Potential Bluetooth chips/controllers need to be identified in the case the Bluetooth is not embedded into the microcontroller. This would then be used as in interface between the microcontroller and the phone service. At a minimum, the following questions need to be answered:

* What potential Bluetooth chips are available?
* What are the power specs? (power consumption, voltage requirements, etc.)
* What is the interface?
* What is the range?
* Cost?
* Leadtime?
* [Microchip BM70](https://www.mouser.com/ProductDetail/Microchip-Technology/BM70BLE01FC2-0B04AA?qs=sGAEpiMZZMsGelYiB%252bjhZoug4L%2fWODSMDiW%2fylgEGWPQdFoV%252bM6JxA%3d%3d)
  + Bluetooth 5.0 module
  + Supply voltage 1.9V to 3.6V
    - At 3V
      * Tx and Rx 13 mA
      * ‘Reduced’ low power 60 uA
      * ‘shutdown’ low power 2.9 uA
  + Serial interface
  + 100m range
  + $6.00 per unit.
  + Factory lead time of 3 weeks. Can buy and ship currently
  + 12 x 15 x 2.4mm. Can order different dimensions possibly.
* [Microchip RN4020](https://www.mouser.com/ProductDetail/Microchip-Technology/RN4020-V-RMBEC133?qs=sGAEpiMZZMsGelYiB%252bjhZoug4L%2fWODSMf7RLIRJcHE%2fxGp2LukTiJw%3d%3d)
  + Bluetooth 4.1 module
  + Supply voltage 1.8V to 3.6V
    - At 3V
      * Dormant <900 nA
      * Deep sleep <5 uA
      * Idle <1.5mA
      * TX/RX active 16mA
  + I2C and UART
  + 100m range
  + $9.10 per unit
  + Factory lead time is 14 weeks. Plenty of units ready immediately
  + 19.5 x 11.5 x 2.5mm
* [Sierra Wireless BC118\_DS](https://www.digikey.com/product-detail/en/sierra-wireless/BC118-1103394/1495-1003-2-ND/4860035)
  + Bluetooth 4.0
  + 3.3V to 4.7V
    - At 3.3V
      * Tx and Rx 16mA
      * Deep sleep <5uA
      * Hibernate <1.9uA
      * Dormant >900nA
  + Supports I2C and UART
  + 30m range
  + $6.25 per unit.
  + Factory lead time is 8 weeks. Can ship immediately
  + 14.4 x 19.3 x 2.2mm
* [Texas Instruments CC2564MODx](https://www.digikey.com/product-detail/en/texas-instruments/CC2564MODNCMOET/296-37933-2-ND/4914345)
  + Bluetooth 4.1
  + 2.2V to 4.8V
    - Current for Tx and Rx ~112.5mA
  + I2S and UART
  + $7.40
  + Factory lead not listed. 12,000 units ready to ship
  + 7 x 14 mm