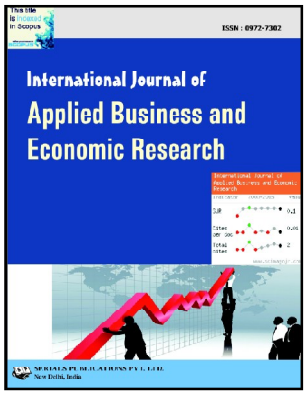

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Study of Consumer Perception about Socially Evenhanded, Economically and Environmentally Feasible Smart Services Designed for Smart India

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Abstract: The proposed engineering for the Smart Services will be another stage lift in creating Smart Environments. This paper portrays how Smart Services will serve an overall population with many innovative assistances. This paper draws out an achievable application in every area. Globally, urban areas are viewed as motors for practical financial development. Development accomplished by urban communities will be emphatically connected to their capacity to deliver the issues identified with urbanization and related social, ecological and monetary issues in an all-encompassing way, while taking advantage of future open doors; or, then again urbanization to be effective, three objectives should be accomplished where the benefits must be the accompanying: Socially evenhanded, Economically and Environmentally feasible.

Keywords: Internet of Things (IoT), Smart Services, Smart India, Smart Environment, Smart Cities, Enterprise Mobility, E-Governance, Next Generation Network, Sensors

1. INTRODUCTION

On the fringe of contemporary, up-to-date smart and sensor enabled products connected to the internet in this tech savvy world comes SMART SERVICES. By utilizing information produced by present-day devices, astute new participants can offer inventive, esteem services.

Are we as consumers of these services ready for this dramatic change?

The shift from a customary product-driven economy to a service-centric one!!!

The platform based coordinated effort upgrades shrewd services to citizens giving them access to operational information for improved mobility, productivity and decision-making.

With the sudden eruption of smart gadgets which are expected to reach 50 million by 2020 with respect to its usage represents a multi-billion-dollar opportunity world-wide. Smart devices from watches to tablets, from cell phones to thermostats have a much larger potential if they were managed and overseen as core elements to provide Smart Services.

Market of Smart Services that is; Smart – Health, Transport, Energy, Education, and Water – is assessed to achieve $1134.84 billion by 2019 growing at a cumulative annual growth rate (CAGR) of 22.5%. Smart Service conveys expected mix of products and services – whenever and wherever – to consumers and citizens.

Smart Services aim at achieving a point in light of his or her inclinations of travel time, comfort, course style and contamination levels. To deliver these utility solutions in the form of services, suppliers require a top to bottom comprehension of the end user's needs and inclinations. They need to consolidate and exhibit benefits on request, crosswise over sectoral ecosystems to convey a logically important, customized experience.

In (Rakesh Roshan, 2016)an Indian point of view is taken, on the grounds that India is in the first stage for actualizing the Smart Services. This paper clarifies many difficulties in Indian situation like the accessibility of the Internet, Cost of gadgets, gadget support issue and so forth and proposes a system of brilliant services is likewise talked about here.

2. LITERATURE REVIEW

As per the utilization of new innovations in plans of action and infrastructure has been energized to some degree by the Internet and globalization. Inescapable new advances give a significantly more prominent extension to instrumentation, interconnection and knowledge of the existing framework. As IBM noted that becoming "smart" requires a shift in thinking. Going back to ancient times 19th century was the era of Empire, the 20th century was the era of a Nation (democracy or dictatorship depending upon the convenience) but the 21st century is the era of providing citizens with Smart Services and thus creating Smart Cities. (Leyla Zhuhadar, 2016)

2.1. Paradigm Shift

Urban areas these days confront complex difficulties to meet targets respecting financial improvement and personal satisfaction; and thus, the idea of providing all these services in a smarter way is the reaction to these difficulties. Sharing tangible and intangible assets with the end goal of setting up an ecosystem capable of providing arrangements facilitating urbane services. (Hans Schaffers, 2011).

By taking a gander at shrewd illustrations [given by (Ersoy, 2017)] as destinations of experimentation and additionally mechanical arrays, three components rise as imperative elements: Guaranteeing coordinated effort, Incorporation and institutional limit with regards to preparing aggregate learning and Changing Framework.

As we all are well aware that Smart India Mission began in 2015 with the point of giving a superior personal satisfaction to the residents, but like any other mission it's going to face difficulties in the route forward. The Union Urban Ministry is asking governments at the State/UT/nearby level to make professional

dynamic strides in assembling coordinating measure of assets, and in getting ready and actualizing the undertakings on time, so that the finishing due dates are met. (Rumi Aijaz, 2016)

2.2. Citizens – Attuning or Retorting???

According to (Md. Rakibul Hoque, 2015) Technology Acceptance Model (TAM) is utilized as the hypothetical support the investigation endeavored to decide and measure the different uses of present technology. The discoveries from the investigation can fill in as contribution to advance national's utilization of cell phone for better self-administration of well-being.

Human culture is creating with quick energy and accomplished different triumphs for improving its vocation. The present time is enlarged on Information and Communication Technology. This innovation has demonstrated its potential in different parts of advancement in urban and provincial scenes. (Pinak Ranade, 2015).

As per the survey conducted by (Gurmeet Singh, 2010) in India with Ethiopia and Fiji with the main focus on poor service quality. Citizens need one-stop shop for service delivery and it is of great value but not perceived much. So, there is tremendous requirement of e-governance initiatives to ensure the delivery of public services to citizens on a vast scale.

(Edwards, 2015) tried to establish that though political and economic drivers of smart cities lean towards technology supremacism, privacy may lead to failure of these projects. As smart services use a combination of IoT, Big Data and cloud infrastructure which are major issues for modern privacy law to regulate, "all smart service projects must get their privacy right in order to elude from any kind of failure".

(Debjani Bhattacharya, 2011) found that government projects under national plan were far below the expectations of citizens. Technology enabled applications promised ease of access, but citizens' satisfaction is not up to the mark. Therefore, the perception of citizens towards e-services and its adoption is quite skeptical and these portals require improving the e-service quality.

2.3. Role of Government in Providing Smart Services

Governments in rising countries are depending on data innovation as an essential instrument for their managed improvement. Henceforth, it is a basic to comprehend and impact client's acknowledgment and dispersion of e-Government administrations among subjects. This is guided towards giving a superior and more viable appropriation of electronic government data frameworks, in light of a few conceivably critical ramifications. (Mahadeo, 2009).

It is realized that e-governance provides better delivery of government services to citizens, greater convenience, citizen empowerment and increased transparency through access to information. But the only drawback of new technologies is cybercrime which overcomes the benefit of digital governance. (Ajay Dutta, 2015).

(Satyabrata Dash, 2016) focuses on using Cloud Computing for e-governance and find out the challenges with e-governance paradigm in India. As we know that the use of cloud provides a platform that is more scalable, high performance, low cost and reliable.

(Banerjee, 2016) concludes that the Indian Government Aadhar Initiative has created a direct value regarding digital infrastructure creation which can help in transfer of social and financial resources. Also, in that case Aadhar should be accessible to urban and rural population and to rich and poor so that its use can be exploited to maximize.

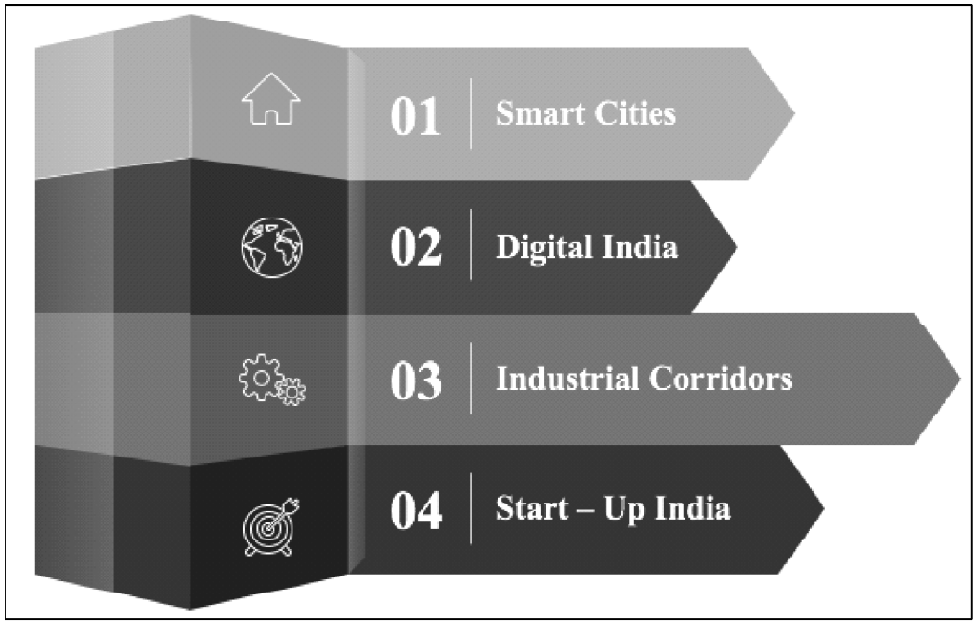

Figure 1: Mega Trends in India

The above figure shows the major trends in India, which has paved way for the Smart Services in India.

(Hemant Bhargava, 2016) discusses the clear market power with respect to new innovations and section of new, versatile applications are likely, in light of past involvement. It thereby focuses on the contemplations and different mediations to redress misuse of strength. Anybody planning intercessions need to keep the breaking point of our insight, even with problematic advancement immovably at the top of the priority list.

(Vimal Jerald A., 2015) proposes a coordinated keen condition in view of smart services in a few divisions like farming, security and crisis, keeping money, Surveillances, meteorology, social insurance, instruction, government – e administrations, local apparatuses checking, activity reconnaissance is coordinated and the different articles and gadgets are associated utilizing RFID innovation.

This paper is about an integrated approach and sustainable strategy required to sustain brisk growth of economy and urbanization and handle problems created by them. One of the strategy is smart planning, analyzing and evaluating the necessity of smart services along with government's proposed 100 smart cities for development. (M.F. Jawaid, 2015).

(S.M. Barhate, 2015) makes a strong argument on attributes like cost reduction, effective communication, security and privacy and flexibility and accessibility as prime concerns which can be achieved through innovative techniques that are being stressed upon nowadays for providing smarter services through cloud

computing eg – smart teaching and smart learning ecosystem. At the same time Traffic Control System models are proposed by (Megha A Tank, 2015) for fast growing traffic and to reduce time for emergency vehicles to reach its destination through completely automatically control model.

(Deepak Chawla, 2017) paper provides with the valuable insights about user perception, attitude and intention for mobile banking. It states the relationship between the age and smart service usage. Respondents here were segmented in TA Leaders, TA Followers and TA Laggards and are analyzed on the basis of ease of use, efficiency, convenience, trust and lifestyle.

(Arun Khatri Chhetri, 2016) considers the prioritization of Smart Services for farmers, which will thereby encompass Climate-Smart Agriculture (CSA) Technologies. For farmers, smart services will lie in the selection of CSA technologies based on socio-economic characteristics and rainfall zones. It also talks about technologies, highly preferred by farmers.

As per (Sapna A. Narula, 2010) a number of services are provided by ICT initiatives to farmers, but use of these services are limited due to lack of awareness. Some of the bottlenecks for this hindrance for usage of these services are internet speed, experienced manpower and other social and economic barriers. In this paper, it is recommended to focus on increasing those services which are highly valued by farmers and withdrawing the least valued one.

(Nirmaljeet Singh Kalsi, 2015) makes an attempt to come up with an ICT-based framework for good governance and shared vision of the stakeholders is taken about their understanding of governance with respect to Smart Services in any nation. The main focus is on implementation of strategic policy framework.

(Madhurima Deb, 2014) talks about the adoption of smart services in India and segments existing in this adoption. It revealed that attitude towards basic services and intention to adopt it is found positive. But privacy and security factors are not perceived positively and needs improvement. Hence, they suggest in improving customer perception of benevolence and privacy and security.

When required a better grained test system on a limited segment of the simulated zone, which permits considering all issues worried about remote interchanges. In light of this utilization case, (Gabriele D'Angelo, 2016) affirms that the specially appointed remote systems administration innovations do speak to a real instrument to convey brilliant administrations over decentralized fields. More-finished, the execution assessment affirms the practicality of using multi-level reproduction for mimicking substantial scale Smart Services & IoT conditions.

(Nicos KOMNINOS, 2011) explores the development viewpoint, joining sees on the administrations and the specialties of novel arrangements. These approaches focus principally on the administration of central layers for accomplishing a spatial insight of urban areas installed on future Internet advancements and client driven development forming the interest in cutting edge internet based services.

In this study, an attempt is made to cover all the benefits of Smart Services through Use Case Scenarios followed by perception and conception of Smart Services in India. As we live in a country where these services are in its nascent stage, hence this paper aims at covering all the barriers resulting in resistance in adoption of smart services. In the end, a survey is conducted which strives in having the user point of view with respect to expectations from smart services viz-a-viz consumer readiness to adopt it in the first place.

3. USE CASES

Smart Services use contextual analysis to provide real-time data to users. From smart traffic to smart parking, all the new service offerings work in coherence resulting in accelerated time-to-value. Since there is no dependency on the third party, hence it provides users with results in no time. This makes a compelling proposition for Faster-Time-To-Value through as a service (**FaaS**).

Case 1: From product to service: expanding a product portfolio

The manufacturer in this use case makes gas creating sets for the concoction business. The producer's customers utilize the creating sets to deliver the gasses they required for their own particular assembling forms. In view of their gauge prerequisites, the clients deliver the important amounts of gas utilizing the creating set and store them in tanks. They additionally need to store a go down supply to guarantee that adequate gas is accessible to keep creation running amid planned and unscheduled stoppages of the producing set. The client of the generating set, for the most part, utilizes a few distinctive specialist co-ops to keep it running easily. One of the producing sets' key segments are their superior electrical drives. These are normally subject to wear and tear and along these lines require consistent overhauling. (Prof. Dr. Henning Kagermann Frank Riemensperger, 2014)

Benefits of introducing smart services in this case: The customer can concentrate on his core business (the utilization of the gas in his assembling forms) and as it were purchased in as much gas as he needs. The producing set maker enhances the operation of the creating set by limiting vitality costs and undertaking preventive support, subsequently averting unscheduled stoppages. Most clients don't have the inside and out comprehension of the producing set innovation required to do this. The working information got from the creating set enables the maker to wind up plainly more focused by actualizing further enhancements to the machine. By receiving new plans of action – for instance going about as the administrator of the creating set – the manufacturer can take advantage of new markets. (Prof. Dr. Henning Kagermann Frank Riemensperger, 2014)

The manufacturers offer to supply the client with gas as an administration. As the administrator of the gas creating sets, he gets skilled advancement specialist co-ops to convey new usefulness. For instance, status data about the producing set is caught and examined consistently standard particular vibration investigations. Besides, the creating set is outfitted with a remote access office, permitting an administration focus to give early notices of any potential glitches with the goal that preventive support work can be performed. A vitality administration framework is utilized to create working calendars to guarantee that the producing set star increases gas when power costs are low. The levels of gas put away in the accessible tanks are advanced all together to limit vitality costs while guaranteeing that request is met and furthermore taking planned stoppages of the generating set into account. (Prof. Dr. Henning Kagermann Frank Riemensperger, 2014).

Case 2: Patient-centered digital healthcare: enhancing prevention and treatment

An extensive variety of patient information is as of now accessible today (e.g. through GP's practices, doctor's facilities, medical coverage organizations, and so forth.). Additionally, patients are progressively making utilization of cell phone applications and comparable applications (Layer 3) to quantify and record

their regular day to day existences or their therapeutic history. In any case, there are strict regulations representing how this smart data can be consolidated and examined, implying that the related open doors have heretofore scarcely been taken advantage of by any stretch of the imagination. As indicated by the specialists, the utilization of individual or potentially anonymized understanding information is required to offer enormous potential for enhancing treatment results and counteracting complexities and therapeutic mistakes. While personalization, dynamic buyer investment and quicker and more proficient data sharing are as of now the standard in different enterprises, the social insurance division has neglected to keep pace with these extremely the essential developments. (Prof. Dr. Henning Kagermann Frank Riemensperger, 2014).

By examining individual information, inventive brilliant well-being administrations give another level of straightforwardness for patients and the specialists who are approved to see the information. Other brilliant information, some of which might be anonymized, can be used to create experimentally and prove based clinical pathways, prompting noteworthy enhancements in both finding and treatment. Patients advantage from the more prominent straightforwardness of confirmation based prescription, both in crises and over the course of endless infections. They get persistent arranged and patient-focused therapeutic care. New agreeable plans of action are produced that may incorporate on-screen characters who are totally new to the wellbeing mind area. These models draw on extra customized information acquired e.g. through sensors or other monitoring frameworks in patients' homes. (Prof. Dr. Henning Kagermann Frank Riemensperger, 2014).

Benefits of introducing smart services in this case: This approach enables patients to receive medical care in their own homes whilst also ensuring greater autonomy and increased transparency with regard to their diagnosis and treatment. It also enables the establishment of services and tools that allow patients to choose which type of preventive support they receive for acute and chronic conditions. Significant cost savings are delivered through the reduction/prevention of hospitalizations. There is a positive impact on the course of treatment. The better quality of data used as the basis for patient care leads to efficiency and effectiveness gains. Evidence-based diagnosis and treatment and standard processes for collecting, processing and sharing patients' medical data make it possible to detect and correct errors in the treatment regime at an earlier stage or even prevent them completely. The result is a lasting improvement in the standard of care, a higher number of successful outcomes, shorter treatment durations and lower costs for the healthcare system. (Prof. Dr. Henning Kagermann Frank Riemensperger, 2014).

Digitization of Health Services in India: "Smart Health India" is one of this type of model developed by George Institute researchers in UK, India and Australia. It aims at delivering high-quality healthcare services at very low cost with the help of community health workers and doctors. Advanced mobile health technologies are merged with this model through which a personalized guide to support clinical decision is provided to the healthcare worker.(The George Institute for Global Health)

A similar type of service comes from Samsung India also in which they are providing advanced x-ray and ultrasound machines for free to selected government hospitals across India. These machines will help economically backward sections of society to get high-quality medical facility at low cost.(Samsung Newsroom India, 2017).

Case 3: Focusing on buyers during supper: an individual procedure colleague for purchasing and getting ready sustenance and giving nourishing counsel

Purchasing and cooking sustenance is a general piece of our regular daily existences. In any case, since doing as such eats into our recreation time when we have completed work, it can come to be viewed as a burden. This can have the impact of diminishing the assortment and nature of our eating routine. Singular buyers initially need to choose what they might want to have for supper. They at that point need to visit at least one sustenance stores with a specific end goal to purchase the fundamental fixings. It is regularly just once they get to the shop that they understand they have no clue which fixings they as of now have at home. They are at that point confronted with either going home and check or winding up purchasing nearly nothing or excessively. It is likewise simple for consumers to get into propensities that reason them to dismiss their own wholesome and utilization designs. (Prof. Dr. Henning Kagermann Frank Riemensperger, 2014)

An intermediary reconfigures carefully empowered administrations gave by retailers, coordination organizations, nutritious counsel suppliers and online networking keeping in mind the end goal to make a Smart Service. Iceboxes fitted with cameras and associated with the Internet give a remotely open review of their substance and the accessible determination of various foodstuffs. Together with the client's information based client inclinations and healthful objectives, this in development is utilized as a reason for furnishing them with formula proposals joined by itemized item information. In the event that the client picks one of these formulas, the go-between conveys the important requests to the businesses that have a place with the shopper products biological system. A co-ordination's firm is utilized to gather the products from the diverse retailers and convey them to the client in a refrigerated holder during an era of their comfort. The client is additionally given cooking guidelines and tips from the group. Installment of the whole arrange is masterminded with the distinctive specialist co-ops by means of the middle person. (Prof. Dr. Henning Kagermann Frank Riemensperger, 2014)

Benefits of introducing smart services in this case: Buyers are furnished with help in their particular, regularly tedious ordinary shopper processes. An information based colleague supplies them with a point by point item data and gives them a straightforward review of their sustenance. This empowers them to live more naturally well-disposed and more beneficial lives. By investigating deals information, retailers can design their item ranges to all the more precisely reflect what shoppers as a matter of fact purchase, in this way anticipating overproduction and waste. Specialist co-ops' inside procedures can likewise be enhanced. Clients can be offered extra advantages, for example, coupons or different sorts of devotion program. These exceptional offers focus on clients' needs so precisely that they see them as esteem included administrations. New focused on biological communities and Smart Services are made, giving e.g. healthful guidance, client item customization, swarm based transport, and so forth. (Prof. Dr. Henning Kagermann Frank Riemensperger, 2014)

4. OUTLOOK OF CITIZENS

The driving inspiration which propels the idea of "Smart Services" is that the innovation should go about as an impetus for improvement, empowering instruction and nearby business openings, enhancing wellbeing and welfare, upgrading majority rule engagement and a general upgrade of country town inhabitants.

"The most far-reaching and radical technological advancements are those which intertwine itself with day-to-day activities until they become an inevitable part of our lives."

Factors Driving Smart Services

Various factors which can be accounted as drivers of Smart Services are:

4.1. Easier Everyday

It has been seen that smart services have a great deal of potential in making the everyday easier. Smart services like smart clothing, which could screen your essentialness, give you direction for eating and resting consistently, respond to climate changes and enable you to remain sound would help this reason enormously. (SAARELAINEN, 2017).

4.2. More Information

Smart services provide more information resulting in various benefits and making every day easier. But it has a risk of losing privacy and at worst losing self-awareness associated with it. Hence there is a trade-off between benefits and harm of smart services. So, we can say that smart services provide an option for health and privacy to choose. (SAARELAINEN, 2017).

4.3. Time Saved

It has been seen that smart services like automated traffic help you find the optimal route and traffic flow resulting in time-saving. Apart from time-savingother benefits observed are increased safety as decreases chances of accidents. Apart from this booking movie, train, airline etc. tickets online save time as people need not to stand in queue.(SAARELAINEN, 2017)

4.4. Ecology

Smart services help in managing resources in different situations and needs in a better way. This is seen as a major advantage for ecology provided by smart services. Smart services provide monitoring of energy usage which is perceived as most important solution provided ever. (SAARELAINEN, 2017)

4.5. Save Money

Finding a way to do a task efficiently, thereby reduces the expenditure and hence can be availed by citizens at lower cost. The main objective of Smart Services is to adopt disruptive initiatives to realize the true potential of any service and hence being able to capture the shared value.

4.6. Safety/ Security

Safety and Security has always been the most crucial parameters; be it in any country. Service innovation has proven to be a major stakeholder in providing citizens with custom-built applications and add-ons to ensure safety and security. City and local governments are deploying networked surveillance cameras and video analysis software to expand public safety capabilities.

5. CHALLENGES/BARRIERS

Inability to use Information Technology instruments for country advancement is a result of absence of methodology, unfocused arranging or more all checking and execution of the exercises. Every one of these exercises should be tended to in light of the shifting provincial circumstances. An extraordinarily composed appropriate system for rustic territories on the grounds of Science, Technology, Engineering, Regulations and Management will assume vital part to work cutting edge ***Smart India***.

5.1. Technical Challenges

Internet Availability: Indeed, the even today Internet network, Internet association unwavering quality and accessibility of required association transmission capacity are still a noteworthy challenge in India. For a brilliant mortgage holder or an IoT buyer reception – this can a remain a most critical challenge. (Rakesh Roshan, 2016).

Overall Infrastructure Challenges: Not just the web yet the supporting framework, for example, smart grid matrices, Smart drainage/sanitation Framework, Smart Water Supply and so forth, which are the undefined piece of a keen home and these are a long way from being prepared to use in India. (Rakesh Roshan, 2016).

Data Conversion: The signs and information gathered from the associated gadgets and items will fluctuate in their inclination and consequently, they can't be transmitted by means of traditional system utilizing web. Successful strategies for data conversion to be utilized for making the information good for additionally preparing by IoT based Information Kendra. Numerous applications from different areas will have extraordinary recognizable proof advances for the gadgets and articles. A few customers will be included getting to and making utilization of the benefits by this savvy condition. It is basic to take vital strides to take legitimate security measures and forestall unapproved access of the gadgets and articles. There is another plausibility where individuals may not know about the sensors settled, along these lines, it regards direct the protection of human being also. (Vimal Jerald A., 2015).

Interoperability: The gadgets and articles are heterogeneous in their working. Every gadget and object will utilize their own advancements and they may not be good to utilize the administrations of others. Interoperability to every one of the articles and gadgets like RFID labels, sensors ought to be guaranteed. The assembling of gadgets and items are not with same standard and the institutionalization protest and gadget fabricating is required. (Vimal Jerald A., 2015).

5.2. Financial & Economic

Cost of IoT enabled systems and devices for smart homes: Indeed, the even today Internet network, Internet association unwavering quality and accessibility of required association transmission capacity are still a noteworthy challenge in India. For a brilliant mortgage holder or an IoT buyer reception – this can a remain a most critical challenge. (Rakesh Roshan, 2016).

Lack of vendor activity: Worldwide sellers are for the most part or by mixed up expect that Indian customers are not prepared for propelling gadgets or item. This is especially clear if there should arise an occurrence of selection of smart home innovation and IoT space, with once in a while any sort of merchant

movement today. This prompted the low level of familiarity with IoT Systems or smart home machines among the Indian buyers. (Rakesh Roshan, 2016).

5.3. Social

Lack of skilled resource in India: IOT adoption is additionally obliged by the inaccessibility of skilled workforce for execution of across the country IoT empowered brilliant frameworks. As indicated by the report of Labor Bureau Report of 2014 the gifted workforce in India is just two percent of the aggregate population, which is much lower when contrasted with some other creating countries. So there is have to present some instructive projects that aides the workforce to take in this innovation and meet the prerequisites with a specific end goal to help the developing environment. (Rakesh Roshan, 2016).

***Object Naming*:** The proposed savvy condition will associate a large number of gadgets and articles for various administrations. Each gadget and objects should be exceptionally recognized over the network. In this way, a dynamic instrument of object naming and a recognizable proof is expected to oversee an expansive number of gadgets associated. (Vimal Jerald A., 2015).

Quality of Service:As several millions of information to be exchanged for different administrations, there might be the absence of nature of administrations. It is important to find a way to guarantee the quality measure to give better administrations to various applications in the smart condition. (Vimal Jerald A., 2015).

5.4. Regulation & Framework

A large portion of the obstacles is surmountable and a lot of these difficulties are more hierarchical in nature than specialized or business-related, as all the service providers revolve around the central government in a country like India.

Intangible assets are highly sensitive to regulatory policy. Recently, China's change in policy forced cryptocurrencies to be shut down within a month. Smart Services are also intangible in nature and hence they immensely depend on the Regulatory Policies. Lack of standards and frameworks for smart services makes it more vulnerable and hence there is a requirement of separate regulations in order to deploy Smart Services more efficiently.

With Smart Services, there will be a massive amount of data (Personal & Sensitive) shared between devices and sensors, and hence comes the requirement of endpoint security from the stakeholders. In order to provide the end-user with the required security there has to be the groundwork laid to build ***Highly Secured Data Protection Policy***.

Complete implementation of IoT enabled Smart Services, requires more 'joined up' regulation, with telecom/ICT regulators working more closely with their counterparts in data protection and competition, but also with emergency services, health and highway authorities, as **legacy regulatory models.** Similarly, broader **governance** issues may impede the adoption of the IoT.

6. DEPLOYMENT AND IMPLEMENTATION

6.1. Smart Cities

In India, the urban population as of now constitutes 31% of the aggregate population also, contributes around 60% share of India's GDP. It is anticipated that in the following 15 years, urban India will contribute about 75% of the national Gross domestic product. There is a prompt requirement for urban areas in the nation to get quicker witted so as to manage expansive scale urbanization, what's more, find better approaches to oversee complex forms, increment productivity and enhance the personal satisfaction for natives. (Dr A Didar Singh, 2015).

With different declarations and budgetary allotments, the Indian government is progressively focusing on the production of different brilliant urban communities, mechanical hallways and a few revivals extend so as to address rapid urbanization. This opens up a few roads in arranging, execution and administration of each of the segments. Rapid urbanization brings real ramifications for organizations as they refocus their offerings, promoting furthermore, circulation models towards a progressively urban client base with unmistakable necessities and utilization propensities. (Dr A Didar Singh, 2015).

Each venture under the new government will make open doors for foreign funding to go into new domains. Keeping in mind the end goal to facilitate the passage of extensive outside speculations into ventures, the government accommodates a solitary window freedom framework. Likewise, numerous of the proposed brilliant urban communities are either assigned as special economic zones (SEZs) or will house SEZs in them, and in this way, will be land enclaves which will have numerous exceptions from the normal assessment laws, traditions and extract obligations and work laws. In this way, the advancement of the new activities such as brilliant urban areas can be viewed as an exertion by the Indian government to advance worldwide companies to contribute also, work inside cleaned spaces, bypassing the various complexities that generally portray urban India. (Dr A Didar Singh, 2015).

With promising prospects for savvy urban communities in India and a variety of advantages for city partners, savvy arrangements are required to additionally drive development in ordinary building and outline benefits and also new administrations. This is liable to grow the market prospects for worldwide sellers in India and give a stage for them to send out their services. (Dr A Didar Singh, 2015).

In January 2015, the secretary of the Ministry of Urban Development (MoUD) made an introduction which plainly expressed that the Indian government's main goal to take off 100 smart cities across the country. These brilliant urban communities will use advancement and innovation for e-governance and the Digital India activity. Likewise, they will concentrate on the business era, include natives in basic leadership and strategy execution, and enhance the quality of life. (Dr A Didar Singh, 2015).

Smart, sustainable urban communities hold a considerable lot of the keys to ensure better monetary, social and natural conditions. And conveyed adequately and with supportability as a centre target, ICT can quicken advance toward the related objectives. (Ericsson, 2016).

ICT is changing urban areas all over, and it is a key empowering influence of smart, sustainable solutions. As 4G/5G, IoT and enormous information advances wind up noticeably far reaching, the potential for ICT to illuminate urban areas' issues will just develop. Be that as it may, ICT extends alone don't really

influence urban communities to keen or reasonable. To be sure, ill-conceived, silly improvements can possibly prevent a city's long-haul advancement. (Ericsson, 2016)

6.2. Internet of Things

Technology is being embedded into ordinary physical objects, and keeping in mind that we can't yet stop projectiles by fixation, we can instruct objects to react to our essence, movement, vocal charges, eyeball following, and even autonomic physiological practices, for example, heart rate. IoT consolidates availability with sensors, gadgets and individuals, empowering a type of free-flowing interaction between man also, machine, programming and equipment. With the betterment in artificial intelligence and machine learning, these discussions can empower gadgets to foresee, respond, react and improve the physical world similarly that the web as of now utilizes systems and PC screens to upgrade the data world. (EY, 2016).

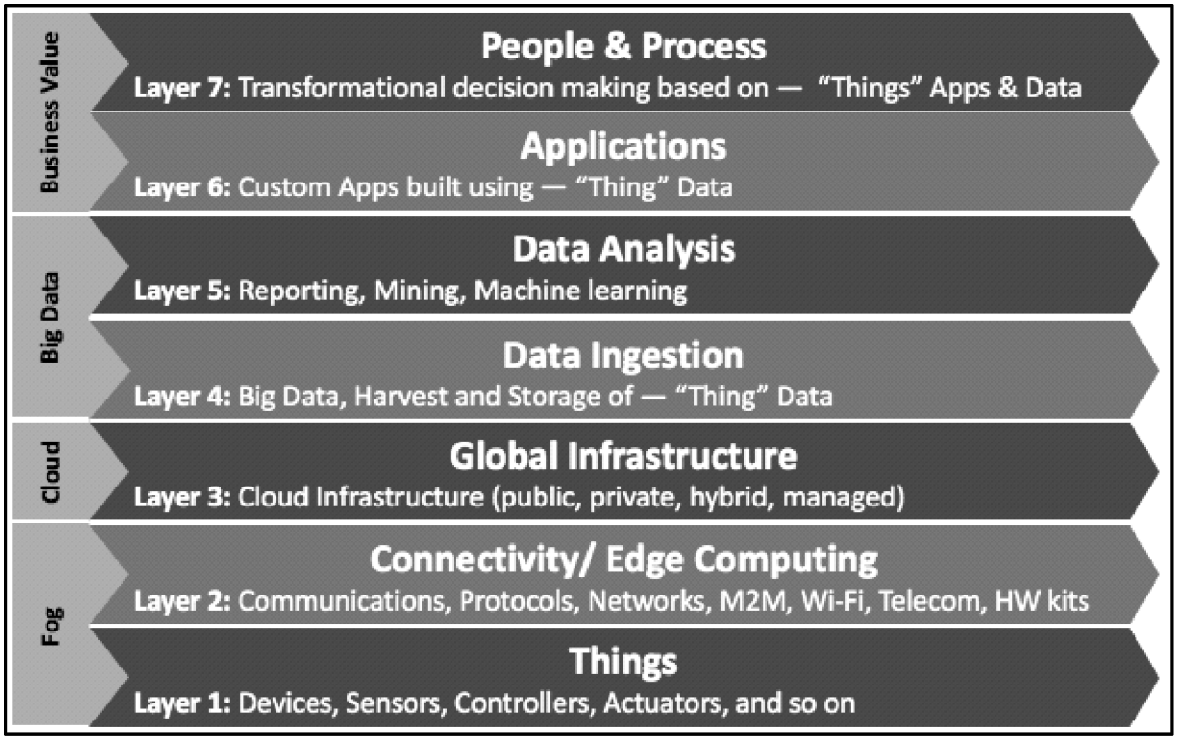

Figure 2: 7 Layers of IoT(Frost & Sullivan, Internet of Things Opportunities for Telcos in India)

The above figure depicts the seven layers of IoT which works in coherence with each other in order to provide the end result i.e., Internet of Everything. Astute applications would offer automation, coordinated examination, coherence, integrated analytics and self-governance.

Despite the fact that the potential for IoT is huge, its viable execution stays in its earliest stages. Therefore, it's hard to measure the future impact with exactness. International Data Corporation (IDC) gauges that there will be 30 billion connected devices in the market by 2020. IDC also predicts the monetary esteem of IoT to be around $1.46 trillion in 2020. Gartner figures 20.8 billion connected devices and $3 trillion IoT financial esteem amid the same time period. Within the media and entertainment (M&E) industry, officials expect that IoT will prompt a 16.5% lift in income in the vicinity of 2015 and 2018, more

than its impact on energy, buyer bundled merchandise, retail and car, yet not as much as its effect on mechanical producing, hi tech and banking and financial administrations. (EY, 2016).

IOT presents huge potential for Indian industries, arrangement suppliers and the nation as a whole. The IoT change alongside the resulting changes are relied upon to be speedier and every enterprise may have its own pace and timing in coming to the IoT development state. Organizations today don't have the options about whether to embrace IoT or, then again not, since it can possibly disturb plans of action, economies of a venture and inevitably the survival of endeavours. (Nitin Atroley, 2016).

The expanding capacities of smart, associated items not only reshape rivalry inside businesses but will also magnify industry limits. This happens as the premise of rivalry shifts from discrete items, to item frameworks comprising of firmly related items, to frameworks of frameworks that connection a variety of item frameworks together. (Michael E. Porter, How Smart, Connected Products Are Transforming Companies, 2015).

6.3. Enterprise mobility

Mobilizing the enterprise frameworks to enable enterprise workforce with cell phones to execute their everyday activities anywhere anytime. Employees are provided real time access to critical business data using enterprise mobility. It also provides better coordination among employees and hence enhances productivity and decision-making process. Business operations like approval based workflow tasks can be executed on the go using this platform. It provides the competitive edge to users by enabling mobile users to perform payment processing Digital signal capturing, Inventory management and real-time dashboard based apps tracking. Apart from employees, it allows your customer to access customer centric information anytime anywhere. (PwC).

A couple of years prior, when mobile phones were first presented, enterprises raised concern that representatives would resent being always associated, seeing this as an unwelcome interruption of their work-life adjust. Today, such concerns are getting to be plainly unessential. Progressively, the enterprise workforce is turning into the learning workforce – they convey an incentive by making, overseeing, deciphering, devouring, conveying data to an end client. To enhance efficiency for the workforce, managers must help enterprises to decrease downtime and should be associated with learning sources, including clients, other workers, the Internet or intranet, and back-office frameworks. (PwC).

Interest for business applications, for example, timesheet entries on cell phones was lower than for the different situations, likely mirroring the relative absence of hearty applications that are genuinely reasonable for portable gadget screens. We expect that as the E-Mobility advertise develops, more basic business applications will be relocated to the versatile condition furthermore, others will be produced particularly for cell phones, empowering universal availability. (PwC).

As system speeds enhance and the gadgets themselves move forward, the request will increment for applications on handheld gadgets. The current imperviousness to business applications on the cell phone is expected partially to the truth that the handheld encounter could not hope to compare to the interface on a PC, and in part to the way that end clients need to approve information with numerous sources – something that is substantially less demanding to accomplish (and to accomplish precisely) on a PC or in the workplace. With the presentation of new interface choices in the commercial center (the iPhone's

touch screen, for instance), end clients may float towards the comfort of a handheld gadget as boundaries to acknowledgement keep on being lessened. (PwC).

6.4. Value Chain of Smart Services

The given figure provides the roadmap of adoption and implementation of Smart Services with its roles and responsibilities:

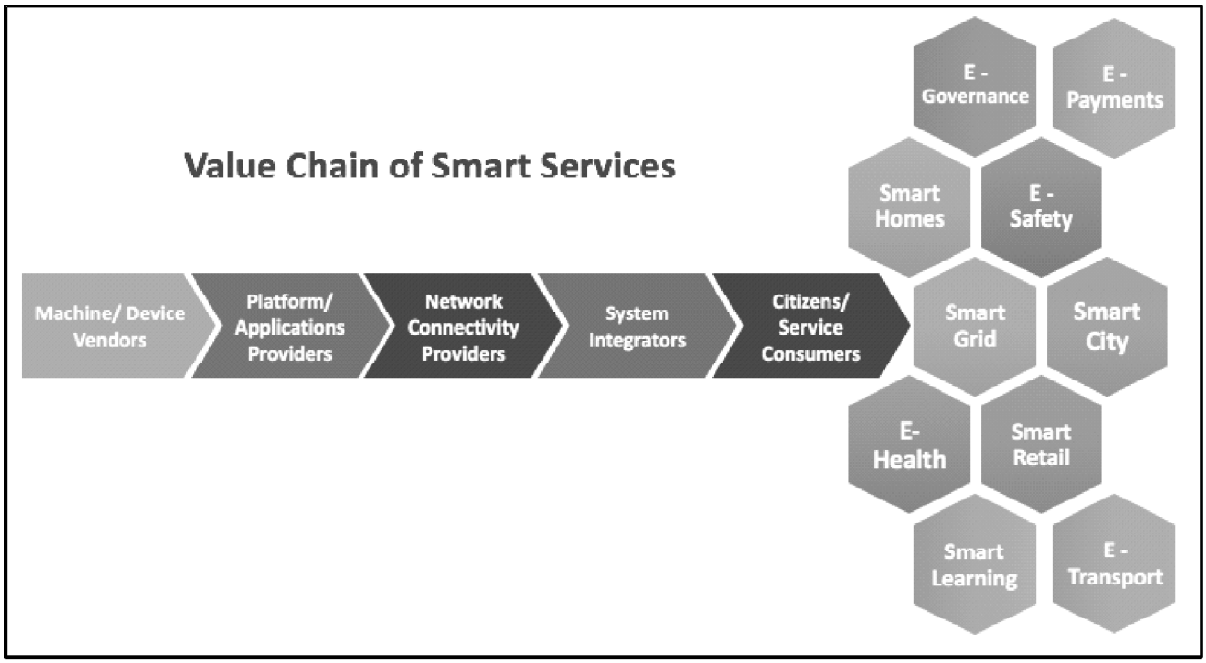

Figure 3: Value Chain of Smart Services

Internet applications, users (businesses and consumers) will capture most of the value created by IoT enabled Smart Services — potentially as much as 90 percent in 2025.

7. RATIFICATION OF SMART SERVICES

The sharing economy will develop and thrive, creating the "Uberization" of an extensive variety of new services. Far reaching selection of IoT empowered Smart Services to track and guide worker activity could bring efficiency altogether up in both developing & developed economies.

With practically every industry, offering arrangements in the IoT portion, there are colossal open doors to promote development. ~70 percent of IoT startups have emerged since 2010. In 2025, we would expect an application and service providers to capture 85% of the IoT revenue generated by suppliers.

7.1. Global Scenario

The given table gives the viewpoint of the IoT Devices Market, which is increasing exponentially year-on-year basis. In 2018, revenue generated by IoT Applications alone $20,756.4 Mn, viz-a-viz revenue generated in 2017 $16,297 Mn. The rapid growth of applications and services, creates a synergistic reliance on robust, secure, resilient communications networks to reliably transmit data and commands.

Table 1
Total Internet of Things (IoT) Devices Market: Revenue Forecast by Application, Global, 2014–2023
(Frost & Sullivan, Global Internet of Things (IoT) Devices Market, Forecast to 2023, 2017)

Application	*2016*	*2017*	*2018*	*CAGR (2016–2023) (%)*
Portable Asset Tracking	730.3	1,097.6	1,581.5	31.60
OEM Telematics/Connected Car	786.9	862.5	955.1	9.30
Commercial/Fleet Telematics	19.7	23.7	28.5	14.60
Usage-based Insurance	5.4	6.4	7.5	11.40
Vehicle Lending/ BHPH	17.3	17.6	17.9	0.90
Infotainment & Aftermarket Telematics	1.2	1.7	2.3	25.10
Smart Grid/ Oil & Gas	317.7	408.6	512.3	18.10
AMIs & Smart Meters	229.0	305.6	406.0	22.90
Smart Home/ Alarm Monitoring	53.0	56.0	59.1	5.90
Building Automation, Security & Surveillance	6,489.8	8,720.9	11,020.4	20.30
Factory & Industrial Automation	1,435.0	1,725.1	2,250.1	19.60
Fixed Asset Monitoring	949.2	1,402.8	1,932.9	25.00
Vending, PoS & Transaction Terminals	45.4	61.8	83.0	24.00
Digital Signage	16.4	21.0	26.7	18.70
Healthcare & Medical Devices	94.0	114.5	139.8	15.40
mHealth & Wellness	363.2	448.7	557.4	17.30
Connected Consumer Electronics	184.2	353.6	608.4	39.50
Others	699.7	668.8	567.7	(21.50)

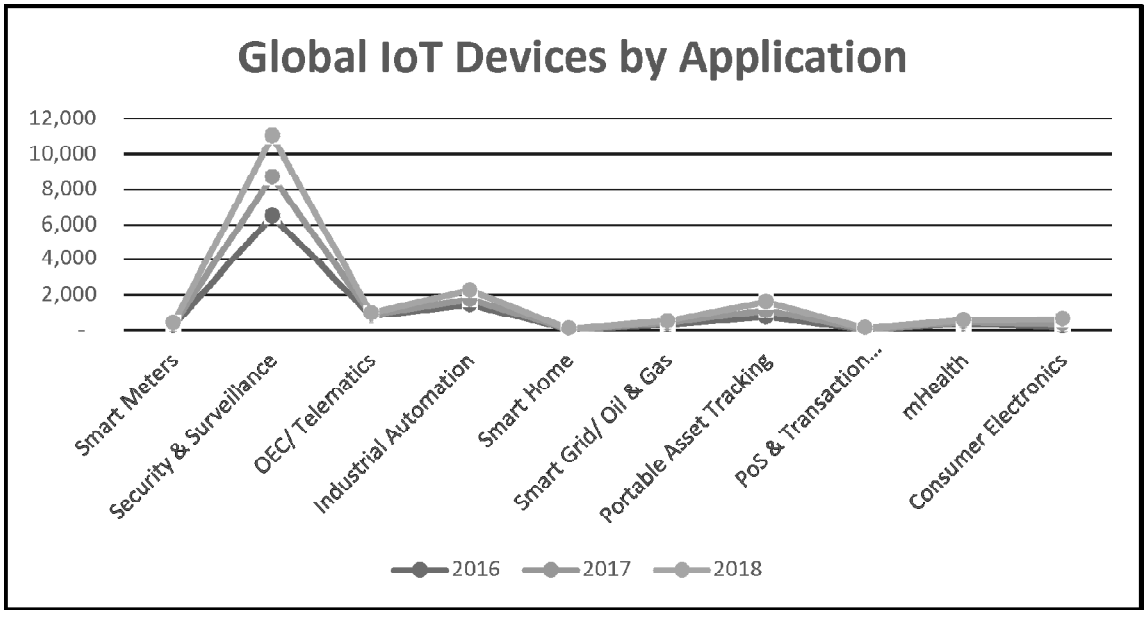

Figure 4: Comparison of Global Adoption of IoT Devices w.r.t. year

The given data tell us that the most crucial application of all times remains to be Security and Surveillance amounting to $8720.9 Mn in 2017 which is predicted to increase to $11,020.4 Mn. IoT forecasts reflect increasing focus and driving outcomes using sensor-based data and creating rich data-sets.

7.2. Indian Scenario

Indian Government along with many incubators are working towards the smarter India mission. As said earlier, India is at the first stage of actualizing the Smart Services. This can be realized with the following table illustrating various projects and investment done by Indian Government:

Table 2
Government Initiatives v/s Investment Made(Frost & Sullivan, Internet of Things Opportunities for Telcos in India)

Project Running In India	*Description*
Smart Cities Initiative	• Total Budget Approved by Indian Cabinet = 980 Billion • Rs. 50,802 Cr. to be invested in first 20 Smart Cities
Digital India	• Total Investment committed for Digital India = Rs. 4.5 Lakh Cr. • Vision of generating employment for 18 Lakh people
Stand – Up India Initiative	• NCGTC given a Total Budget = Rs. 500 Cr./ year (to support Start Up ventures) • Initial corpus = Rs. 2500 Cr.

With critical advancements occurring in the field of e-Governance, the Indian Government can offer conventional administration for the citizen's convenience. Now a days India is shifting from E to M-Governance, particularly for government to citizens (G2C) and citizens to government (C2G) correspondence. Today, cell phones are seen as operational apparatuses to acquire unrest administration.

Table 3
App Based Projects by Government of India(Smart Cities, 2017)

City	*Project*	*Description*	*Project Cost (INR Crores)*
Bhubhaneshwar	a. Parking Management	a. Availability of parking notification on mobile app	50.88
	b. Integrated City Operations Management Center	b. City Incident Management & Emergency Response through app	
	c. Bus Service Operation	c. Enhancing Bus Transit Usage, Journey Planning, and Passenger Information System of passengers "On-Board and at Bus-Stops"	
Pune	a. e-Chalaan	a. Smart Payment System for e-Chalaan, and Cops provided with tablets with the e-Chalaan App.	72
	b. Intelligent Traffic Management System	b. Real Time tracking of buses using GPS	

contd. table

City	*Project*	*Description*	*Project Cost (INR Crores)*
	c. Website for PAN City Water	c. Passenger Information System d. Entertainment Systems and Wifi in buses	
Jaipur	a. Air Quality Monitoring	a. App to create database on Air Quality thereby helping Government to monitor the Air Pollution	3
	b. Civic Infrastructure	b. Sustainable & Smart Civic Infrastructure - App to report street problems connected to e-governance portal, Incident Alert, Panic Buttons	
Surat	a. Traffic Control system	a. Integrated Mobility Center for Transport, Transit Management System	258
	b. SMAC Center	b. Data Center Strengthening & DR SiteOpen Surat - Mobile ID (for Social Media, Mobile Tickets)	
Kochi	City App - Integrated	Creating the app in order to provide one stop solution thereby developing the overall ecosystem across the Spectrum	25
Indore	a. Parking Management	a. Dynamic Messaging Signboards, camera and sensors for collecting data on parking availability and capacity	72.5
	b. Safai Mitra	b. Management of information on primary & secondary waste collection	
	c. Transit Management	c. Passenger Information System, Fleet Management System, Real Time Vehicle Tracking and Video Surveillance	
NDMC - Delhi	a. Geo Tagging Bins (Smart Cities, 2017)	a. Waste Management for institutional and commercial areas and monitoring bins using RFID	9
	b. Sensor Parking	b. Developing centralized Parking Management System by installing sensors at existing parking places	
	c. Cycle Track	c. Identification of Cycle Tracks on Traffic Routes	
Chandigarh	Public Transport System	Integrated Application for Smart Transport System including - Smart Ticketing and Tracking Vehicle and Passenger Information System	20
Imphal	a. Smart Mobility	a. Developing app for Smart Cycle pick & go	5
	b. Safe Imphal	b. Mobile Application to ensure safety of tourists and natives	

contd. table

City	*Project*	*Description*	*Project Cost (INR Crores)*
	c. Digital Road Guidance	c. Guiding citizens with major Land Marks and real-time mobility guidance	
Panaji	a. Municipal Services	a. Services given by Government to Citizens (G2C) through and Interactive Citizens App	15.47
	b. Smart Parking	b. Mobile Application with Dynamic Signaling	
Ajmer	a. SMART Connectivity	a. SMART Web and Mobile Application for Navigation, Online Recreational Activities, and Parking Availability	0.5
	b. Public Information System (PIS)	b. Urban Transport Application for PIS	
Thane	a. Smart Tourism	a. Responsive Government Application for - Transit Management, Fleet Management, Passenger Information (ones at Transit & on Railway Station)	34
	b. TMC Digi Card	b. TMC Digi-Card Mobile Application for Map based Monitoring Services and amenities, Municipal Services including payment management and contacts.	
Vellore	App for Citizens	Developing Web and Mobile Applications for E-Governance services for line departments	6
Amritsar	Intelligent Transport System	Mobility and Transport System of Amritsar include - Developing Mobile Applications with Route Information and Dynamic Sign Boards, Automated Traffic and Enforcement System, Lane Monitoring for pedestrians and bicycle riders.	656.9
Bhopal	Smart Unified Governance	Umbrella App with the idea to improve and bring all the city-wide operations and functions under one roof. a. Citizen Engagement Portal b. Citizen Grievance Redressal System c. Dashboard d. Data Analytics and MIS e. Command Centre f. Transaction Gateway and Mobile Service Delivery	200

Utilization of cell phones for e-governance is tied in with perceiving and clarifying real difficulties, begin with authentic results keeping in mind the end goal to retouch the ways individuals live. There are in total 60 cities where app based solution projects have been initiated out of which some major projects are listed. (Table 3).

A few, minor arrangements will thereby empower the natives of this nation. There are numerous motivations to utilize these cellular phones for the administration, however in India the quantity of ***m-seva*** are low when contrasted with our aggregate cell phone clients by and large. We can expand these numbers by considering a few measures important with the goal that our residents can make utilization of these administrations in future.

8. ACCEPTANCE & UPTAKE – GAP ANALYSIS

8.1. Methodology

In order to understand the current status of adoption of Smart Services, a Questionnaire was formed on which ***pilot study*** was conducted. On the basis of feedback certain changes were made on the Questionnaire making it more comprehensible for Indian Citizens.

A survey strategy was utilized to gather information from Respondents of various categories i.e., from college students to office going professionals, from Unemployed to Retired Professionals. Respondent data was collected by publishing the Survey Online as well as by distributing Survey Form Offline.

The survey questionnaire used in this study is structured in 3 sections as follows:

- SECTION 1 – Expectations from Smart Services
- SECTION 2 – Industry, Barriers and Stakeholders
- SECTION 3 – Rating the Acceptability/ Impact of Smart Services

Measurement in the last section was done using a 5 point Likert Scale – (a) Strongly Disagree, (b) Disagree, (c) Neither Agree nor Disagree, (d) Agree, (e) Strongly Agree.

8.2. Gap Analysis

Before going ahead with any verdict, the analysis was performed on the Respondent Data which is summed up as follows:

8.2.1. SECTION – 1

(a) Emerging Smart Services: There is no doubt that smart services are going to replace traditional processes. In this survey, various smart services were mentioned and respondents were asked to choose the smart services which are going to grow at a faster pace in future. The smart service which got the maximum response is E-payment. Hence, we can say that there is scope for all type of smart services but the smart service which might grow at a much faster rate than others according to this survey is E – Payment following E – Governance (figure 5).

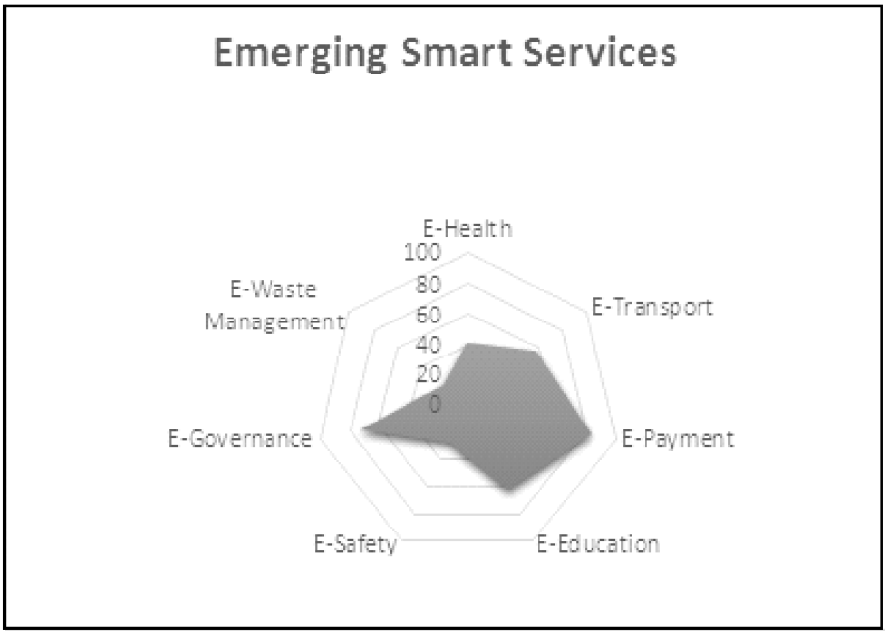

Figure 5: Emerging Smart Services – Respondent Data

(b) Consumer's Readiness to Pay for Smart Services: Acceptance of any smart service is directly linked to the amount people are ready to pay. If a smart service is rich in quality but not priced correctly then chance of getting accepted by people is very less. So, we have asked the respondents about the price they are ready to pay for smart services. 26% respondents agree to pay the amount between 101 – 200 whereas 17% and 18% agree to pay between 400 – 500 and 200 – 300 respectively.

(c) Reasons for Using Smart Services: There is always a reason behind using any service. People will accept and start using any of the smart services if they have a reason to do so and also there must be the value addition to their daily life after using that service. In this survey, we have asked respondents about the reason to accept smart services and the main reason which came up in this survey is saving time. 79% respondents agreed that they want to use this service for time-saving (figure 6).

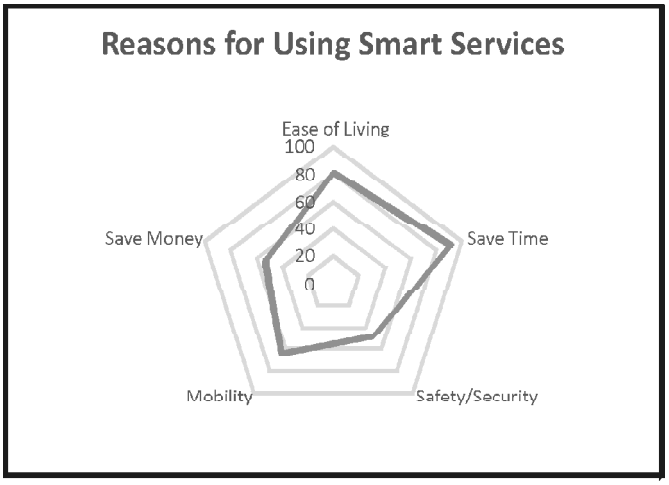

Figure 6: Reasons for Using Smart Services – Respondent Data

8.2.2. SECTION – 2

(a) Impact on Other Industries: Smart services are going to impact most of the industries as well. We have asked the respondents that which industry is going to be impacted the most due to smart services. 59% of the respondents agree that BFSI Industry is going to be affected the most because of smart services (figure 7).

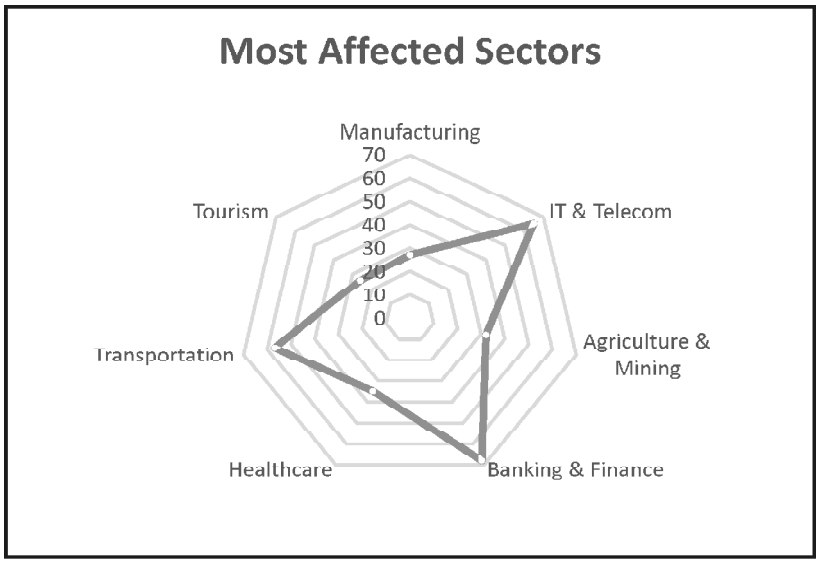

Figure 7: Most Affected Sectors

(b) Barriers of Smart Services in India: Every technology has some challenges adhered with it. Smart services are also having some major challenges and we have asked the respondents that which could be the major restraining factor that can affect the acceptance rate of smart services in India. The major problem that most of the respondent agreed on is lack of knowledge (figure 8).

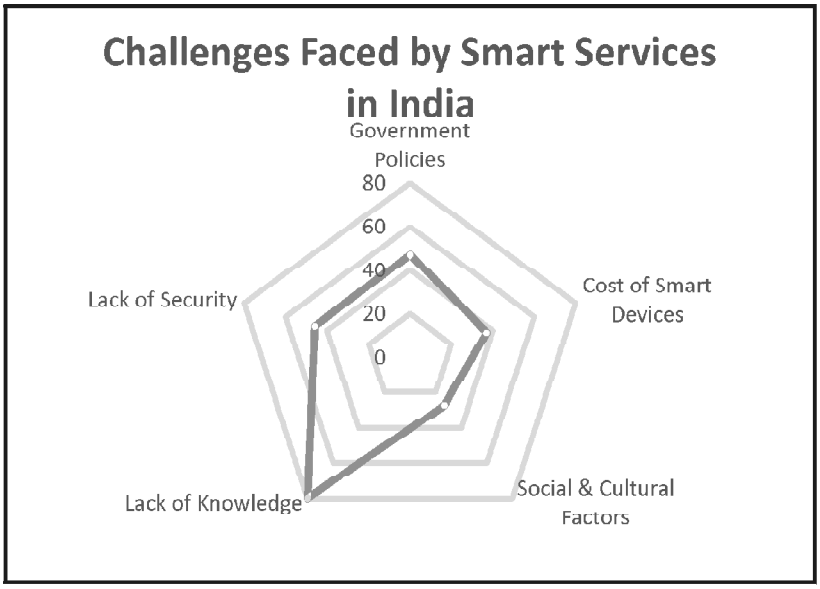

Figure 8: Challenges faced by Smart Services in India

(c) Satisfaction Level: Many smart services are in use nowadays and people are extensively using them. In this study, we have asked the respondents whether they are satisfied with the smart services they are currently using or not. 59% of respondents are found satisfied with the smart services they are currently using while 41% are not satisfied with the smart services they are currently using.

(d) Areas of Improvement: As 41% of respondents are not satisfied with smart services they are currently using. So, we have asked respondents that which domain needs improvement so that satisfaction level can be improved. 70% of respondents agree that internet connectivity requires the major improvement in order to increase the quality of smart services (figure 8).

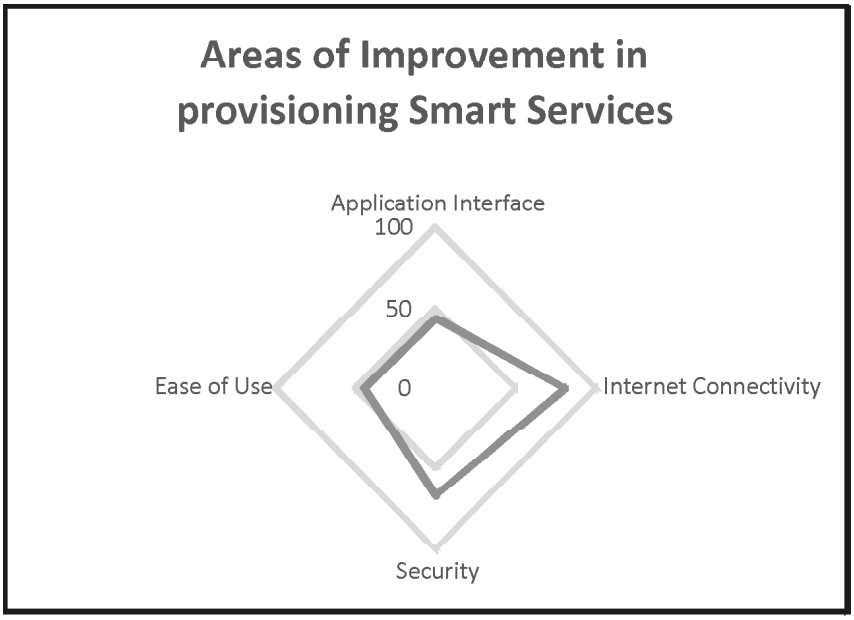

Figure 9: Areas of Improvement in provisioning Smart Services in India

(e) Stakeholders of Smart Services in India: There is no doubt that industries will try as much as possible to be a part of the major projects running in this country. We have asked our respondents about the sector which is going to be the biggest investor thus aligning its interest with the upcoming smart services. According to respondents' IT industry is going to be major stakeholders for smart services with a consensus of 76% respondents (figure 10).

(f) Awareness of IoT and M2M: IOT and M2M are major drivers for smart services delivery. So, it is necessary to be aware of them. We have asked our respondents whether they are aware of these two technologies or not. 53% of respondents agreed that the are aware of them and it's a good sign for the acceptance rate of smart services in India.

8.2.3. SECTION – 3

(a) Smart Services Solving Traditional Problems: Technology is of no use if it can't solve the problems of people effectively and efficiently as compared to the traditional process. So, we have asked the respondents whether they agree or not that smart services can solve their problem much easily as compared to the

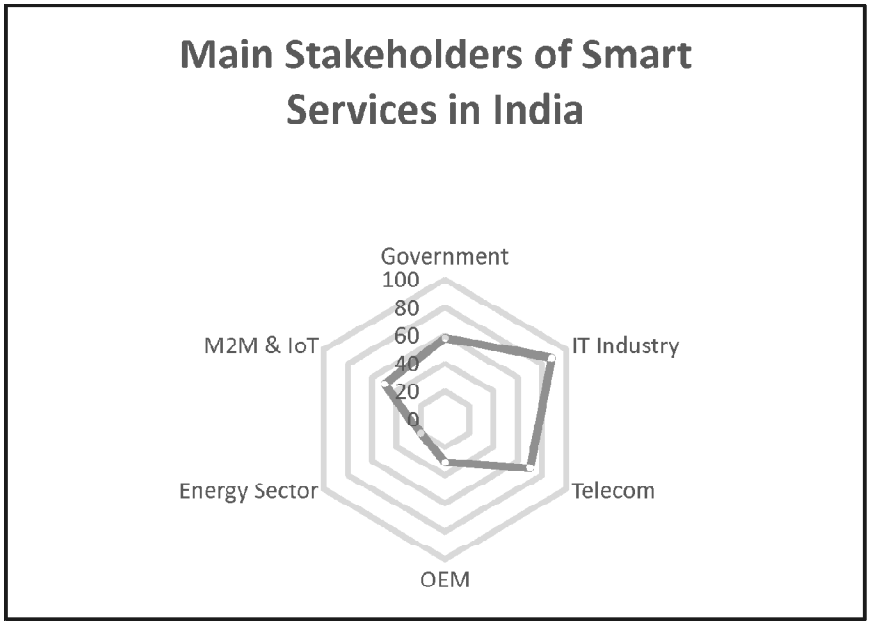

Figure 10: Main Stakeholders of Smart Services in India

traditional process. 50% of respondents agreed that smart services can solve their problem in a better way as compared to the traditional processes.

(b) Smart Services v/s Standard of Living: Technology has always increased the standard of living of human beings. Same is expected from smart services also so we have asked the respondents whether smart services will increase the standard of living or not. 57% of respondents agreed that smart services will increase the standard of living in future.

(c) Acceptance of Smart Services among SMB's (Small Medium Businesses): There is a huge market of SMBs present in India. In order to take the full benefit of smart services, it must be accepted by SMBs. We have asked the respondents whether SMBs will accept smart services or not in India. 46% of respondents agreed that SMBs will accept smart services while 18% disagree with it. Rest have neither agreed nor disagreed.

(d) Is Rural India ready to adopt Smart Services?: In India, majority of the population still lives in rural areas and penetration of technology is also not good there as compared to urban areas. So, we have asked the respondents whether rural India is ready to accept smart services or not. 54% of respondents agreed that rural India is ready to accept smart services and it's a positive signal for large-scale acceptance in future.

(e) Impact of Smart Services on Indian Economy: Any technology has the direct impact on the economy of a country. It is expected from all technologies that they will enhance the economy of that country. We have asked about expectations from smart services in enhancing India's economy to the respondents in which 53% agreed that smart services will. 31% disagree that it will have any impact on economy and 16% are doubtful about the result.

Acceptance & amp; Impact of Smart Services [How much do you agree or disagree that smart services will impact our economy?]

		Frequency	*Percent*	*Valid Percent*	*Cumulative Percent*
Valid	Strongly Disagree	30	26.1	26.1	26.1
	Disagree	6	5.2	5.2	31.3
	Neither Agree nor Disagree	16	13.9	13.9	45.2
	Agree	47	40.9	40.9	86.1
	Highly Agree	16	13.9	13.9	100.0
	Total	115	100.0	100.0	

(f) Fortune of Smart Services: Technologies should be resilient enough to exist in the market for the longer period. We have asked the respondents whether there is any future of smart services in India or not. 52% agreed that smart services are going to be useful in future whereas 36% disagreed that it will be useful.

Acceptance & Impact of Smart Services [How much do you agree or disagree that smart services will be useful in future?]

		Frequency	*Percent*	*Valid Percent*	*Cumulative Percent*
Valid	Highly Useless	44	38.3	38.3	38.3
	Useless	16	13.9	13.9	52.2
	Neither Useless or Useful	13	11.3	11.3	63.5
	Useful	34	29.6	29.6	93.0
	Highly Useful	8	7.0	7.0	100.0
	Total	115	100.0	100.0	

8.2.4. Data Analysis

Respondent Data of the above parameters is in the form of Likert Scale which can be summarized as follows:

Statistics

		[How much do you agree or disagree that smart services can solve your problem more efficiently than traditional processes?]	*[How much do you agree or disagree that Smart Services will affect the standard of living?]*	*[How much do you agree or disagree that SMBs will accept smart services?]*	*[How much do you agree or disagree that rural India is ready to accept smart services?]*	*[How much do you agree or disagree that smart services will impact our economy?]*	*[How much do you agree or disagree that smart services will be useful in future?]*
N	Valid	115	115	115	115	115	115
	Missing	0	0	0	0	0	0
Mean		2.50	2.50	2.43	2.50	3.11	2.53
Median		3.00	2.00	3.00	2.00	4.00	2.00
Std. Deviation		1.471	1.530	1.278	1.259	1.437	1.429
Variance		2.164	2.340	1.633	1.586	2.066	2.041

Further, analysis was done was performed on the four parameters, i.e., Smart Services Solving Traditional Problems, Smart Services v/s Standard of Living, Acceptance of Smart Services among SMB's, Readiness to adopt Smart Services by Rural India.

Acceptability Level

		Frequency	*Percent*	*Valid Percent*	*Cumulative Percent*
Valid	Not Ready to accept	54	47.0	47.0	47.0
	Ready to accept	61	53.0	53.0	100.0
	Total	115	100.0	100.0	

The ***median score*** of these four parameters was calculated. Going with the null hypothesis, i.e., people with score 2.5 and below are the ones showing resistance towards adoption of smart services in India.

On analyzing the Acceptability Level of the collected data, it was found that 53% of the respondents are willing to accept the life – changing smart services, whereas 47% of the respondents are still opposing its adoption, proving that our society still consists of a big knowledge gap which needs to be bridged before deploying smart services.

9. CONSPECTUS

Be that as it may, are we ready to embrace the Smart Services?

With diverse players in the ecosystem at various phases of Standards & Maturity in Smart Services are still nascent. There is no intelligible business or specialized model. Consequently, even as organizations confront innovation difficulties to monstrous scaling, they are likewise considering how to expand the valuable existence of huge scale interests in Machine to Machine interaction, IoT, and therefore in providing Smart Services. In any case, industry pioneers are not sitting tight, waiting for the pieces to become alright. Rather, they are pushing to make a manageable plan of action for smart services. Also, some of these visionaries are governments in developing economies.

A momentous step is to make suitable interests in perspicacious infrastructure and applications. A discerning framework is one that can anticipate, learn, ensure and self-mend over all layers: network, data-centre, working environment, security and operations.

Eventually, considering the Change Management implications of SMART SERVICES. The stipulation of Smart Services is probably going to bring about significant changes in individuals' work, particularly as machines and people interface with more recurrence.

The ***"Smart India"*** idea intends to understand its objective through furnishing policymakers with clever, bottom–up investigations of the difficulties of individual and technological advancement.

As ***Smart Environment*** (stage lift in Next Generation Network) has huge advantages the quantity of difficulties and issues are numerous and they must be tended to legitimately. The organization of this proposed Smart Environment providing citizens with Smart Services will be troublesome, however in the meantime, it has various advantages to the general public in not so distant future.

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