle school is not attending school</td>
<td>16.7</td>
</tr>
<tr>
<td>Education</td>
<td>Cooking Fuel</td>
<td>Cooking is done with dung, wood, charcoal or coal fuel</td>
<td>5.6</td>
</tr>
<tr>
<td></td>
<td>Sanitation</td>
<td>Sanitation facility is not improved, or is shared with others</td>
<td>5.6</td>
</tr>
<tr>
<td></td>
<td>Drinking Water</td>
<td>There is no drinking water within at least a 30-min walk from home, round trip</td>
<td>5.6</td>
</tr>
<tr>
<td>Standard of living</td>
<td>Electricity</td>
<td>There is no electricity</td>
<td>5.6</td>
</tr>
<tr>
<td></td>
<td>Housing</td>
<td>At least one of roof, walls and floor is not pucca</td>
<td>5.6</td>
</tr>
<tr>
<td></td>
<td>Assets</td>
<td>More than one of these is lacking: radio, TV, phone, computer, animal cart, bicycle, motorbike or refrigerator, and does not own a car or truck</td>
<td>5.6</td>
</tr>
</tbody>
</table>