| W. diam.                           |          | _   |   |             | -              | _  | -                            | _                                     |  | 40            | 44             | 40   | 40  | 44                              | 45     | 40  | 47                                | 40              | 40          | - 00  | - 04  | - 00  | 00    | 04                            | 0.5    | 00                             |
|------------------------------------|----------|---|---|-------------|----------------|--|------------------------------|---------------------------------------|--|---------------|----------------|--|---|---------------------------------|--------|---|-----------------------------------|-----------------|-------------|---|---|---|-------|-------------------------------|--------|--------------------------------|
| Working weeks                      | 1        | 2   | 3   | 4           | 5              | 6  | '                            | 8                                     | 9  | 10            | 11             | 12   | 13  | 14                              | 15     | 16  | 17                                | 18              | 19          | 20  | 21  | 22  | 23    | 24                            | 25     | 26                             |
| start of the week                  | 2-dic    | 9-dic   | 16-dic  | 23-dic      | 30-dic         | 6-ene  | 13-ene                       | 20-ene                                | 27-ene                                       | 3-feb         | 10-feb         | 17-feb                                       | 24-feb  | 3-mar                           | 10-mar | 17-mar  | 24-mar                            | 31-mar          | 7-abr       | 14-abr  | 21-abr  | 28-abr  | 5-may | 12-may                        | 19-may | 21-may                         |
| Working Package                    |          | Having control of the camera for procesing image, Selecting the region of interest and reduction of noise |   |             |                |  |                              |                                       |  |               |                |  |   |                                 |        |   |                                   |                 |             |   |   |   |       |                               |        |                                |
| Sensing and input                  |          |   |   | ide         | entifying inpu | ts and conec                                 | s and conecting to an output |                                       |  |               |                |  |   | preprocessing, noise cancelling |        |   | Induce noise on all sensors and s |                 |             | other functionalities and optimizations - TBD |   |   |       |                               |        |                                |
|                                    |          |   |   |             | Defining       | sensors to incorporate                       |                              |                                       | gps  |               |                | s interaction)                               |   |                                 |        |   |                                   |                 |             |   |   |   | =     |                               |        |                                |
|                                    |          |   |   |             |                |  |                              |                                       | Speed control at the highway entry/exit sign |               |                |  |   |                                 |        |   |                                   |                 |             |   |   |   |       |                               |        |                                |
| Perception and scene understanding |          |   | Lane de   | tection     |                | Intersection detection                       |                              |                                       |  |               |                | , , ,  |   |                                 |        |   | s detection & classification      |                 |             |   |   | Other for a fire a fifther and                |       |                               |        |                                |
|                                    |          |   |   |             |                | Traffic lights detection                     |                              |                                       |  |               |                | Position fusion                              |   |                                 |        |   |                                   |                 |             | Other functionalities and optimizations - TBD |   |   |       |                               |        |                                |
|                                    |          |   | Lane keeping  |             |                |  |                              |                                       |  |               |                |  | -   |                                 |        |   |                                   |                 |             |   |   |   |       |                               |        |                                |
|                                    |          |   |   |             |                | Object detection (pedestrians or cars ahead) |                              |                                       |  |               |                |  |   |                                 |        | Object dete   | ct detection & classification     |                 |             |   |   |   |       |                               |        |                                |
|                                    |          |   |   |             |                |  |                              |                                       |  |               |                |  |   |                                 |        | Define objects properties file                                |                                   |                 |             |   |   |   |       |                               |        |                                |
|                                    |          |   |   |             |                |  |                              |                                       |  |               |                | En   |   |                                 |        | vironmental server interaction                                |                                   |                 |             |   |   |   |       |                               |        |                                |
| Behaviour and motion plan          | Kick off |   |   | Define      | project archit | ecture and co                                | ommunication                 | between pa                            | ckages                                       |               |                |  |   |                                 |        |   |                                   |                 |             |   |   |   |       |                               |        |                                |
|                                    |          |   |   |             |                |  |                              |                                       | Path planning                                |               |                |  |   |                                 |        |   |                                   |                 |             |   |   |   |       | functionaliti<br>imizations - |        |                                |
|                                    |          |   |   |             |                |  |                              |                                       |  | De            | efine prioriti | es and safety                                | measures  |                                 |        |   |                                   |                 |             |   |   |   |       |                               |        |                                |
| Vehicle control                    |          |   |   |             |                |  |                              |                                       | Simpla action                                | taking maneuv | vers (parkin   | g, stop for tra                              | affic sign, sto   | p for traffic                   |        |   |                                   |                 |             |   |   |   |       |                               |        |                                |
|                                    | i        |   |   |             |                |  |                              | light, stop for pedestrial            |  |               |                | Complex action taking                        |   |                                 |        | maneuvers (swith lane for static and mobile car, road search) |                                   |                 |             |   | _   |   |       |                               |        |                                |
|                                    |          |   |   |             |                |  |                              |                                       |  |               |                |  | Robot can go on a pre-determined path, stop stop sign, park at parking sign, slow at crossw |                                 |        |   |                                   |                 |             |   |   | Other functionalities and optimizations - TBD |       |                               |        |                                |
|                                    |          |   | Installing  | and testing | simulator      |  | 1                            |                                       | Robot  | can navigate  | in intersect   | ion  |   |                                 |        |   | ilitera                           | Ct With Other C | cais ailu s | ena environe                                  | ilit uata)                                    | _   |       |                               |        |                                |
|                                    |          | Deciding and assembling phisical testing environ  |   |             |                |  | nt                           |                                       |  |               |                |  |   |                                 |        |   |                                   |                 |             |   |   |   |       |                               |        |                                |
|                                    |          |   |   | <u> </u>    |                | Team defines a way of                        |                              | parallel devel                        | loping and                                   |               |                |  |   |                                 |        |   |                                   |                 |             |   |   |   |       |                               |        |                                |
|                                    |          |   |   |             |                |  |                              |                                       |  |               |                |  |   |                                 |        |   |                                   |                 |             |   |   |   |       |                               |        |                                |
| deadline                           |          |   | 16-dic  |             |                |  |                              | 20-ene                                |  |               |                | 17-feb                                       |   |                                 |        | 17-mar  |                                   |                 |             |   | 21-abr  |   |       |                               |        | 21-may                         |
| checkpoint                         |          |   | 1st report  | Christm     | as brake       |  |                              | 2nd report                            |  |               |                | 3rd report                                   |   |                                 |        | Qualification   |                                   |                 |             |   | 4th report                                    |   |       |                               |        | 5th report                     |
| Expected                           |          |   | Control de<br>car with<br>the given<br>start-up<br>code |             |                |  |                              | Link the input data to a rough output |  |               | d<br>a         | shown in-<br>epth<br>Igorithmic<br>pproaches |   |                                 |        | Autonomous<br>features  |                                   |                 |             |   | Autonomo<br>us features<br>almost<br>complete | :   |       |                               |        | Autonomous<br>features complet |