In the documents describing the MyTaxiService’s project we have always tried to be as detached from the project’s language as possible. In such way we managed to describe a high level view of the application without bounding the developers to the limitations (or, possibly, advantages) of a specific language. However, here we will evaluate the COCOMO parameters as if the project was to be developed in the J2EE language, which however seems to be the most obvious choice for this kind of application.

The average Source Lines of Code (**SLOC**) are calculated using a conversion factor of 46, as described in the table at <http://www.qsm.com/resources/function-point-languages-table>.

To calculate the project’s **Effort**, we first evaluate the **Scale Drivers** according to the COCOMO manual (see the section 1.4 for references). The following parameters were estimated:

|  |  |  |
| --- | --- | --- |
| **Scale Driver** | **Factor** | **Value** |
| Precedentedness | Low | 4.96 |
| Development Flexibility | High | 2.03 |
| Risk Resolution | High | 2.83 |
| Team Cohesion | Very High | 1.10 |
| Process Maturity | Normal | 4.68 |
| **Total** |  | 15.6 |

In the following table we have estimated the **Cost Drivers**:

|  |  |  |
| --- | --- | --- |
| **Cost Driver** | **Factor** | **Value** |
| Required Software Reliability | Low | 0.92 |
| Data Base Size | Nominal | 1.00 |
| Product Complexity | Nominal | 1.00 |
| Required Reusability | High | 1.07 |
| Documentation match to life-cycle  needs | Nominal | 1.00 |
| Execution Time Constraint | Low | n/a |
| Main Storage Constraint | Low | n/a |
| Platform Volatility | Nominal | 1.00 |
| Analyst Capability | Very High | 0.71 |
| Programmer Capability | Nominal | 1.00 |
| Application Experience | Low | 1.10 |
| Platform Experience | Nominal | 1.00 |
| Language and Tool Experience | Low | 1.09 |
| Personnel continuity | Low | 1.12 |
| Usage of Software Tools | Nominal | 1.00 |
| Multisite development | Nominal | 1.00 |
| Required development schedule | Nominal | 1.00 |
| **Product** |  | 0.93 |

From the Cost Drivers we can obtain the **exponent** **E**, which will be used in the Effort equation.

With B = 0.91 (for COCOMO II.2000) we obtain:

It is now possible to calculate the **Effort**:

With A=2.94 (for COCOMO II.2000) we obtain:

An interesting value is also the **duration** of the project:

Where

The **Number of people** required is:

An overview of the parameters seems to suggest a quite correct estimation. A group of two people should be able to develop properly the MTS application in a timespan of eight months. However, in our opinion, the final number of lines of code will probably be greater than the estimated.