

|             |   |  | Year 1    |   |   |   |   |   |   |   |   |   |    |    | Year 2 |   |   |   |   |   |   |   |   |   |    |    | Year 3 |   |   |   |   |   |   |   |   |   |    |    |    |
|-------------|---|--|-----------|---|---|---|---|---|---|---|---|---|----|----|--------|---|---|---|---|---|---|---|---|---|----|----|--------|---|---|---|---|---|---|---|---|---|----|----|----|
| WP and Task |   |  | WP Leader | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12     | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12     | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
| WP 1        | Project Leadership                                      |  | URV       |   |   |   |   |   |   |   |   |   |    |    |        |   |   |   |   |   |   |   |   |   |    |    |        |   |   |   |   |   |   |   |   |   |    |    |    |
|             | T1.1  | Project Coordination                                       |           |   |   |   |   |   |   |   |   |   |    |    |        |   |   |   |   |   |   |   |   |   |    |    |        |   |   |   |   |   |   |   |   |   |    |    |    |
|             | T1.2  | Scientific Coordination                                    |           |   |   |   |   |   |   |   |   |   |    |    |        |   |   |   |   |   |   |   |   |   |    |    |        |   |   |   |   |   |   |   |   |   |    |    |    |
|             | T1.3  | Innovation Management                                      |           |   |   |   |   |   |   |   |   |   |    |    |        |   |   |   |   |   |   |   |   |   |    |    |        |   |   |   |   |   |   |   |   |   |    |    |    |
|             | T1.4  | Risk Assessment  |           |   |   |   |   |   |   |   |   |   |    |    |        |   |   |   |   |   |   |   |   |   |    |    |        |   |   |   |   |   |   |   |   |   |    |    |    |
| WP 2        | Architecture and Software Validation                    |  | URV       |   |   |   |   |   |   |   |   |   |    |    |        |   |   |   |   |   |   |   |   |   |    |    |        |   |   |   |   |   |   |   |   |   |    |    |    |
|             | T2.1  | Global Architecture  |           |   |   |   |   |   |   |   |   |   |    |    |        |   |   |   |   |   |   |   |   |   |    |    |        |   |   |   |   |   |   |   |   |   |    |    |    |
|             | T2.2  | Prototyping and Software Evaluation                        |           |   |   |   |   |   |   |   |   |   |    |    |        |   |   |   |   |   |   |   |   |   |    |    |        |   |   |   |   |   |   |   |   |   |    |    |    |
|             | T2.3  | Testbed and Validation                                     |           |   |   |   |   |   |   |   |   |   |    |    |        |   |   |   |   |   |   |   |   |   |    |    |        |   |   |   |   |   |   |   |   |   |    |    |    |
|             | T2.4  | Metabolomics Use Case                                      |           |   |   |   |   |   |   |   |   |   |    |    |        |   |   |   |   |   |   |   |   |   |    |    |        |   |   |   |   |   |   |   |   |   |    |    |    |
|             | T2.5  | Genomics Use Case  |           |   |   |   |   |   |   |   |   |   |    |    |        |   |   |   |   |   |   |   |   |   |    |    |        |   |   |   |   |   |   |   |   |   |    |    |    |
|             | T2.6  | GeoSpatial Use Case  |           |   |   |   |   |   |   |   |   |   |    |    |        |   |   |   |   |   |   |   |   |   |    |    |        |   |   |   |   |   |   |   |   |   |    |    |    |
| WP 3        | Serverless Compute Engine for Big Data                  |  | IBM       |   |   |   |   |   |   |   |   |   |    |    |        |   |   |   |   |   |   |   |   |   |    |    |        |   |   |   |   |   |   |   |   |   |    |    |    |
|             | T3.1  | High Performance Stateful Compute Engine                   |           |   |   |   |   |   |   |   |   |   |    |    |        |   |   |   |   |   |   |   |   |   |    |    |        |   |   |   |   |   |   |   |   |   |    |    |    |
|             | T3.2  | CLOUDBUTTON Operations Support                             |           |   |   |   |   |   |   |   |   |   |    |    |        |   |   |   |   |   |   |   |   |   |    |    |        |   |   |   |   |   |   |   |   |   |    |    |    |
|             | T3.3  | Instrumentation and QoS                                    |           |   |   |   |   |   |   |   |   |   |    |    |        |   |   |   |   |   |   |   |   |   |    |    |        |   |   |   |   |   |   |   |   |   |    |    |    |
|             | T3.4  | Big Data Serverless Execution Framework                    |           |   |   |   |   |   |   |   |   |   |    |    |        |   |   |   |   |   |   |   |   |   |    |    |        |   |   |   |   |   |   |   |   |   |    |    |    |
| WP 4        | Support for Mutable Shared Data in Serverless Computing |  | IMT       |   |   |   |   |   |   |   |   |   |    |    |        |   |   |   |   |   |   |   |   |   |    |    |        |   |   |   |   |   |   |   |   |   |    |    |    |
|             | T4.1  | Programming abstractions for Mutable Shared Data           |           |   |   |   |   |   |   |   |   |   |    |    |        |   |   |   |   |   |   |   |   |   |    |    |        |   |   |   |   |   |   |   |   |   |    |    |    |
|             | T4.2  | Support for Consistency Degradation                        |           |   |   |   |   |   |   |   |   |   |    |    |        |   |   |   |   |   |   |   |   |   |    |    |        |   |   |   |   |   |   |   |   |   |    |    |    |
|             | T4.3  | Just-right Synchronization                                 |           |   |   |   |   |   |   |   |   |   |    |    |        |   |   |   |   |   |   |   |   |   |    |    |        |   |   |   |   |   |   |   |   |   |    |    |    |
|             | T4.4  | In-memory Data Storage                                     |           |   |   |   |   |   |   |   |   |   |    |    |        |   |   |   |   |   |   |   |   |   |    |    |        |   |   |   |   |   |   |   |   |   |    |    |    |
| WP 5        | CLOUDBUTTON Toolkit                                     |  | IMP       |   |   |   |   |   |   |   |   |   |    |    |        |   |   |   |   |   |   |   |   |   |    |    |        |   |   |   |   |   |   |   |   |   |    |    |    |
|             | T5.1  | Programming abstractions for Stateful Serverless Computing |           |   |   |   |   |   |   |   |   |   |    |    |        |   |   |   |   |   |   |   |   |   |    |    |        |   |   |   |   |   |   |   |   |   |    |    |    |
|             | T5.2  | Consistency and fault tolerance models                     |           |   |   |   |   |   |   |   |   |   |    |    |        |   |   |   |   |   |   |   |   |   |    |    |        |   |   |   |   |   |   |   |   |   |    |    |    |
|             | T5.3  | Programming tools for porting existing applications        |           |   |   |   |   |   |   |   |   |   |    |    |        |   |   |   |   |   |   |   |   |   |    |    |        |   |   |   |   |   |   |   |   |   |    |    |    |
|             | T5.4  | Application patterns and libraries                         |           |   |   |   |   |   |   |   |   |   |    |    |        |   |   |   |   |   |   |   |   |   |    |    |        |   |   |   |   |   |   |   |   |   |    |    |    |
| WP 6        | Promoting Impact  |  | RHA       |   |   |   |   |   |   |   |   |   |    |    |        |   |   |   |   |   |   |   |   |   |    |    |        |   |   |   |   |   |   |   |   |   |    |    |    |
|             | T7.1  | Communication strategy and plan                            |           |   |   |   |   |   |   |   |   |   |    |    |        |   |   |   |   |   |   |   |   |   |    |    |        |   |   |   |   |   |   |   |   |   |    |    |    |
|             | T7.2  | Dissemination and community involvement                    |           |   |   |   |   |   |   |   |   |   |    |    |        |   |   |   |   |   |   |   |   |   |    |    |        |   |   |   |   |   |   |   |   |   |    |    |    |
|             | T7.3  | Exploitation and standardization                           |           |   |   |   |   |   |   |   |   |   |    |    |        |   |   |   |   |   |   |   |   |   |    |    |        |   |   |   |   |   |   |   |   |   |    |    |    |