



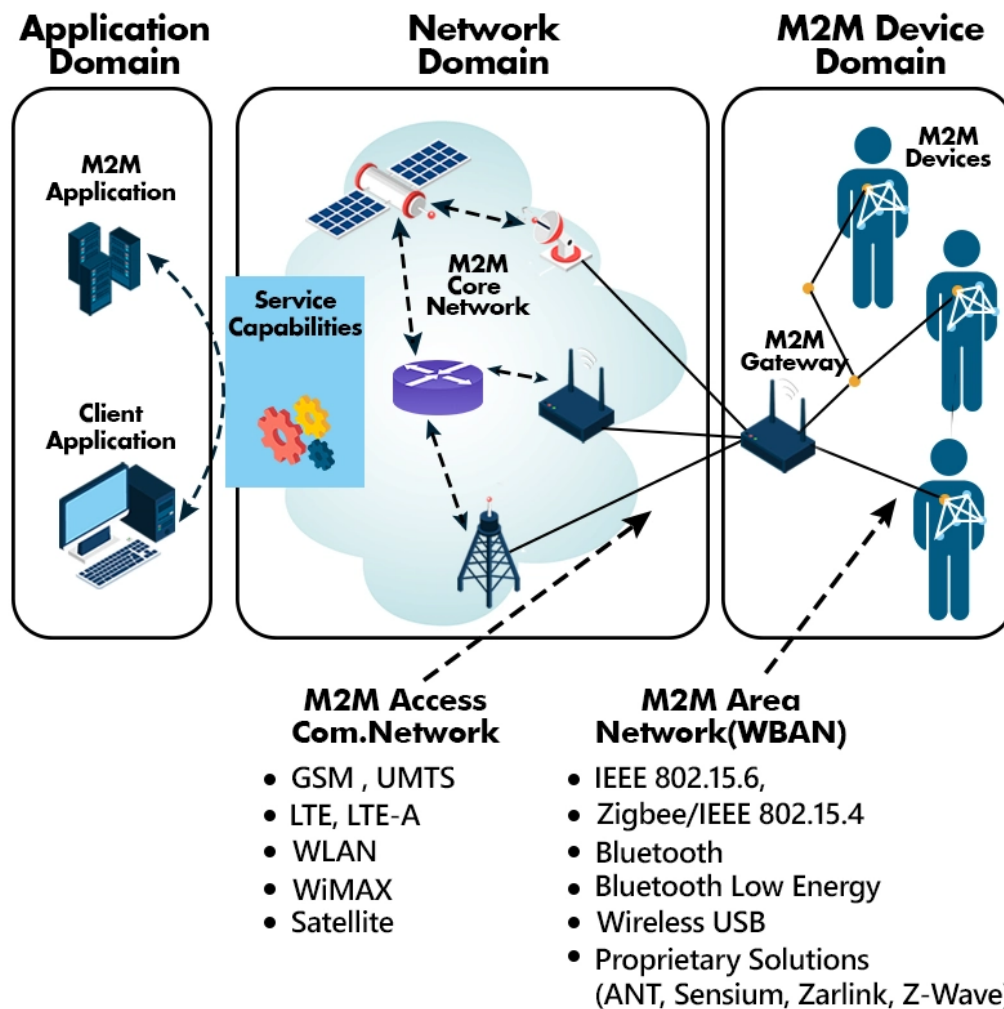
## M2M Communication and eSim Technologies

[Source: PIB](#)

The [Telecom Regulatory Authority of India \(TRAI\)](#) has released recommendations on the usage of [Embedded SIM \(eSIM\) for Machine-to-Machine \(M2M\) communications](#) to ensure security through proper [Know Your Customer \(KYC\) for network security](#), fraud risk mitigation, and overall integrity of the M2M eSIM ecosystem.

- M2M, the next generation of Internet revolution, connects devices through **automated communication without human intervention**. Embedded sensors and communication modules **enable data transmission through wired and wireless networks**.
  - With the rollout of [5G services](#), the M2M ecosystem's opportunities have expanded, offering increased scope for applications in sectors such as agriculture, transportation, healthcare, and industrial automation.
- **Understanding M2M Technology:**
  - It's a way for devices to exchange information directly, without needing a person in the loop. They can be simple things like sending alerts (like a smoke detector) or exchanging complex data (like factory machines).
    - For example, a smart thermostat might talk to a smart sprinkler system. If the thermostat detects it's a hot day, it can tell the sprinklers to turn on and keep the lawn healthy.

# Simple M2M Architecture



- An eSIM is a digital SIM card embedded directly into a device, eliminating the need for a physical SIM card. It's programmable remotely via inbuilt device software.

Read more: [eSIMs Technology](#)

PDF Refernece URL: <https://www.drishtias.com/printpdf/m2m-communication-and-esim-technologies>