CoeGSS

Centre of excellence

D6.3 – SECOND ANNUAL REPORT ON COMMUNITY BUILDING

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Responsible scientist/administrator	Leonardo Camiciotti (TOP-IX)
Contributor(s)	Luca Cicchelli (TOP-IX) Andrea Rivetti (TOP-IX)
Internal reviewers	Alexandra Gens (DIA) Lena Bühler (HLRS)

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Abstract

This document covers the activities aimed at community building carried out in the Task 6.1 of the Work Package 6 during the second 12 month period of activity of the CoeGSS project starting from October 2016.

The work package on Awareness Creation and Community Support is the keystone to secure the project success and aims at establishing a self-sustaining interface between stakeholders (politics, business, public) and experts in the fields of global systems science (GSS) and high performance computing (HPC) fields.

This deliverable is about building the community within and around the CoeGSS Project.

This effort is connected to the progress of the other WPs, identifying those areas where the modelling techniques developed by GSS can effectively avail of the huge computational power of HPC infrastructures. In particular, the goal is to find the “magic spot” where the two communities deem it unique and useful to combine and leverage their knowledge and expertise in order to tackle unsolved global challenges.

For these activities the document describes the general objectives (section 2 and section 3), the current implementation in terms of approach, tools and resources (section 4 and section 5) and the future development (section 6). The current situation regarding the execution of the Community building strategy is also outlined in this document (section 4 and section 5 in particular).

Table of Contents

1 Introduction

This deliverable presents the progress during the period from Oct. 2016 and Sept. 2017 of task T6.1 (Community Building, CoeGSS Brand and Website) in WP6 "Awareness Creation and Community Support", with specific focus on activities aimed at (CoeGSS) Community Building.

This task is closely related to other tasks within Work Package 6 given that, for example, community building can occur through awareness creation which is one aspect of dissemination (e.g. in the form of a newsletter) or through personal engagement which is a form of collaboration with other people, projects, or institutions.

This deliverable is therefore closely related with D6.6 "Second annual report on training, standardisation, collaboration, dissemination, and communication". In order not to overlap information completely, there will be references to D6.6 whenever necessary.

Similarly, as the WP6 activities are key to the project's aim of establishing a self-sustaining Centre of Excellence for Global Systems Science, this deliverable is closely related to D2.2 "Final Sustainability Model" and will therefore reference the latter, instead of repeating information, whenever possible.

The following chapters provide a description of the pillars of the community building strategy (section 2) and a classification of stakeholders in the CoeGSS Community (section 3). Then, a description of the tools used is provided (section 4) followed by the actions done in the second year of the project activity (section 5). The final chapter (section 6) wraps up community building at the current stage of development and shows next actions to develop the CoeGSS community.

The CoeGSS project brings together the power of high-performance computing and some of the most promising (applied) science on Global Systems in order to improve decisions in business, politics and civil society. It aims at establishing a Centre of Excellence for Global Systems Science that provides advanced decision-making support in the face of global challenges availing of High Performance Computing to empower Global Systems Science to address extremely complex societal and scientific problems.

Further information about synthetic information systems, or the three pilot studies of the Centre of Excellence for Global Systems Science – Health Habits, Green Growth, and Global Urbanization – referred to as "pilots" in this document, can be found in the deliverables by Work Package 4 of the project.

2 The pillars of the Community Building Strategy

The CoeGSS project defined a strategy to grow a community interested in the disciplines of High Performance Computing (HPC) and Global Systems Science (GSS).

The strategy CoeGSS is following to build its community is an integral part of the 3-years roadmap to reach the sustainability of the Centre of Excellence described in deliverable D2.1 - section 7.4 which includes steps to define business models, evaluate the markets where the Centre can offer commercial services and leverage the stakeholders in order to asses which proposals are more viable based on their feedback.

The three main pillars on which it is based are:

- definition of the CoeGSS Community
- implementation of the tools needed to engage the identified target audiences
- definition of the actions through which the community is created and grown.

These three pillars are the result of several tasks performed by different Work Packages.

The different target audiences identified within the definition of the Community are engaged starting from the internal community of project participants and extending the Community Building actions progressively towards the audience outside the project, consistently with the description of the CoeGSS ecosystem by WP2 in deliverable D2.1 - section 3.

The following section of this document details the definition of the target audiences and lists the set of tools, which are subsequently used as categories to organize and describe the related implemented actions.

3 Definition of the CoeGSS Community

The CoeGSS community is being created by the project around the GSS and HPC expertise of the project participants and will be expanded throughout the life of the project. The Centre of Excellence needs to engage a diverse set of stakeholders in order to have the expertise and know-how needed to offer complete solutions to its potential end users.

The CoeGSS Community is also going to be expanded in order to include the potential end users of the services of the Centre of Excellence. Then a description of different tools used in the community building is provided followed by a description of the ongoing and planned actions organized by the identified categories of recipients and the tools used.

As detailed in D2.1, the approach of the project takes into consideration two categories of stakeholders:

- Internal Stakeholders: the different groups of project partners, which are involved in the CoeGSS concept development (as representative members of GSS/HPC groups) and directly linked to project success and further exploitation. As the dissemination activities are running this group will be constantly extended with key partners.
- External Stakeholders: further groups of stakeholders who are not directly in charge of the project execution but somehow are interested in its results (e.g. they are considering to join project exploitation and might also contribute towards the development or spreading of the CoeGSS concept/ portal). Some of the external stakeholders are:
  - Other European and Global projects such as other Centres of Excellence, projects related to HPC and/or GSS.
  - Communities and networks of HPC and GSS researchers, users, providers, etc.
  - Individuals like experts and researchers who can bring in their expertise.

End users (potential customers) are also considered part of the CoeGSS Community and are divided into two subgroups:

- Commercial customers (for profit users).
- Academic institutions, government agencies, civil society organizations (not-for-profit users).

Stakeholders are also categorised based on the nature of their interest in participating in the CoeGSS community:

- Commercial:
  - Business/industrial sector including large companies and SMEs.

  - Consulting concerning global challenges.

- Scientific
  - Scientific and research communities / networks.
  - EU-funded projects, networks and initiatives related to e-Infrastructure, Centers of Excellence, Future Emerging Technologies, etc.
- Political
  - Policy makers in Governments and European Commission services (like commonwealth agencies, international organisations including the United Nations and the World Bank, crisis agencies).
  - Not-for-profits who require social research, training and policy advice.
- Social
  - Anyone interested in how new scientific approaches can support policy making, crisis management, global sustainability.

The Community Building actions during the first year of activity of CoeGSS created awareness of the project aims and efforts among entities working and researching in the fields of HPC and GSS. The Community Building actions are now widening their focus towards entities that might not be directly involved in the GSS and/or HPC fields but have an interest in evaluating what the simulation techniques of GSS can achieve when scaled to fully avail of the power of HPC infrastructures.

4 Community building Tools

The community as defined in the previous section is addressed on an ongoing basis using the tools described in this chapter.

Each tool represent a channel used to publish content and to get feedback about the activities of the CoeGSS project.

4.1 Project Web Site

This is the main online presence of the project, information in its sections is constantly reviewed and updated.

The Web site is available at the URL: http://coegss.eu

At this time the website, modified accordingly to the project evolution, is organised in these sections:

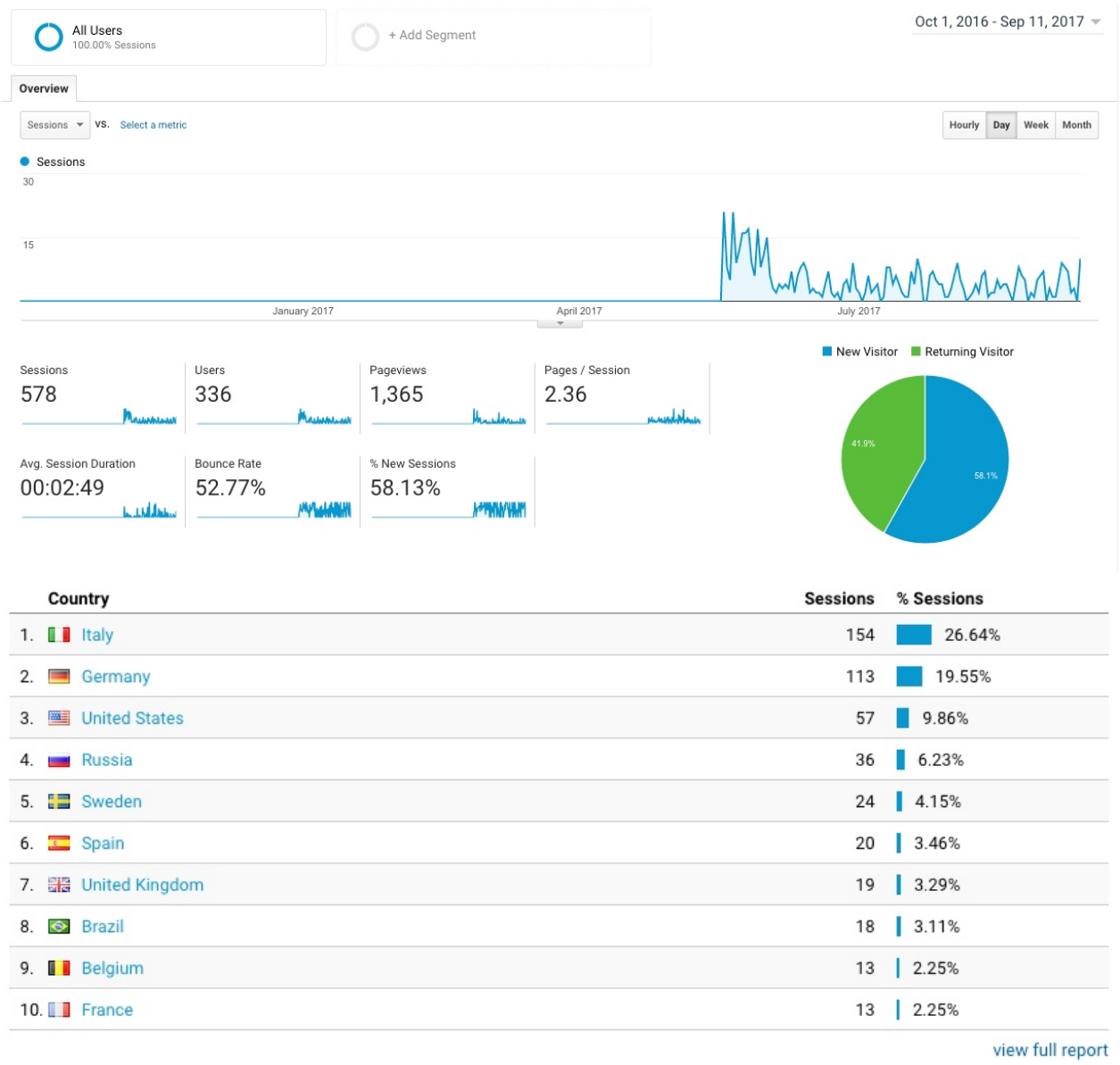
- Front page
  - Form to subscribe to the CoeGSS newsletter, synthetic description of the project.
- About us
  - Description of the mission of the project and the methodology used, list of CoeGSS partners.
- Resources
  - Archive of published Deliverables.
  - Links to Training material.
  - Media Kit.
  - List of relevant Publications in the GSS and HPC fields.
- HPC-GSS
  - Info about CoeGSS Pilots.
  - Links to GSS and HPC projects, initiatives and networks.
- Event - News
  - CoeGSS News.
  - Archive of published Newsletter issues.
  - Twitter feed.

- Community
  - Link to the Medium.com blog.
  - Archive of videos.
  - Link to the internal project wiki.
- Contact us
  - Contact form.

Website statistics are collected using Google Analytics and the features provided by Google to identify access by automatic scripts and bots are used to create a filtered view that provides a more accurate evaluation of real visitors.

The metrics taken into consideration from the Google Analytics report are the “Users” and “Page views” counters. The Users counter represents a conservative measure of the number of visitors of the website and corresponds to the “Visits” number reported in the KPI. The “Page views” counter evaluate how active the visiting users have been accessing the pages of the CoeGSS website and is also reported in the KPI table.

Analysis of the statistics shows that the interest in the CoeGSS website is stable also when access by bots and other automatic tools is filtered out.



	Country	Sessions	% Sessions
1.	Italy	154	26.64%
2.	Germany	113	19.55%
3.	United States	57	9.86%
4.	Russia	36	6.23%
5.	Sweden	24	4.15%
6.	Spain	20	3.46%
7.	United Kingdom	19	3.29%
8.	Brazil	18	3.11%
9.	Belgium	13	2.25%
10.	France	13	2.25%

view full report

Figure 1: filtered data (excluding bots)

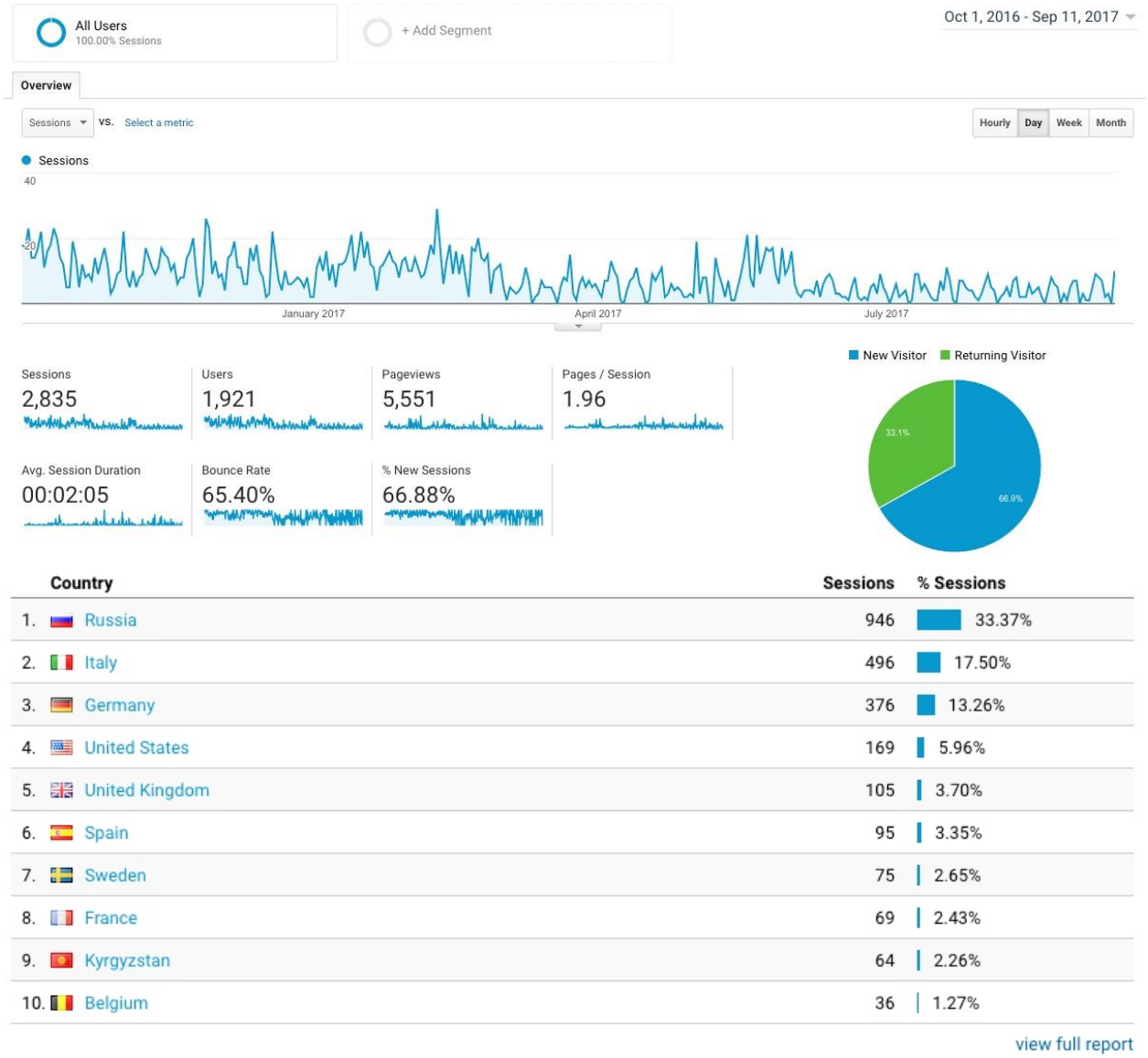


Figure 2: unfiltered raw access data

In addition to these visitors, the library of videos published on the CoeGSS website and hosted on youtube.com had 162 views in total.

4.2 Internal Project Wiki

A Wiki system based on Dokuwiki is available to CoeGSS members for internal use. The system is being used to share material, collaborate on documents and keep information updated (lists, tables, etc.) in a collaborative manner.

The system has been extended installing plugins that suit the needs of the user.

A plugin for collaborating on structured information bases has been introduced to maintain a database of publications shared across all users.

The system can be accessed at http://wiki.coegss.eu

4.3 Twitter account

CoeGSS is maintaining a Twitter account as a channel to advertise its activities and establish connections with other entities who can be involved in the Community.

Part of the Dissemination work of WP6 is to keep the CoeGSS Twitter feed alive with posts relevant to both HPC and GSS. All project partners have been involved in creating content for the CoeGSS Twitter channel in order to successfully create a social media channel focused on both fields. CoeGSS also follows many relevant influencer (projects, initiatives, events, etc.) in order to get involved in a Social Media community around both HPC and GSS.

The count of followers of the CoeGSS user currently stands at 290.

4.4 Newsletter

The Newsletter is another tool used to develop a dissemination plan and to foster the community building process.

The Newsletter serves as a periodic appointment to update users about project news, to increase community loyalty and to recommend GSS/HPC events and workshops.

Until now three issues of the newsletter have been published:

- July 2016 Mailing list 75 recipients opened 28 times, CoeGSS partners 52 recipients opened 26 times.
- Feb 2017 Mailing list 82 recipients opened 29 times, CoeGSS partners 77 recipients opened 32 times.
- May 2017 Mailing list 82 recipients opened 27 times, CoeGSS partners 84 recipients opened 37 times.

The issues published are sent to the CoeGSS mailing list and published in the “Events - News” section of the website.

4.5 Feedback forms

CoeGSS is using feedback forms as a tool for Community Building in order to:

- Evaluate progress in community building.
- Identify issues and areas where additional effort is needed to achieve better integration and suggest corrective actions.

- Highlight which of CoeGSS activities and services are more likely to attract the interest of potential stakeholders.

Feedback forms have been collected after project meetings, at training events open to the general public and have been filled-in by all project participants once a year to evaluate the state of the CoeGSS community.

More information in section 5.1.4 “Internal evaluation poll for member organizations” of this document and in D2.2 - Annex “Task 2.3” and in D6.6.

4.6 Partner Events

4.6.1 International Conference on Synthetic Populations, Lucca, Italy Feb 2017

The CoeGSS project co-organized the Conference together with IMT and the SIMPOL project. The event was structured as a two-day conference followed by a workshop going into some of the technical details of models based on synthetic populations. The conference was open to the general public while the workshop was mainly oriented towards CoeGSS members with some participants from research institutions not part of the project.

The event was an occasion to identify and outline the steps in the process of defining and running simulations based on models using Synthetic Population and has been valuable in improving the understanding of the challenges the CoeGSS project is working on.

https://icspconference.wordpress.com/

4.7 “EXA Future Global Systems” blog on medium.com

The blog has been created by the CoeGSS project with the explicit idea to position it as an independent space where the challenges and potential breakthroughs related to bringing together GSS and HPC are discussed.

The CoeGSS project appears as an author and the blog welcomes other contributors not part of the Consortium. Apart from being interesting for researchers in the GSS and HPC field, the blog aims at becoming relevant for any entity interested in the possibilities opened up by reaching the objective of scaling advanced complex models to take advantage of large exa-scale HPC infrastructures. Indeed the main idea of the blog is to foster the reasoning about the “magic spot” where HPC and GSS meets, which means where HPC unleashes and makes possible GSS applications which would be impossible or less efficient to be carried out through less powerful computing resources.

https://medium.com/exa-future-global-systems

5 Community Building Actions

5.1 Actions toward internal stakeholders

5.1.1 Project Website

The website is the authoritative source of information about project participants and their role in CoeGSS. The content of the website has been regularly updated and the WordPress software upgraded. Sections frequently updated include Resources (Deliverables, Training, Publications), HPC - GSS (crosslinked projects), Event - News, and Community (Videos).

5.1.2 Internal Project Wiki

The wiki provides a mean to share information between project participants and collaborate on documents and information bases. It has been expanded to include tools to manage structured information in a database used to keep track of publications.

5.1.3 Newsletter

The newsletter requires an ongoing effort in order to collect proposals for articles from all project participants, edit the content, manage the subscriptions and finalize the layout for each issue. It represents an effective way to communicate the status of the project and what it is focussing on.

5.1.4 Internal survey for member organizations

A dedicated task in WP2 has been introduced to carry out the observation, documentation and analysis of the communication and cooperation process between project members, more info in D2.2 - Annex "Task 2.3".

CoeGSS brings together the community of HPC researchers/operators with the community of GSS researchers. Factors that have an influence on the cooperation between these two communities have been evaluated:

- Differences and similarities of the communities.
- Ability to work towards a common aim.
- Quality of communication and cooperation.

The main sources from which information about these factors have been collected are:

- Questionnaire-based survey in which all CoeGSS partners participated.

- Participatory observation of CoeGSS meetings and phone conferences (Technical Meetings on 19 and 20 April and 19 and 20 July in Stuttgart, Review Meeting on 29 and 30 May in Brussels), several phone conferences of CoeGSS work packages 2 & 4.
- Email correspondence at WP-level and overall project level.
- Deliverables.

Preliminary results from Task 2.3 provide input to WP6 Community Building activities:

- Common project vision is considered vital.
- Community building is progressing well also thanks to workshops, conferences and informal networking events where people meet in person. Positive attitude and mutual respect for experts from different areas is considered vital for implementing the synergies CoeGSS needs to succeed.
- Training to improve general reciprocal understanding of each community is considered very helpful.

Communication means such as face-to-face meetings, bilateral phone calls and reading deliverable documents is considered very important to improve the way project participants work together. Though being an essential tool for remote collaboration on a WP level, phone conference calls are considered less effective for community building compared to one-to-one communication. Further means considered helpful are shared repositories, online documentation, emails, tutorials and workshops.

- Strategies for the organization of work have been suggested such as more frequent face-to-face meetings, defining “work sprints” with a specific focus involving a smaller team of people, hackathon-style events with a specific intermediate goal to reach. These meetings should define intermediate goals with deadlines and responsibilities and be followed up by regular phone and skype calls to ensure efficiency. Close collaboration with small mixed teams is considered important to improve the process of deploying the simulations of the pilots on the HPC infrastructure.

Full details about the feedback on the internal community is available in D2.2 - Annex “Task 2.3”

5.2 Actions toward external stakeholders

- Project Website
- Information about project status is constantly kept updated. This includes:

- List of Deliverable documents.
- Links to Training material.
- List of Publications relevant for CoeGSS.
- Directory of other GSS and HPC projects that link to CoeGSS with their description.
- Updates about upcoming Events.
- News in the GSS and HPC fields.
- Video material produced by CoeGSS.
- Newsletter
- The newsletter is advertised to potential external stakeholders by all CoeGSS members as a simple channel to get updates about the project.
- Medium Blog
- A blog on medium.com has been created with the focus on the specific subject of the potential of getting advanced GSS models to scale on large HPC infrastructures. The focus of the articles is not necessarily limited to matters relevant in the GSS or HPC fields but is directed more towards issues, problems and challenges where the synergy between GSS and HPC can become a game-changer.

  The blog is hosted on the medium.com platform in order to increase visibility and to make it easier to involve other authors apart from CoeGSS who are interested in contributing.

  A series of interviews has been started where we will follow a “chain of nomination” asking the experts being interviewed to “nominate” other experts who can extend the matters being discussed and keep a sort of conversation going.
- Curated Twitter feed
- The credentials of the CoeGSS twitter user are available to all project participants to post content and keep the twitter feed active with relevant content.
- Presence at relevant GSS and HPC conferences and events.
- Crosslinking in 2nd year

  This activity has been carried out starting from the list of projects and research entities in deliverable D2.1 “Stakeholder context and initial sustainability model”

that has been used as an initial contact list containing 62 entries. Contact info has been verified to be actually reachable, 7 addresses have been found not reachable.

A standard format for the contact email requesting a reciprocal publishing of links between CoeGSS and the project being contacted has been reviewed by the other CoeGSS partners. The current format contains elements such as:

- Description of CoeGSS main features.
- Proposal for a mutual exchange of links.

"we are contacting you on behalf of the CoeGSS project (http://coegss.eu/) which aims at empowering the community of analysts addressing global challenges through high-performance computing and data analysis. In particular, the project will develop an HPC-based framework to generate synthetic information systems for tackling global challenges.

Your project has several points of contact with ours; if you agree we would like to publish mutually on our websites the project link followed by a brief description, in order to increase the visibility for both"

After taking into consideration the feedback received internally, the email has been sent to all the 55 recipients in the contact list resulting in:

- 5 x Acceptance of the proposal followed by linking.
- 3 x Stand-by.
- 3 x Rejections of the proposal.
- 3 x Undelivered mail.
- 41 x No reply.

The entities with which an agreement has been reached have been published on the CoeGSS website with the description provided and the presence of a link to CoeGSS on the entity website has been verified.

Projects that accepted to cross-link with our website have been also sent an email advertising updates such as the video material published after the workshop in Lucca.

5.3 Actions toward potential end users

A new event is being organized to be held at the end of October in Lucca, that is the Conference "Computing Power for Global Challenges".

IMT School of Advanced Studies and other partners will host a 2-day conference to explore how the task of understanding and mastering global societal challenges and high performance computing can benefit from each other. This conference follows up on the International Conference on Synthetic Populations <https://icspconference.wordpress.com/>, organized earlier this year as described in this document.

A series of discussion workshops will consider four global challenges:

- developing a sustainable and resilient global financial system,
- addressing the daunting risks of pandemics,
- transforming the fossil-fuel based global mobility system,
- creating forms of democracy adequate to the age of digitalization

The two-day conference will be followed by a two-day internal meeting in order to take advantage of the output of the conference and plan the steps forward for the project.

6 Future development

6.1 CoeGSS community at 2nd year

Table 1: WP6 KPI

	GSS		HPC		Total	
KPI	Target: 36 months	Current state	Target: 36 months	Current state at M24	Target: 36 months	Current state at M24
Scientific Papers	10	7	10	1	20	20 (of which 12 from previous periods)
Presentations	15	3	10	2	25	26 (of which 21 from previous periods)
Website					6000 visits	raw data: 15900 page views 5530 Unique visitors bots filter: 7100 page views 1430 Unique visitors
Newsletter					6	3 (of which 1 from previous periods)
Press Releases	3		3		6	
Twitter					200	287

followers						
Training courses offered	4		4		8	4 (of which 2 from previous periods)
Training participants per course	15		25		40	

6.2 Planned actions

The main focus of the activities for the third year of the project will be on engaging external stakeholders availing of the events organized in the other tasks of WP6 (presentations, workshop, conferences and training sessions).

A diverse and active community will be very important in order to be leveraged for an effective process of validation of the interest in the services developed by WP5 and the related Business Models outlined in WP2.

6.2.1 Medium.com Blog

The series of interviews is going to follow a "chain of nomination" as described in the previous chapter.

The aim is to involve experts from different fields apart from GSS and HPC trying to identify the challenges where the synergy of GSS and HPC can be beneficial and the issues to be solved in order to allow agent-based simulation techniques to scale in an effective way on the coming exascale HPC infrastructures.

6.2.2 Website Crosslinking

Two new actions are planned. At first we will use the existing dataset already that has already been used for the first round of emails and check the websites in the list to find new addresses to write to in the second round of emails.

The second action starts from the assumption that many other EU-funded projects use Forecasting techniques at different levels and for different purposes as part of their main line of activity. Projects with these requisites can be found in many areas such as Secure Societies, Health, Mobility, etc. and their need in terms of modelling and analysis can fit in the scope of GSS research. We plan to identify a set of keywords to find projects and investigate their needs

to see if their needs could match what CoeGSS provides and open a channel with them with another round of emails.

7 Conclusions

The effort of creating and extending the CoeGSS Community is connected to the progress of the other WPs. Interaction of users with the Service Portal (WP5) is being developed consistently with the overall strategy followed by WP6 in engaging the Community. An engaged Community is also going to be crucial in order to receive meaningful feedback about the Business Models developed by WP2 and about the services offered through the Portal.

The efforts of WP6 will concentrate more on identifying those areas where the modelling techniques developed by GSS can effectively benefit from the huge computational power of HPC infrastructures. Technical challenges are being identified and solutions are being studied where the software layers that are being used to run tasks on HPC systems do not fit the requirements of GSS simulations in an effective way and where GSS models are unable to scale effectively on HPC architectures.

Along with these technical efforts in both the GSS and HPC fields, it is getting more and more important for the CoeGSS Community Building task to find out which applications can better demonstrate the power of the integration of GSS and HPC and to engage those entities and initiatives that can benefit from this synergy. This activity aims at unleashing the innovation and impact potential of the combination between HPC and GSS.

8 List of figures

9 List of tables

10 List of abbreviations

11 References

- D2.1 “Stakeholder context and initial sustainability model”
- D2.2 "Final Sustainability Model"
- D2.2 - Annex “Task 2.3”
- D6.6 "Second annual report on training, standardisation, collaboration, dissemination, and communication"