



IoT Market Perspective: India Market

IoT Week 2007, Geneva

**EU – India Cooperation Platform in
Future Internet & Electronic Media Project**



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Industry Support





Beyond Evolution

leading the IoT revolution



The beTS Story: Mobile Apps to Internet of Things



Early Entrant in Mobile Utility
Services
(est. 2005)



Established **Mobile app** development
expertise

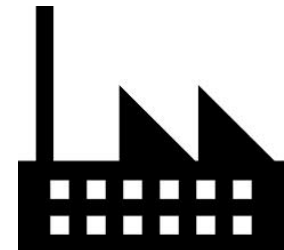


Air India
Air India Ltd.



SoftBank

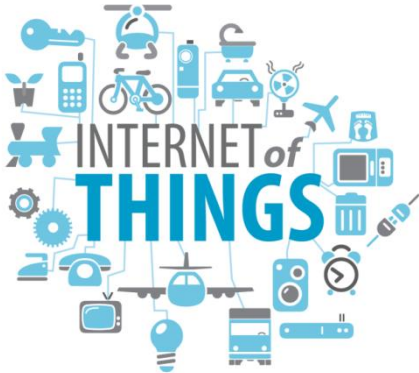
Working with **Market leaders**



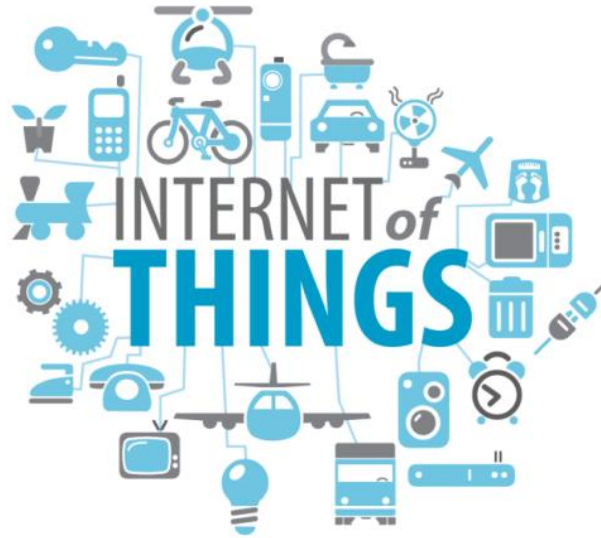
**Developed Remote
Monitoring & Control
solutions(IoT) for B2B**



Innovated to create **Smart Home
solutions**



Envisioning to create end to end
integrated platform of IoT



The Market Perspective

“500 million years ago, the Cambrian Explosion marked a biological turning point, as the advent of eyes, smell, and senses developed the brain, and created millions of diverse life-forms.

Today we are at the beginning of a similar such turning point, a paradigm shift from mobile, to the combination *of Internet-of-Things (IoT) sensors and artificial intelligence (AI)* that will drive **ONE Trillion cumulative devices** over the next 20 years and *changing the way we live*, making human lives happier and safer.”

summarized from speech by Masayoshi Son, CEO Softbank, ARM TechCon, 2016



IoT: nearing inflection

Factors driving IoT

Ubiquitous wireless coverage

Cheap sensors, standardised components, cheap connectivity

Cloud storage & processing

Smart phone proliferation

Need for greater efficiency, automation & control, comfort...

275bn IoT

Over 1 trillion
IoT devices

(accumulated in 2016-2035)



Note: Created by SoftBank Group Corp. Based on data by Ericsson

Need Drives the market...

Few Key factors:

1. Individual Consumers:

- Necessity, Comfort, Luxury, Entertainment.



2. Corporate / Industrial Consumers:

- Costs, Efficiency, Productivity, Growth



3. Governance

- Efficiency, Law & Order, Compliances, Socital Benefits



IoT Market Segments

- Energy (Electricity)
- Health Care
- Transportation
- Agriculture
- Manufacturing
- Security – Home, Industrial
- Hospitality & Tourism
- Retail
- Entertainment
- Banking & Insurance
- Governance & Administration





IoT for Smart Cities





India Market



- Population: 1.3 Billion
- Internet Users: 462 million
- Growing e-commerce usage: 65% of I't Users
- Fastest growing Middle Class segment:
 - 267 million in 2016, more than 550 million by 2025
 - Hunger for comfort, luxury;
 - Technology Savvy





Electricity Segment : Addressable Market

Euro 4,842 million (INR 348,600 million)

Estimated annual electricity spend by urban households (3rd after food & education)

Euro 2,986 million (INR 215,000 million)

Estimated annual electricity spend by urban households on electric appliances

28 million

Air conditioners in India

34 million

Refrigerators in India

6 million

Annual residential pump
sale in India

1.8 million

Annual electric water heater sale

3.3 million

Annual washing machine sale in
India

1.2 million

Annual microwave sale in
India



Opportunity Analysis

Data Items	Unit	2013	2014	2015	2016	2017-Q1
No of Internet Users	Mn	213	250	300	400	462
Ecommerce Visitors	%	60%	62%	64%	65%	67%
No of Ecommerce Visitors	Mn	127.8	155	192	260	310
Conversions	%	2.7%	2.8%	2.9%	2.9%	3.0%
No of Shoppers per mth	Mn	3.5	4.3	5.6	7.5	9.3
Orders per buyer per mth	No.	1.6	1.6	1.7	1.7	1.8
Total order per mth	Mn	5.3	6.9	9.2	12.8	16.7
Average per order value	Euro	26.6	33	42	52	65.4
Average per month order value	Mn Euro	142	233	385	671	1093
Total No of Unique Shoppers per yr	Mn	20	25.2	32	40	50
Exptd no of households shopping per yr	Mn	10.0	12.6	15.9	20.0	25.2
% expected to be falling in higher target category	%	20%	22%	23%	23%	24%
Target Potential - Households	Mn	2.0	2.8	3.7	4.6	6.0

Opportunity Analysis

IoT User Community:

- 28-55 yrs, Early adopters, Tech Savvy. Willing to pay for convenience & Connectivity;
- Corporate & SMEs
- Self Employed
- On-Line Buyers;
- Urban buyers : Metros, Tier 1, Tier 2 cities
- Rural Segment : Remote Control of Irrigation, Live stock monitoring

Need to control Appliances

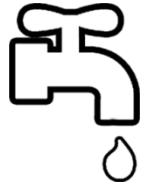
Daily Challenges faced by people



Cathy & John

Both work at city and also have a mini farm.

Who will turn on the irrigation pump at 8 AM?



Nick

Stays with family & children in a big Villa

How do I manage the ACs/ Heatings remotely & control my electricity bill?



Mushin & Kim

going on vacation

Who will watch our house ?



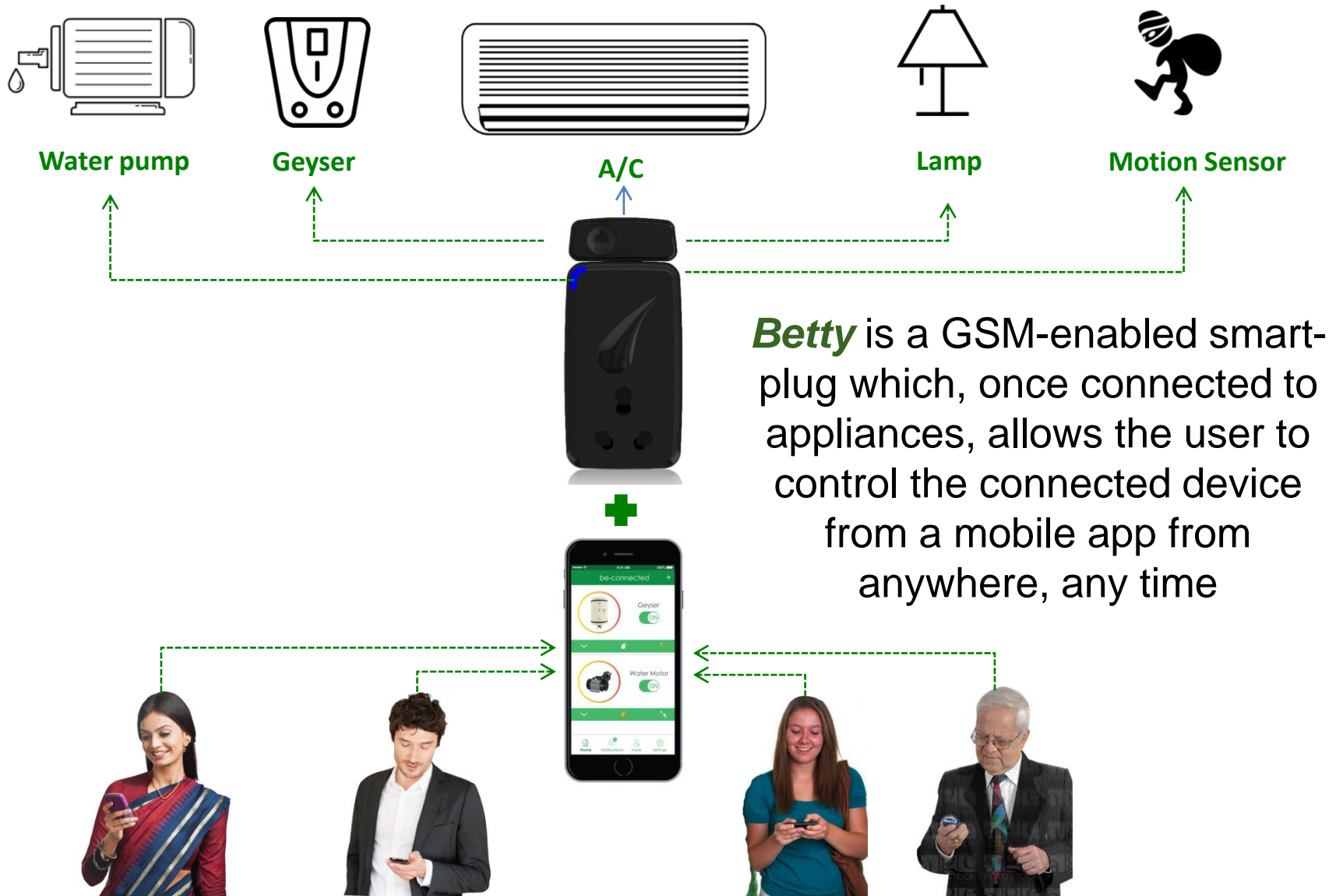
Linda & Richard

Are single & work in a top MNC

Forget to turn-on the heating system? Wish it could Turn On itself every morning



Betty – making legacy devices smart



Who are buying & why

Home owners*	Small office owners	Small hotels	Niche commercial applications
<p>Convenience of controlling appliances remotely</p> <p>Energy monitoring</p> <p>Scheduling</p> <p>(Eg Geysers, ACs, Water pumps)</p>	<p>Tracking energy consumption (Eg - A/cs)</p>	<p>Tracking energy consumption (Eg – A/cs)</p> <p>Convenience of controlling appliances remotely</p>	<p>Convenience of controlling appliances remotely & monitoring (Eg – Rural water pumps, Rented office space Energy Monitoring)</p> <p>Scheduling</p>

* Currently largest segment for Betty

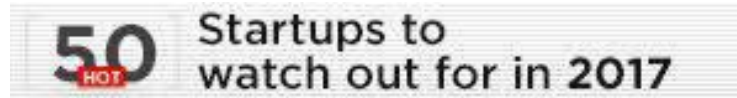
Betty: Getting noticed

Reviewed by leading Tech Shows -



NDTV
PRIME

Identified as a top 50 startup by ET



Covered by leading journals

THE
HINDU

live
mint

YOUR
STORY

TECHSTORY.

The Indian EXPRESS

Promoted by leading ecommerce stores Massive response-Convergence India



THE ECONOMIC TIMES

Business Standard

A night-time photograph of the Red Fort in Delhi, India. The fort's architecture is illuminated with warm yellow lights, highlighting its domes, minarets, and intricate carvings. The central gatehouse is the focal point, flanked by two large towers. The fort is surrounded by a high wall and a moat. The sky is dark, and the foreground shows a paved area with some low-lying vegetation.

India's Smart City Mission



India's Smart City Mission



The core infrastructure elements in a smart city

- Adequate water supply,
- Assured electricity supply,
- Sanitation, including solid waste management,
- Efficient urban mobility and public transport,
- Affordable housing, especially for the poor,
- Robust IT connectivity and digitalization,
- Good governance, especially e-Governance and citizen participation,
- Sustainable environment,
- Safety and security of citizens, particularly women, children and the elderly, and
- Health and education

Source: Smart Cities Mission, Ministry of Urban Development, Govt of India





IoT policy of India

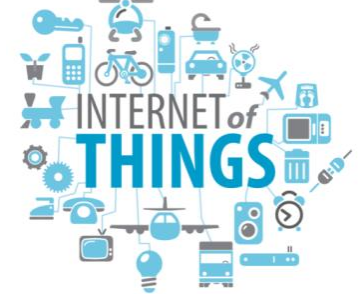


- To help the IoT industry, the Department of Electronics and Information Technology has drafted India's first 'IoT Policy'.
- This policy is to power the Indian IoT industry by 2020 to reach into the projected **USD 15 billion opportunities**, increasing number of **connected devices** to **2.7 billion** from 200 million.
- This policy is expected to impact B2B and B2C businesses with data from billions sensors being processed by various IoT platforms.
- Smart City focus of the Indian Government opens this up into trillions of dollars in opportunity.
- Smart City is a subset of "Digital India" program of the Indian Government which will lead the development of the IoT industry ecosystem in the country.



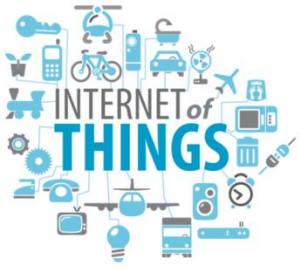


What is in it for you...



- Market
- Technology support
- Skill support
- Input Resources
- Business Growth
- Social Impact





Way Forward...

What India has to offer

- India - Not just a market...
 - Huge Skill base
 - > 100,000 quality engineers graduate per year
 - Govt's extra push for manufacturing
 - Huge demand for Infrastructure growth

India has more than **50%** of its population below the age of 25 and more than **65%** below the age of 35. It is expected that, in 2020, the average age of an Indian will be 29 years, compared to 37 for China and 48 for Japan; and, by 2030, India's dependency ratio should be just over 0.4.





Way Forward...



- Build Partnerships
 - Identify specific segments;
 - Select topics;
 - locate compatible Industry Partners: Help from industry bodies e.g. NASSCOM, CII, FICI, ASSOCHAM...;
 - Identify suitable academic partners;
 - Identify appropriate Business Partners.

How FI-Media can facilitate ?



Identify IoT developmental areas in a smart environment



Help Select sustainable ones or enhance sustainability



Coordinate to involve industry, researchers to foster entrepreneurship



Enhance Market Reach

We invite C2C Partnership...



Clustering Partnerships



So we progress ...



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