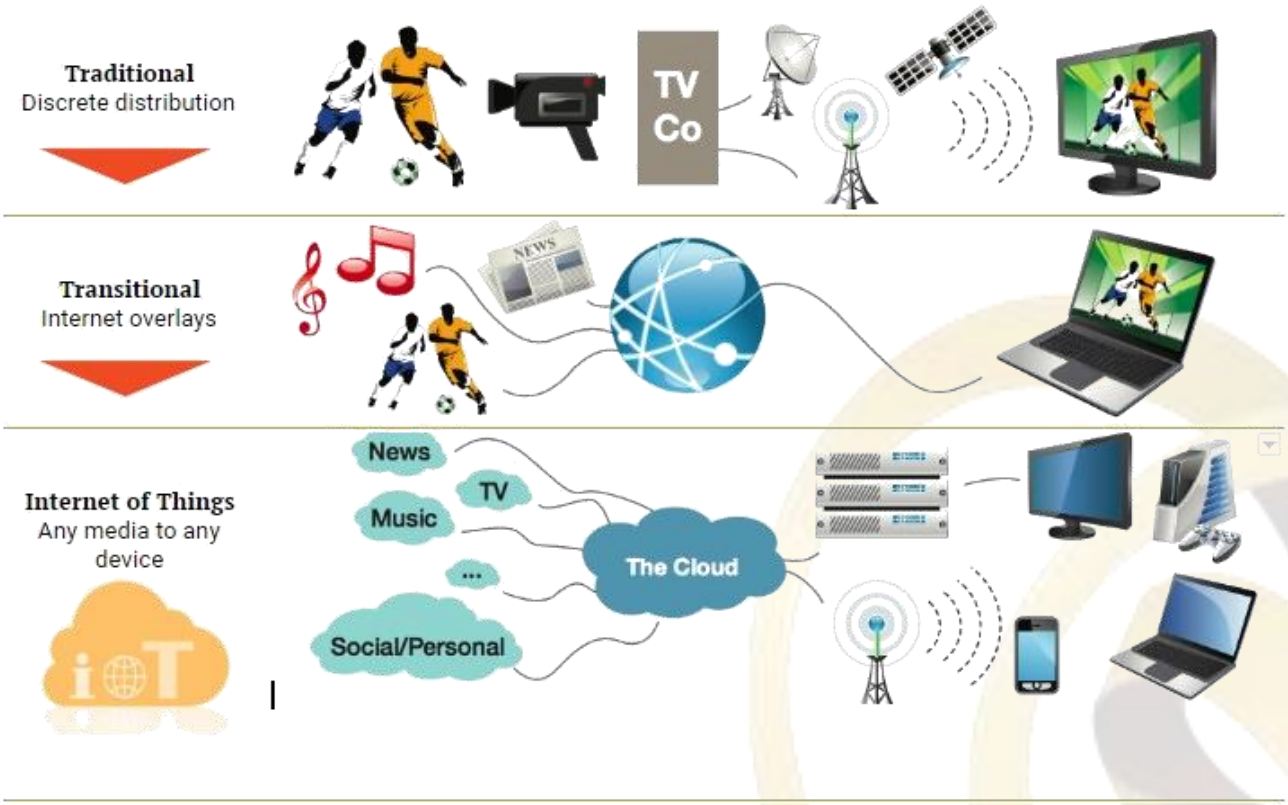
Impact of IoT on Family Offices, Investments into IoT companies and a Snapshot of the Australia-India IoT space

For a long period of time the internet has been the median for search, transfer and exchange of data, disrupting communication channels such as phone, fax and mail. Then came the age of analytics with high-tech platforms, systems and processors. Now with the evolution of smart technologies, internet has become the core of everything. We are now at the era powered by quantum computing, blockchain and artificial intelligence.

'Internet of Things' (IoT), the network of physical objects embedded with software and sensors that are connected to collect and exchange data, is no longer the future, it is now permeating everywhere.



Impact of IoT on Family Offices

IoT will impact family offices and the wealth management industry, as they are naturally seen as the early adopters of technology. Advisers working with wealthy clients can expect data

from sensors that may be attached to physical assets. Smart devices, wearables and AI (artificial intelligence) will also play a major role in the shift from private to intelligent advise, and this may not necessarily be totally artificial.

IoT is driving the idea of shareable assets and real-time market places, which is a growing threat to banks' lending books. Clearly, the business case for sharing assets is very strong, that banks' specialist asset lending businesses are under the most threat. There is some good news for banks in that a marketplace will improve loan quality, since a highly utilised asset will produce a very consistent cash flow. A digitally-connected asset is for all intents and purposes a secured asset. You can finance the asset, you can easily understand its value, and the odds of the loan being repaid are higher.

Why Family Offices are backing IoT companies in Australia

Australia is leading the way, having brought Wifi to the world, and the national broadband network (NBN) is the largest investment in the world relative to its GDP and population. The project is unique in not involving any private sector funding, at least for its first decade, connecting 93% of residential premises and broadband wireless and satellite coverage to the remaining 7% of the Australian population.

LoRaWAN (MAC protocol for a high capacity Long Range and Low Power Wide Area Networks) targets the basic needs of IoT such as secure bidirectional communication, mobility and localisation services. Australia has recently started deploying IoT LoRaWAN network at Launceston (Tasmania), Townsville (Queensland), Docklands (Victoria), Burangaroo (NSW); to enable a host of smart, innovative applications involving real-time transportation monitoring, inventory control, healthcare, agriculture and many other IoT applications.

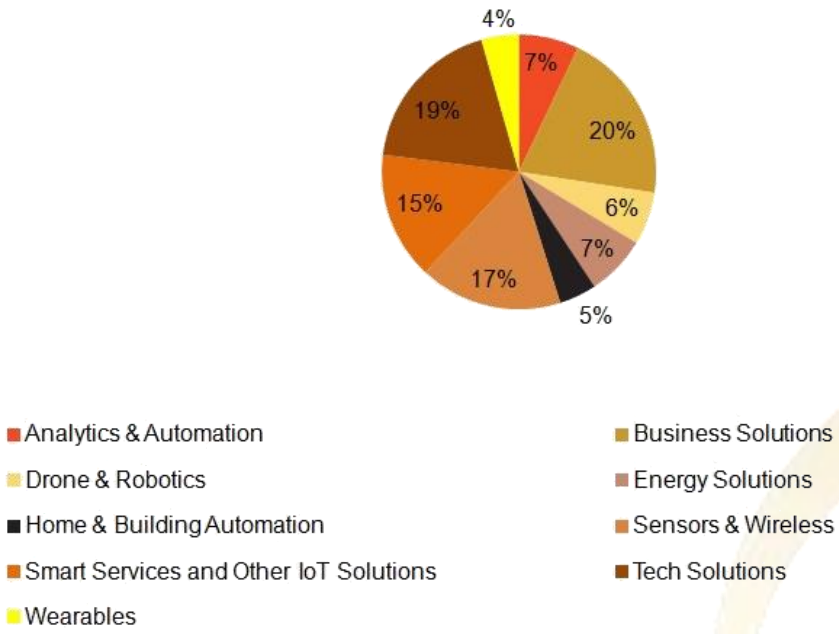
These recent ground-breaking projects will place Australia amongst forward-thinking countries developing smart network infrastructures based on the LoRa Technology to help streamline day-to-day processes and elevate business decisions, environmental conservation, public infrastructure, and more. For example, National Narrowband Network Company (NNN Co) is rolling out its own low power wide area network for IoT based on the LoRaWAN technology — is calling on the Government to spend $800m to build a LoRaWAN network covering 2.5m square kilometres to support IoT applications for Australian agriculture.

There has been recent the trend of technology companies collaborating with Australian universities on IoT initiatives and connectivity:

- **Nokia** and UTS will establish a collaborative innovation and training facility at the university, where the technology company will provide IP routing, optical, fixed and 4G/5G mobile network components, and applications and analytics platforms for project work and training.

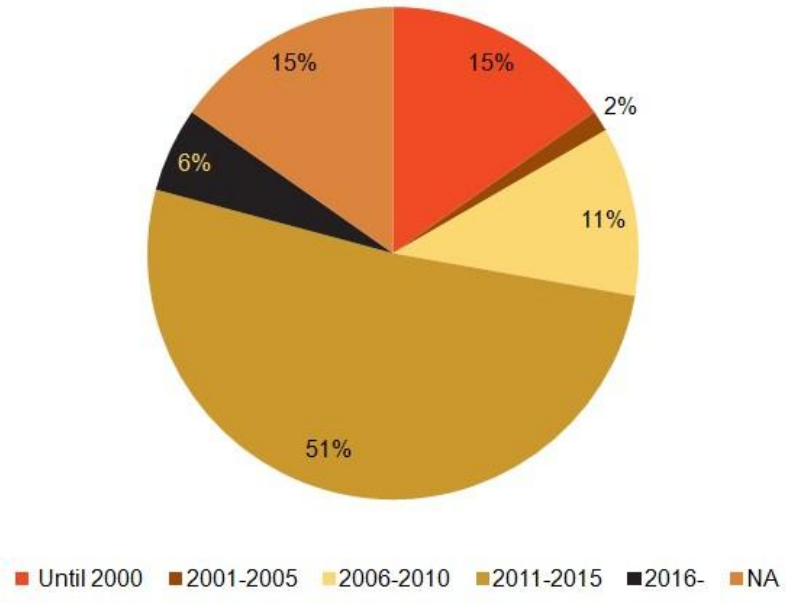
- UTS has also partnered with local IoT network operator **Thinxtra**, with the company providing the university with free access to the Sigfox network as part of its Smart University Partnership Program.
- **Huawei** recently launched a Narrowband-IoT training facility at James Cook University in Cairns, providing the funding and infrastructure required to encourage students to build solutions using the standard as part of the university's new Bachelor of Engineering in Electronic Systems and the Internet of Things degree.
- Australian tech company **Meshed** launched its Sydney CBD LoRaWAN network in partnership with UTS, The Things Network and the IoT Alliance Australia, providing students and surrounding businesses to develop IoT solutions with the crowd-sourced standard.

Even though video analytics has been highlighted as the booming area of focus in the IoT, Tat Capital research shows that generic sectors such as drone, robotics, business solutions, smart services, energy, sensors and wearables are main areas, where IoT companies are starting to evolve in Australia.



Family Office investments into IoT companies in Australia

Tat Capital research shows that approximately 70% of the IoT companies in Australia have launched within the past 10 years, which is consistent with the interest from Australian family offices to invest into the IoT space.



By 2025, data from connected devices are projected to yield insights, driving potential economic value as much as US$11 trillion (McKinsey - June 2015). Global video analytics market segment is expected to be US$2 billion in 2017 (Tractica – Statista 2017). Video-analytics applications are expected to have a compound annual growth rate of greater than 50 percent over the next five years (McKinsey & Company – December 2016).

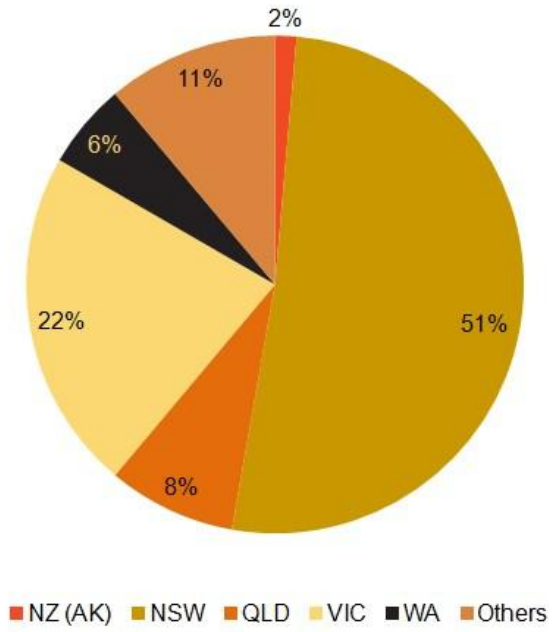
In the intelligent transportation space - **DTI Group** (ASX: DTI) founded in Perth, **SpeedCast** (ASX:SDA) founded in Adelaide, and **Smart Parking** (ASX: SPZ) founded in Melbourne have been around for over 20 years. In 2010, an Australian family office backed a 10-year-old private company, headquartered in Melbourne - **SenSen Networks,** which provides patented video IoT analytics and sensor data-driven AI solutions to global blue-chip customers, across intelligent transportation solutions and gaming.

In the sporting arena - **Catapult Sports** (ASX: CAT) founded in Melbourne has had strong family office and institutional support on the listed markets. **CricHQ**, NZ based private company was backed by Australian, NZ and UK based HNW investors, and in 2015 it received US$10 million PE investment from Tembusu partners, backed by Indian family offices and the investment was facilitated by Tat Capital. Sportstec founded in Sydney, was acquired in 2015 by Agile Sports Technologies and now operates as **Hudl**.

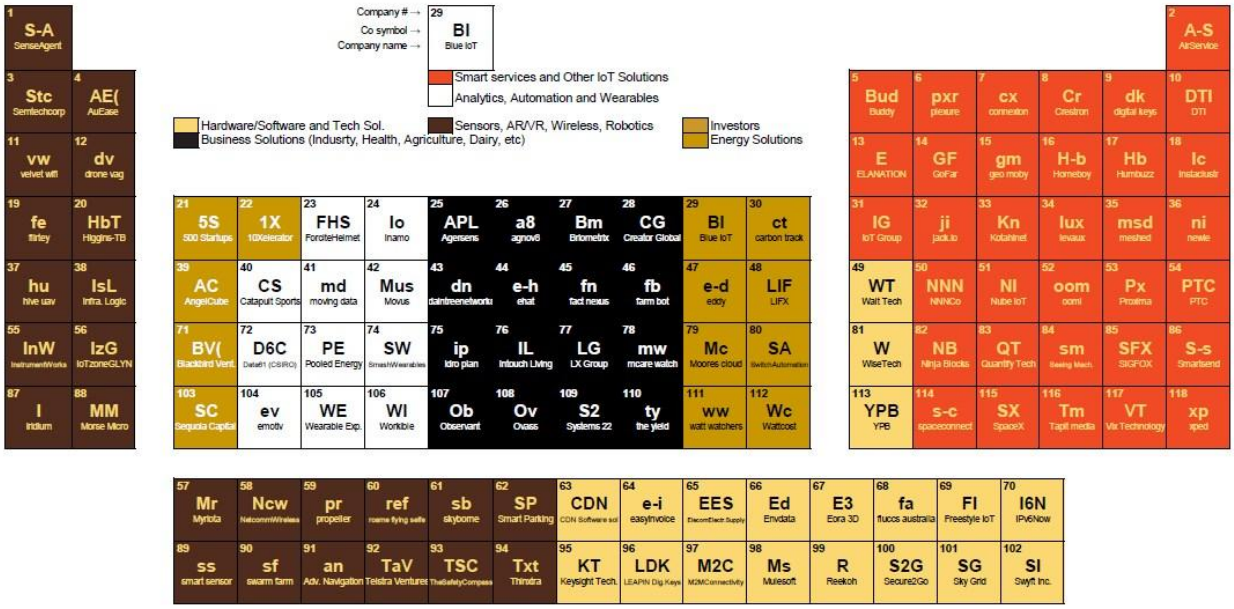
In the construction and building maintenance space: Adelaide-based technology and software company **Sine**, which provides check-in system used for office meetings, schools, hotels, construction sites and events, has also been backed by an Australian family office in 2016. There's also **Buddy** (ASX:BUD), which was founded by an Australian entrepreneur, now based out of Seattle and they operate out of Adelaide. Buddy provides a monitoring solution comprised of IoT class hardware, secure and scalable data infrastructure, an operations portal, engaging occupant facing dashboards, and on-the-go mobile experiences. Another interesting

company backed by a family office is **Advanced Navigation** based in Sydney, which specialises in the development of navigation technologies and robotics.

Even though, most examples above backed by family offices are out of South Australia, WA and New Zealand; Tat Capital research shows New South Wales (51%) spearheading the IoT space in Australia, followed by Victoria (22%).



The research conducted in March 2017, covered the full range of IoT companies in Australia. The majority of the companies seem to be involved in smart services and providing software solutions in the IoT space in Australia. Specific IoT companies providing business solutions specific industries such as health, agriculture, dairy, retail and gaming are gaining traction.



Australia-India IoT Space

There has been some interesting IoT innovations and collaborations in Australia & India in the recent past:

- ASX listed **CCP Technologies** (ASX:CT1) adapted **Thinxtra**'s Australian Sigfox network for monitoring its commercial refrigeration systems. CCP's cloud-based analytics platform provided the business intelligence required to manage food safety and compliance standards and improve business efficiency.
- **Agnov8**, an agricultural innovator, through its two Smart Water sensors, helped **Cameron's Nursery** become more profitable by monitoring the quantitative aspects of the nursery's water.
- **Jain Irrigation**, an Indian multinational, invested in an Australian irrigation agtech company **Observant Technology**, and this collaboration of technology and innovation will aim to increase crop yields while sustainably and profitably managing water.

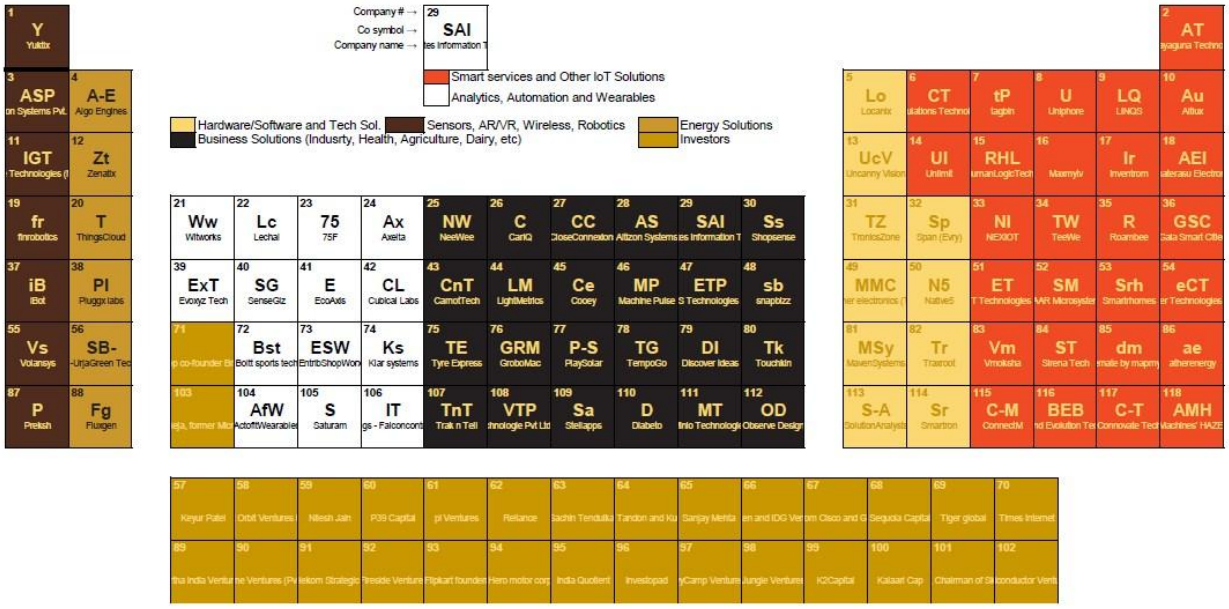
Here are some global examples:

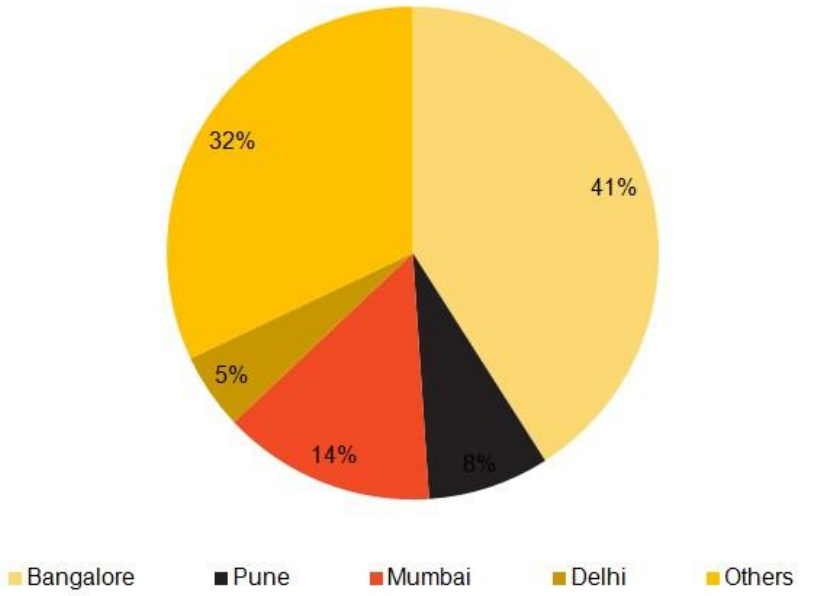
- **Tata Consultancy Services (TCS)** IoT Centre of Excellence in Hyderabad - South India, **HCL Technologies** collaboration with **IBM** to design applications for remote monitoring, smart inventory management and smart buildings.
- **Tech Mahindra**'s partnership with Silicon Valley-based **Aeris Communications** and Dutch company, **Tomtom**.

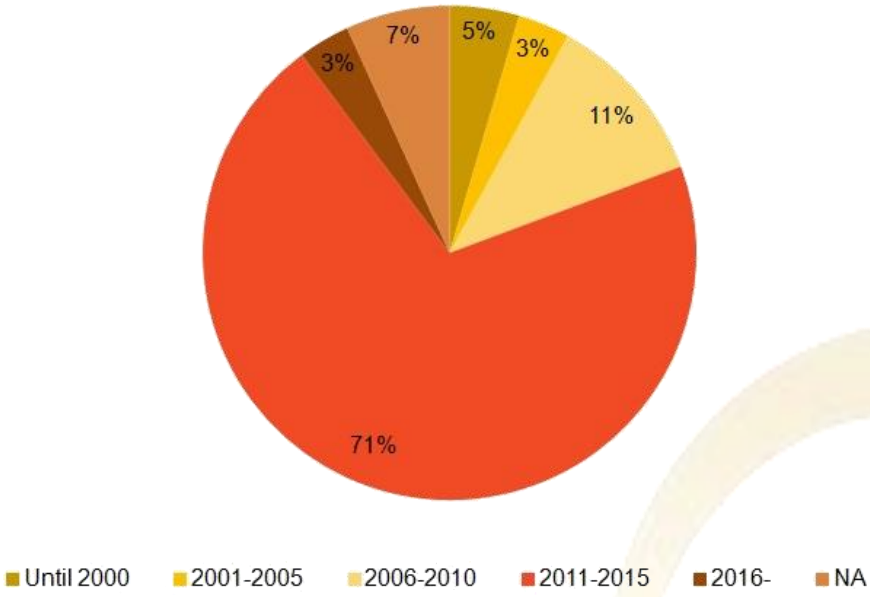
Australia	India
Australian IoT market is currently at about $383 million in 2016, and is expected to grow into a $4 billion industry by 2020. (Australian consumer insights service Telsyte)	IoT market in India is at $5.6 billion in 2016, and is expected to reach $15 billion with 2.7 billion units by 2020. (NASSCOM/Deloitte report)
Internet data consumption in Australia increased by an incredible 45 percent between 2015 and 2016, and this trajectory is expected to continue its exponential rise.In fact, a forecast from Cisco claims that the amount of data we use in 2018 will be more than the amount we used “in all the years before 2013 combined”.	According to a latest report published by Nasscom in 2016, The total Internet usage in India is set to see a two fold increase from 350 million users at the end of 2015 to 730 million by 2020.
Cisco also claims that by 2020, there will be two million internet households in Australia using more than 250 gigabytes (GB) per month, and over 500,000 households using over 500 GB per month.With access to fast internet over the nbn™ network, Australians will be IoT-enabled.	Data traffic per active smartphone is expected to increase fivefold from 1.4 GigaByte (GB) per month in 2015 to 7 Gb per month in 2021.

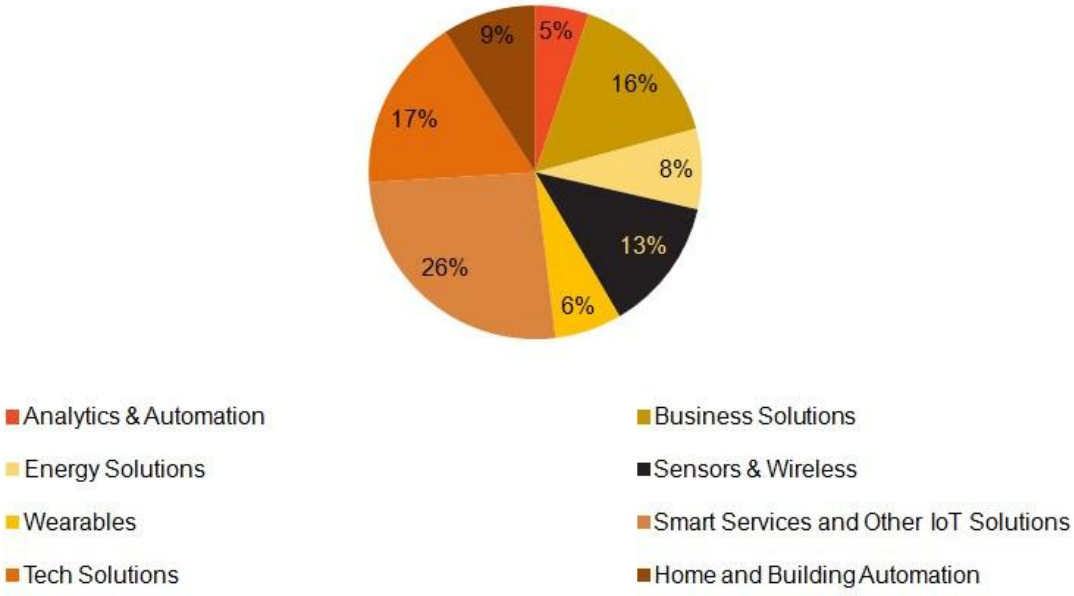
Australian & Indian IoT Company research - conducted by Tat Capital (March 2017)

Overview of Indian IoT space by Companies, Location, Launch & Sector Spread is given below:


Company # →
Co symbol →
Company name →
29
SAI
Smart services and Other IoT Solutions
Analytics, Automation and Wearables
Hardware/Software and Tech Sol.
Sensors, AR/VR, Wireless, Robotics
Business Solutions (Indusrty, Health, Agriculture, Dairy, etc)
Energy Solutions
Investors


32%
41%
5%
14%
8%
Bangalore
Pune
Mumbai
Delhi
Others


7%
5%
3%
3%
11%
71%
Until 2000
2001-2005
2006-2010
2011-2015
2016-
NA


5%
16%
8%
13%
6%
26%
17%
9%
Analytics & Automation
Business Solutions
Energy Solutions
Sensors & Wireless
Wearables
Smart Services and Other IoT Solutions
Tech Solutions
Home and Building Automation