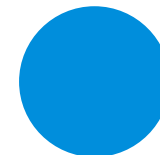# IoT – The Smart Baby(s) Care

September 2019

What's all about…!

IoT enabled – "The Smart Baby(s) care" (Single/Twins) helps the parents to monitor and act upon:

- Monitor the baby's movement in cradle / Inside home

- Pet's movement near baby through video camera

- Home temperature during Winter/Summer

- Observe crying baby

- Enable virtual voice and play lullaby

- Fully loaded wet pampers

- Baby's body temperature

- Any strange movement apart from Pets

- Mosquito / Bed bugs / Insects movement

Framework used to design IoT

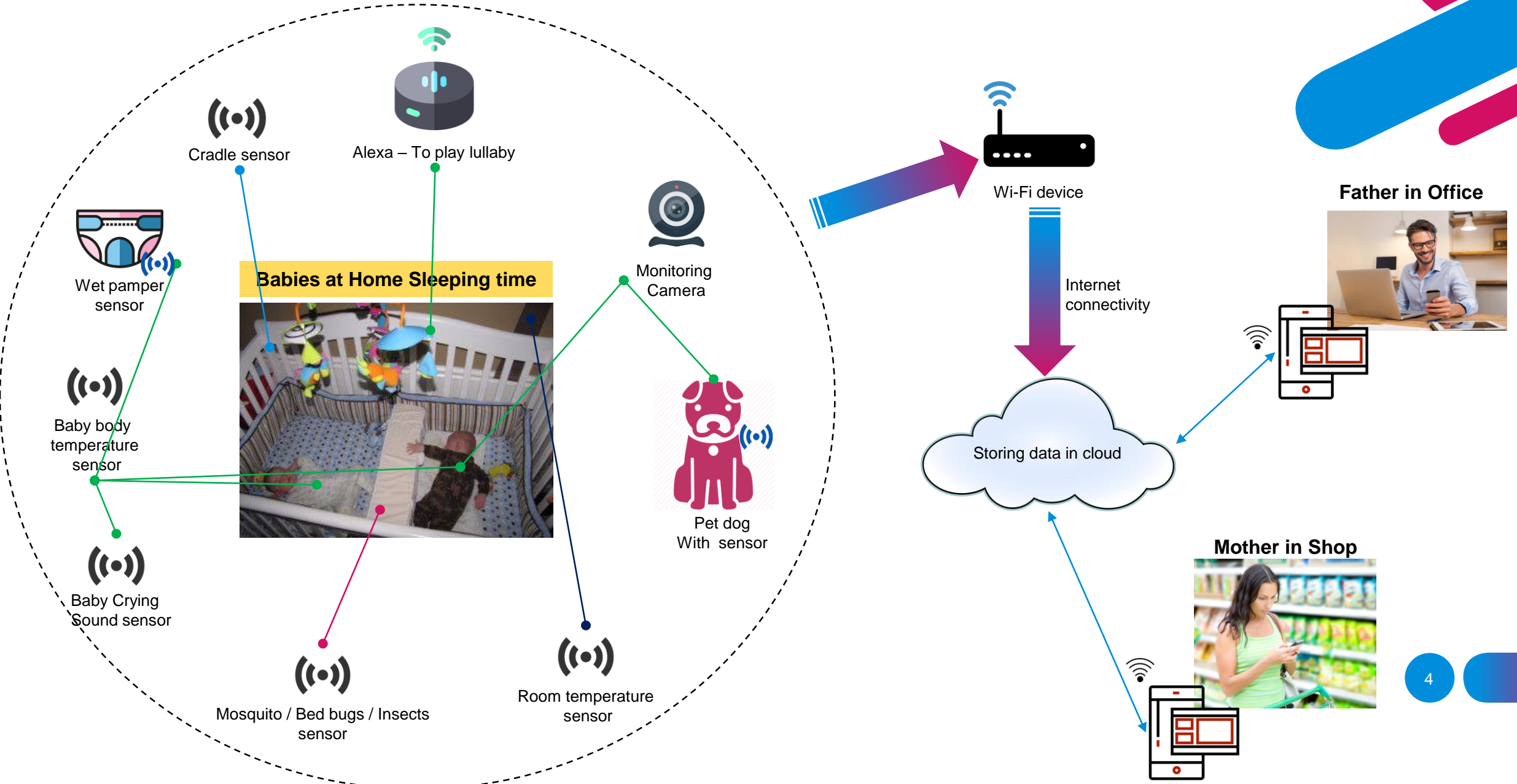**SMART, Connected Products (SCP) Stack**

Smart Apps

Analytics

Connectivity

Sensors

Product Infrastructure

IoT Product - Architecture

Babies at Home Sleeping time

- Cradle sensor
- Alexa – To play lullaby
- Wet pamper sensor
- Baby body temperature sensor
- Baby Crying Sound sensor
- Mosquito / Bed bugs / Insects sensor
- Room temperature sensor
- Monitoring Camera
- Pet dog With sensor

Wi-Fi device

Internet connectivity

Storing data in cloud

Father in Office

Mother in Shop

4

How it functions…

Product Infrastructure	Sensors	Connectivity	Analytics	Smart Apps
Products/hardware/ Software for Video Camera / Alexa device / Electronic boards / Wi-fi device are being used for setting-up the connected products	Sensor devices will sensing the Light, Sound, Heat, Movement etc., Gather the data and cloud It connected with Wi-fi device, which in turn connected with Cloud data storage	All the hardware and sensor devices are connected each other Wi-fi device connected with Cloud through Internet connection Ship the data to store and for analysis	The analysis happens make use of all the data collated from the lake based on applicability The sensible data observed by the application to understand the intend based on data correlation etc.,	The mobile application slice and dice the data received from the data lake, Say observe the trend of Sleeping baby's movement and temperature to act upon From remove location, mother can command Alexa to play lullaby

Smart connected products

Based on design framework the product infrastructure, Sensors, Connectivity, Analytics and smart Apps used here as furnished in the table…

Phenomena	Sensors	Data
Motion	Accelerometer GPS Gyroscope	Position Velocity Acceleration
Location/Position	GPS Gyroscope Electronic compass Proximity sensor	Absolute position Relative position
Heat	Thermocouple Digital thermometer Radiation sensor	Temperature Heat flux Conduction Convection Radiation Insulation
Light	Photovoltaic cell Light meter Video camera Camera Autofocus	Wavelength Intensity Color Optics Amplitude
Sound	Microphone Decibel meter	Intensity Frequency Amplitude Source