## functions

| functions actors passengers    | pollution<br>monitor | security<br>monitor | traffic monitor | trip info to passengers end user | integrated trip<br>planning<br>end user |
|--------------------------------|----------------------|---------------------|-----------------|----------------------------------|---|
| pollution authority            | end user             |                     | end user        |                                  |   |
| traffic planning authority     | end user             |                     | end user        |                                  |   |
| urban traffic police           |                      | end user            | end user        |                                  |   |
| urban security police          |                      | end user            |                 |                                  |   |
| bus operator                   |                      |                     | end user        | provider                         | end user                                |
| other transport operators      |                      |                     | end user        |                                  | provider, end $\boldsymbol{\iota}$      |
| satcom provider                |                      | provider            |                 |                                  |   |
| cellular provider              |                      | provider            |                 |                                  |   |
| short-range provider           | provider             |                     | provider        |                                  |   |
| sensor dev manufacturer        | designer             |                     |                 |                                  |   |
| on-board terminal manufacturer | designer             | designer            | designer        |                                  |   |
| platform vendor                |                      |                     |                 |                                  |   |
| application developer          |                      | designer            | designer        | designer                         | designer                                |
| content providers              |                      |                     |                 |                                  |   |
| system integrator              | designer             | designer            | designer        | designer                         | designer                                |
| transportation experts         |                      |                     |                 | designer                         | designer                                |
| pollution experts              | designer             |                     |                 |                                  |   |
| research institutes            | designer             | designer            | designer        | designer                         | designer                                |

## functions

| ticketing<br>end user | localised<br>advert. and<br>information<br>end user | Internet data<br>access<br>end user | Internet<br>streaming<br>access<br>end user |
|-----------------------|---|-------------------------------------|---|
| end user              |   |                                     |   |
| end user              |   | provider                            | provider                                    |
| provider              |   | provider                            | provider                                    |
| provider              | provider  |                                     |   |
|                       |   | designer                            | designer                                    |
| designer              | designer  |                                     |   |
| designer              | provider<br>designer                                | provider<br>designer                | provider<br>designer                        |
| designer              | acoignoi  | acoignoi                            | acoignei                                    |
| designer              | designer  | designer                            | designer                                    |