Product Development Steps

We are often asked of the processes within product development. Although every product's specs and requirements differ but to give one a better idea of the steps taken towards product development in general would be as follows:

1) **Hardware Development**

   i) Component identification (main components)
   ii) Circuit design – whether analog or digital (active and passive)
   iii) **Schematics design**
   iv) **PCB Layout – Generate Gerber files**
   v) PCB Fabrication (Board) - Prototyping
   vi) PCB Assembly (Components placement) - Prototyping

If project is embedded, meaning at least hardware and firmware developments are part of the project, then:

2) **Firmware Development**

   i) **Define algorithms (if any)**
   ii) **Source codes (in C/C++/Assembly)**
   iii) **Compiling and Debugging the codes**
   iv) **Hardware/Firmware Interfacing**

If packaging/casing is part of development, then:

3) **Mechanical/Enclosure Design**

   i) **Product Illustration (CAD 2D/3D)**
   ii) Determine material – Plastic, Aluminum, etc.
   iii) **Build a prototype**

Note:
    * Steps in bold are essential marks for their specific development.