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| **Team:**  Muhammad Lujaini  Jin Yun Ng  Alyxie Anthony  Hussein Al-Faiz  Jannick Ungerer  Johannes Kessler  Daria Masny-Kulak | | | | **HOCHSCHULE KARLSRUHE**  **TECHNIK UND WIRTSCHAFT**  **REQUIREMENTS LIST**  DEVELOPMENT OF A FLEXIBLE IOT-BASED REMOTE-CONTROL FOR POWER TOOLS IN AN ALTITUDE SIMULATION CHAMBER (HAND ROBOT) | **ss20\_MK\_MYiTOPS-robot-hand** | | | | |
| Organi  sation | | Process | |  | Value of condition | | | | |
| Nr. | Editor | Kind | Phase | **REQUIREMENTS** | Min. | | Debit | Ideal | Unit |
| 01  02  03  04  11  12  13  14  21  22  23  24  25  31  32  33  34  35  41  42  43  44 | JK  JK  JK  JK  JK  JK  JK  JK  JK  JK  JK  JK  JK  JK  JK  JK  JK  JK  JK  JK  JK  JK | N  D  D  N  D  D  W  W  N  N  W  N  N  D  W  D  D  D  N  W  N  N | PR  C  P  PR  P  P  P  S  PR  S  S  PR  S  PR  C  PR  P  P  C  PR  P  P | **Physical-Technical Funktion**  Measurement: equal/smaller than previous MYiTops  Programming of RPi  Insert the layout for different devices of Stihl  Provide scematics, diagrams, utility information  **Communication**  Lightweight internet protocol via Broker  Setup of different motorprocesses  Motorprocess data back to GUI/ User  RPi using mobile internet connection / hotspot  **Mechanical/Electrical Components**  Raspberry Pi 4  Li-Po battery driven  Li-Po battery management system  Clear arranged housing and wiring  Exchangeable actors  **Ergonomics**  Key-Ready Solution  Central system start  Web socket interface  GUI design for universal user  Prevalence goal: product layout  **Human-product relationship**  Operation manual  Design colours: black/white/orange (like chainsaw)  Emergency out for user-safety  Handling of wrong entrys | <1000  Python  3  1  MQTT  3  1  GPRS  1  2000  1  1  3  1  Browser  1  1 | | Python 3  3  1  MQTT  3  1  GPRS  1  5000  1  1  3  1  Browser  1  1 | Python 3  1  MQTT  5  1  3/4/5G  1  5000  1  1  5  1  Browser  Cayenne  1  1 | mm  Langu.  DevicesFolder  SettingsRPM  kBit/sec  PC  mAh  Device  Box  Plugs  Switch  Appl.  SW  Doc.  Knob |
| Kind of conditions: N - Necessary; D - Demand; W - Wish;  Kinds of Phase: P - Principle; C - Concept; S- Sketch; PR – Preparation | | | | | | | | | |
| Ausgabe vom 12.06.2020  Version 4  Ersetzt Ausgabe vom 04.05.2020  Version 3 | | | | Muhammad Lujaini - ML  Jin Yun Ng - JYN  Alyxie Anthony - AA  Hussein Al-Faiz - HAF  Jannick Ungerer - JU  Johannes Kessler - JK  Daria Masny-Kulak - DMK | |  | | | |

**Anforderungs**