

## IC1406 Working Groups Annual Reports – 4th Grant Period

### WG1

**WG Name:** Enabling Infrastructures and Middleware for Big-data Modelling and Simulation

**WG Leaders:** Ewa Niewiadomska-Szynkiewicz

WG1 structure	
Total number of members	79
Number of countries represented in WG1	21
Gender balance:	
Males	61
Females	18
Number of MC members in WG1	13
Number of young researchers (until PhD+8)	31
Number WG1 members from of target countries	50
Number of WG1 members from industry	3
Cost Tools Utilisation	
Number of STSM beneficiaries from WG1	2
Number of STSM visits hosted in institutions represented in WG1	2
Number of Cost meetings hosted in institutions represented in WG1	1
Number of WG1 members involved in Case Studies work	19
Dates of WG1 virtual meetings	
Realization of the workplan	
Tasks planned for GP4	1. Development of a comprehensive compendium of the evolved state of the art and novel trends in Big Data systems software, middleware, and infra-

	<p>structures for MS with special emphasis in Life, Social and Physical sciences. Industrial outreach</p> <ol style="list-style-type: none"> <li>2. Dissemination of the results</li> <li>3. Cooperation within the action, scientific community and companies</li> </ol>
<p><b>Tasks realized in the GP4</b></p>	<ol style="list-style-type: none"> <li>1. Development of a comprehensive compendium of the evolved state of the art and novel trends in Big Data systems software, middleware, and infrastructures for MS with special emphasis in Life, Social and Physical sciences. Industrial outreach</li> <li>2. Dissemination of the results</li> <li>3. Cooperation within the action, scientific community and companies.</li> </ol>
<p><b>Achievements and results</b></p>	<ul style="list-style-type: none"> <li>• Work on the Big Data systems infrastructure and middleware for defined 9 case studies.</li> <li>• Work on the reports and chapters of the book prepared for the publication in Springer, summarizing the activities of Case Studies Groups.</li> <li>• Organization of scientific events as a result of inter-group collaboration.</li> <li>• Dissemination activity: books, journal papers, conferences, seminars.</li> <li>• Inter-group collaboration (meetings, virtual meetings).</li> <li>• Participation in organizing Summer Schools and STSMs.</li> </ul> <p>Dissemination activity:</p> <p>Books (editors and authors from WG1): 1 1 Springer (several chapters prepared by WG1 members).</p> <p>Number of articles published/accepted in journals (authors – WG1 members): 10 papers.</p> <p>Number of conference papers written and presented at the conferences: 5 papers.</p> <p>STSM: (number of beneficiaries from WG1): 2 STSM: (number of hosts from WG1): 2 Summer School: number of trainees (WG1 members): 4 Summer School: number of trainers (WG1 members): 1 Horizon 2020 new proposals submitted (prepared by WG1 member): 1</p>
<p><b>Summary and remarks</b></p>	<p>Number of meetings:</p> <ul style="list-style-type: none"> <li>• Face-to-face meetings: 2, telco meetings of the WG1 sub-groups: 5</li> </ul> <p>The work on the case studies and on the book chapters summarizing the activities in the CSs are finalized.</p> <p>Remarks: It is expected to rise the dissemination level of cHiPSet to common public.</p>

## WG3

**WG Name: HPC-enabled Modelling for Life Sciences**

**WG Leaders: Chair: Dr. Andrea Bracciali, United Kingdom**

**Vice-Chair: Prof. Salvatore Vitabile, Italy**

WGx structure	
Total number of members	20
Number of countries represented in WGx	13
Gender balance:	
Males	15
Females	5
Number of MC members in WG3	10
Number of young researchers (until PhD+8)	6
Number WG members from of target countries	4
Number of WG members from industry	1
Cost Tools Utilisation	
Number of STSM beneficiaries from WG3	Details will be provided in the STMS slots
Number of STSM visits hosted in institutions represented in WG3	Details will be provided in the STMS slots
Number of Cost meetings hosted in institutions represented in WG3	1
Number of WG3 members involved in Case Studies work	15
Dates of WG3 virtual meetings	Meetings delegated to use cases
Realization of the workplan	
Tasks planned for GP4	<ol style="list-style-type: none"> <li>1. Work on use cases</li> <li>2. Finalization of the book titled: High-Performance Modelling and Simulation for Big Data Applications - cHiPSet; Editors: Kolodziej, Joanna, Gonzalez-Velez, Horacio (Eds.) - Lect. Notes Computer; State-of-the-Art Surveys; Vol. 11400</li> </ol>
Tasks realized in the GP4	1. achieved 2. achieved
Achievements and results	A published book with selected results of the COST Action IC1406
Summary and remarks	Work generally proceeded according to general Action's aims.

## WG4

**WG Name:** HPC-enabled Modelling for Socio-Economical and Physical Sciences  
**WG Leaders:** Elisabeth Larsson (chair), Esko Turunen (vice chair),  
Otthein Herzog (vice chair)

WG4 structure	
Total number of members	35
Number of countries represented in WG4	18
Gender balance:	
Males	23
Females	12
Number of MC members in WG4	15
Number of young researchers (until PhD+8)	5
Number WG members from of target countries	13
Number of WG members from industry	0
Cost Tools Utilisation	
Number of STSM beneficiaries from WG4	3
Number of STSM visits hosted in institutions represented in WGx	0
Number of Cost meetings hosted in institutions represented in WG4	2
Number of WG4 members involved in Case Studies work	19
Dates of WG4 virtual meetings	Meetings delegated to case study teams
Realization of the workplan	
Tasks planned for GP4	<ol style="list-style-type: none"> <li>1. Finalization of case studies</li> <li>2. Writing chapters for special LNCS volume</li> </ol>
Tasks realized in the GP4	Both of the tasks are finished, where the book chapters report on the work performed in the use cases.
Achievements and results	Joint publications across WGs and COST countries, new collaborations have been initiated within use cases and through STSMs. WG members have contributed actively to the final publication from the action.
Summary and remarks	The work in the case study teams has been a useful way of organization.