

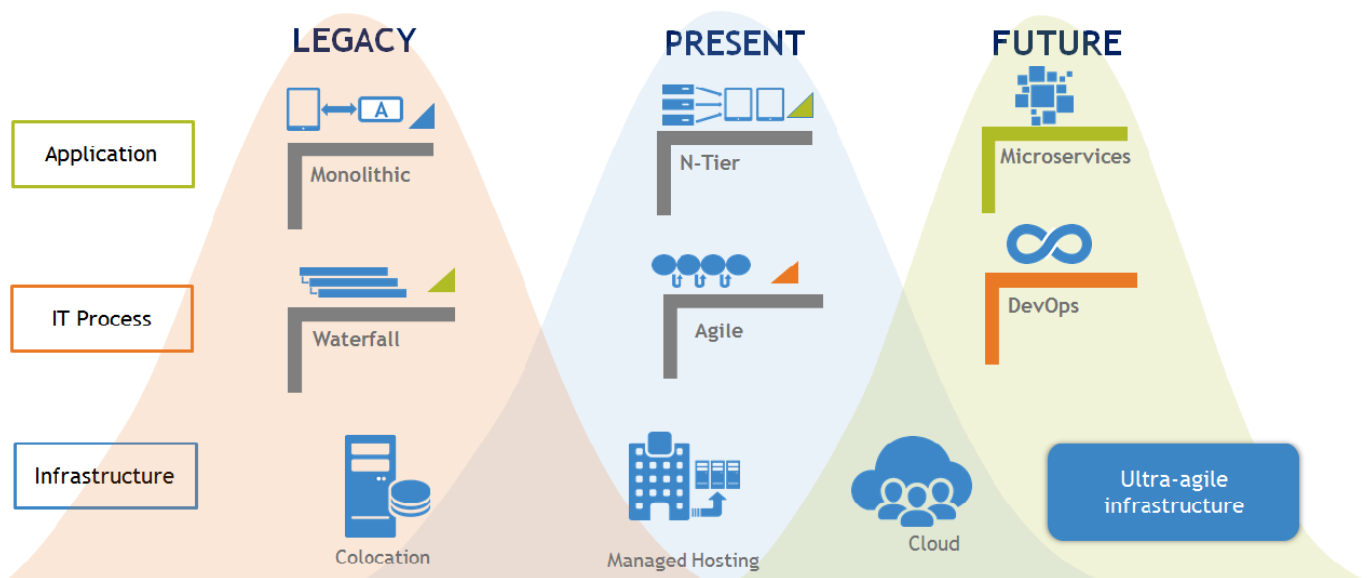
BUILDING A SMARTER INDIA

The '100 Smart Cities Mission' is one of the Government of India's transformative initiatives. It defines its objective as 'improving the quality of life and attracting people and investments to cities, setting in motion a virtuous cycle of growth and development'.

A critical success factor of the 'Smart Cities' mission is the underlying technology platform that will power it. Specifically, hosting applications that can handle such large user volumes demands resilient and agile infrastructure supported by automation with over the top visibility.

THE CLOUD IS THE IDEAL HOME FOR INDIA'S SMART CITIES

Given the requirements outlined, the best route is to make the cloud the preferred choice for infrastructure deployment. The government can locate its application workloads there to address challenges such as scalability, stability, security and agility. What's more, it can place its DR workloads on the cloud to manage risk and ensure business continuity - as well as make valuable cost savings.



WHAT DO SMART CITIES NEED?

To be truly successful, your Smart City infrastructure must address seven key requirements:

- **Fully managed and available IT infrastructure and datacentre:** Smart, scalable, as well as agile - both elements should be available 24/7/365 and be underpinned by SLAs. The IT infrastructure should also be managed round the clock by trained resources using best practice IT Service Management tools. These should give you the freedom to choose technologies such as Hypervisor from VMware, Hyper-V and KVM, depending on application workload. Datacentres and DR centres must be strategically placed in cities that are in different seismic zones to ensure availability even in the event of natural disasters.
- **Data storage:** Data in smart cities is generated in petabytes. This then needs to be retained and accessed for long periods for both statutory and management requirements. Scalable, robust and cost-effective data storage is therefore vital.
- **Compliance:** Services should be 100% compliant to government technical and security needs. Using MietY-accredited services which adhere to government guidelines makes deploying government infrastructure fast and easy. A Government community cloud (GCC) can also be explored in order to ensure that the physical infrastructure is shared only amongst various government departments and other smart cities.

- **Contact centre:** This is an integral part of any Smart City project. As such, the contact centre must deliver 100% availability to ensure that citizens can always reach out to the government with complaints and service requests.
- **Predictable cost:** Although the underlying infrastructure remains constant for almost all Smart City projects, the application can change from vendor to vendor. A large portion of this infrastructure covers compute, storage and licenses (from multiple OEMs).
- **Agility:** To meet future needs with zero disruption, the infrastructure must be easily upgradable, scalable and interactable through APIs, Command and Web.
- **Open frameworks:** These enable governments deploying Smart Cities to control their technology choices and long-term platform road maps, independent of technology vendors.

THE IDEAL SMART CITY ENABLER

The ideal smart city enabler is a one stop cloud enablement platform featuring customised products that give you greater productivity, agility and scalability - without compromising on security and control. Such a partner can provide a cloud platform that is:

- **Integrated:** The orchestration framework will be designed to deliver complete visibility of disparate IT environments and seamless integration (from colocation to the cloud environment).
- **Managed:** End-to-end infrastructure monitoring, service management and personalised support services will be delivered through industry best practice and certified cloud specialists.
- **Secure:** A 360° security framework will underpin a hybrid cloud infrastructure, plus its applications, users and data, to deliver complete protection and adherence to regulatory and security compliance requirements.

HOW TATA COMMUNICATIONS IS ENABLING SMART CITIES

The IZO™ Cloud enablement platform from Tata Communications helps customers to install, deploy and manage their Smart City IT infrastructure and business critical workloads from colocation, hosting, public and private cloud environments across India and worldwide.

- **Maximum reach:**
 - We enable Smart City services to be deployed and accessed by citizens in India or from any global location where they may be travelling.
- **Operational ease:**
 - Increase your business agility and innovation - enabling faster time to market through our strong cloud portfolio.
 - Rapidly scale up or down in response to load using agile solutions such as 'Auto scale'.
- **Investment protection:**
 - Future proof your investments using container services, cloud storage and public cloud operator integration.
- **Security:**
 - Enjoy the security of partnering with a MietY empanelled Private Cloud Provider.