EUROPEAN COMMISSION
DIRECTORATE-GENERAL FOR RESEARCH & INNOVATION

Directorate I - Climate Action and Resource Efficiency
I.4 - Climate Action and Earth Observation

Brussels, 16 December 2014

Conclusion of the Workshop

Engaging the Private Sector in GEOSS – A European Perspective

Organised by the European Commission Directorate General for Research and Innovation

Brussels, 26 September 2014

Introduction:

The implementation of the Global Earth Observation System of System (GEOSS) by the intergovernmental Group on Earth Observations (GEO) has triggered a considerable shift regarding access to Earth observation data. This shift has occurred through GEO's promotion of principles advocating full and open access to both remote sensing and in-situ observation data, globally.

The same trend towards open data also applies in the EU context for instance to the free and open data policy for the Copernicus programme and - to a large extent - to Horizon 2020 through the pilot on Open Data Access promoted by the European Union.

The tremendous value of Earth observations (EO) for society is widely acknowledged, from which the commercial sector could also benefit by transforming data into products and services, and thus contributing to the development of the European digital market, one of the priorities on the agenda of the new Commission.

At the GEO-X Plenary and Geneva Ministerial Summit, GEO's Ministers, Members and Participating Organizations reaffirmed the need to "broaden the engagement and collaboration of stakeholders including decision makers" and "broaden and strengthen engagement with non-governmental organizations; non-profit organizations, such as multi-lateral development banks; foundations; and **the private sector**" during GEO's second decade (2016-2025).

The exploitation of the data made freely available through GEOSS will take place in a competitive global economy. Obviously there is a need to better explore and leverage the

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impact on national economies from data made available to users at basically no cost, along with any resulting services (although the acquisition and distribution of this data does represent significant public investment).

The Earth Observation Data Landscape is complex and linked to a market that has radically changed in the last 10 years with the public sector. Governmental organisations, for example leave increasing leadership for data collection and management to the private firms and to social media. Any attempt to define categories on how the private sector works today can result in an “over simplification”. Today data providers are also investing in data processing services to better serve users and quickly move to product generation. Companies such as Google, Microsoft and ESRI already provide these infrastructures for their users.

On the occasion of the GeoSpatial World Forum 2014, a workshop on “Geospatial industry forging ties with GEOSS: a value proposition dialogue forum" took place involving randomly selected companies, and addressing questions related to the potential collaboration of the private sector with GEO.

This discussion generated a lot of interest from the selected participants present and demonstrated that views from the private sector are not unified, with divergent opinions expressed from small and big companies, as well as from various companies around the world. The private sector participants at the same time did recognize the value of GEO for: increasing the EO market (e.g. facilitating business development); facilitating the dialogue between policy and decision makers, and service providers; including a better understanding of requirements; exploring new business models (e.g. creating partnerships for cloud services); serving as a tool for marketing and advertising services; sharing responsibility and costs for capacity building, etc.

In this context, a dedicated workshop was held to review the interest and requirements, as well as the expectations, of the **European** commercial sector regarding GEOSS. This workshop offered an opportunity to propose actions for facilitating the participation of the European commercial sector in the deployment of GEOSS and for helping the commercial sector take advantage of the full and open access to Earth observations as advocated by GEO. The workshop aimed at developing a European position for the engagement of the commercial sector in GEO/GEOSS and contributing to further discussions taking place within the GEO European caucus (the High Level Working Group), as well as the GEO Executive Committee and Plenary.

This paper is intended to summarise key findings of the workshop.

Workshop Outline:

The workshop was held in Brussels on 26 September 2014 and attracted some 100 participants of which approximately 70 were representatives of private companies (mainly value-adding, but also some end-users and NGOs). Also present were

representatives of the GEO European caucus, pan-European and international organisations, and other services of the European Commission.

An opening session set the scene and included a welcome by Dr Rudolf Strohmeier, the Deputy Director General of the Directorate-General for Research and Innovation (DG RTD), and a keynote address by Dr Alessandro Annoni, Head of the Digital Earth and Reference Data Unit of the European Commission's Joint Research Centre (JRC). The session offered the opportunity to present GEO to participants unfamiliar with the initiative, to provide an update on progress regarding preparation of GEO post-2015, and to present initial considerations regarding the participation of the European commercial sector in GEOSS. In addition, the evolution in the data-'landscape' since the establishment of the GEO initiative was reviewed. The result of this evolution is that the private sector can no longer be simply categorised as either data providers, service providers or downstream users, but has adapted to provide interlinked and multiple functions and services.

A first roundtable identified interest in GEOSS from various business sectors in Europe. This roundtable provided an opportunity to present the different categories of the business sectors that might have an interest in utilizing the GEOSS.

A second round table considered the best modalities for interaction between GEO and the private sector in Europe. This addressed the communication and liaison between GEO and the private sector.

Two breakout sessions were subsequently held: one on actions needed for the involvement of the private sector in the deployment of GEOSS; and a second on actions needed to help the business sectors in Europe to best exploit the full and open access to Earth Observation data.

In the following the issues raised during the workshop and related discussions are summarized:

The use of EO in business and expectations from the GEO/GEOSS initiative:

Throughout the workshop many examples were given where EO are being used in commercial applications covering a variety of different sectors (energy, environment, agriculture, health, transport, climate, raw materials,…and security and defence). Therefore, the full and open data access principles promoted by GEO are also very much welcome by the commercial sector.

In order for the commercial sector to utilise GEOSS, a range of support functions needs to be provided by GEO/GEOSS such as a data/product certification with clear traceability, standards, best practises etc. This would allow the suitability of certain data/services for a particular application to be assessed, and support the development of a particular business case. Furthermore, it was mentioned that the service offered by the GEOSS needs to be better tailored to end-user categories, making the discovery of

suitable data/services easier. This should go 'hand-in-hand with an improvement of the web based user interface.

Of particular interest to the commercial sector is the GEO knowledge base. In the discussion it was mentioned that not only full and open access to data was a prerequisite, but also access to models should be provided. It was reported that this has been already identified as a potential focussed activity within the next phase of GEO where more emphasis on providing access to socio-economic data and models is planned.

GEO/GEOSS is also perceived as a suitable platform for expanding the business network through linking with other commercial entities and/or to public authorities working in the same domain. It potentially could be used to promote commercial data and services.

There was also an intensive discussion about 'free' services operated through public funding and the threat it potentially could pose to the commercial sector. The example of the Copernicus Core Services was mentioned. However, it was also stressed that these services are instrumental in generating new business opportunities, addressing customers who became interested through free services but who are now requesting more tailored services (higher resolution, accuracy, etc.). In the discussion it was concluded that clear boundary conditions would need to be defined up-front stating clearly where the GEOSS public services stop and what the 'playing field' of the private sector is. This delineation exercise needs to be reflected in the on-going discussion on the next phase of GEO to ensure that GEO is not perceived as a competitor, but rather as a facilitator.

In general, the discussions revealed the large interest of the European commercial sector in GEO data and knowledge base and as a platform for increasing the network. Utilizing GEOSS as a 'market place' requires preliminary discussions as to whether GEO's mandate should: 1) be limited to serving as a networking platform with a political arm, leveraging resources and supporting furthering knowledge related to a range of societal benefit areas including the identification of observational gaps; or 2) evolve into a real system offering operational services which would require quality certification and clear boundaries between public and commercial services. This discussion needs to be led by the GEO community in the frame of the next GEO implementation plan.

Involvement of the commercial sector in the GEOSS implementation and the GEOSS exploitation:

Several participants representing commercial companies in Europe are already involved in the current GEOSS, mainly in the context of implementing a GEO Task, and international GEO initiatives (e.g. GFOI, GEOGLAM), or pilots experiments of the GEO Architecture Implementation Pilots (AIPs). They anticipate a strong GEOSS potential to help discovering and accessing the EO data sets upon which they could further develop their commercial activities. Some companies look forward to plug their activities into the GEOSS, but regret the absence a clear pathway to do that. They perceive the current GEOSS as driven by scientists and the public sector, and hope that, in the future, the private sector will not be considered as an outsider. Developing a business culture within

GEO would help accelerating future private sector engagement. Furthermore, a rapid clarification of the main options retained by GEO for the implementation of the GEOSS in the period 2016-2025 would also help. This should at least include a mechanism for a permanent dialogue, a clarification of the scope for a possible GEO market place and clear engagement modalities taking into account of the many facets of the private sector.

Best mechanism to facilitate communication and collaboration between the private sector and GEO/GEOSS:

The participants agreed that this workshop is a very good starting point which should be repeated over time. They recognised that it comes timely considering the significant expansion of the GEOSS data value, especially since recent years. They pleaded in favour of the establishment of an open, transparent European GEO forum or interest group in order to raise GEO awareness and facilitate the uptake of future GEOSS opportunities.

Involvement of European commercial companies in GEO, while rather limited thus far, has often been associated to a collaboration activity in the field of research and innovation and the availability a research source of funding (e.g. the EU Framework programmes for Research and Innovation). Finding resources for getting involved in GEO remains an issue and the establishment of a strong GEO-driven market place would definitely help.

GEOSS concerns a lot of different users, applications and domains of expertise. Direct involvement by a huge number of diverse companies, especially the many SMEs active in the Earth observation service sector in Europe, might not be feasible. While maintaining openness of the proposed European GEO platform, targeting existing European interest groups and trade associations has been recommended by various participants. Several public private fora already exist in Europe, for instance in the context of the EU Copernicus Programme, the implementation of the EU Directives on INSPIRE and on Public Sector Information (PSI), the open science initiative, ESA or the emerging contractual Public Private Partnership on Big Data Value. Any new GEO-related Public-Private platform of cooperation should build upon and leverage what already exists in Europe.

Most important issues and requirements which need to be addressed for the GEOSS information system in order to generate a suitable ecosystem for the commercial sector:

The participants have recalled the following key pre-requisites in order to generate a suitable ecosystem for the private sector: increasing awareness about GEOSS opportunities, raising clarity about the respective roles of the Private Sector and the Public Sector in GEOSS, and exploring eventual new governance options. Several speakers supported the general opinion that value adding should be a default task by the

private sector (rather than by GEO itself). Following this line would reduce the risk of confusion by current users and customers (perceived as a GEO threat on the Private Sector).

With respect to GEOSS as an information system, the participants insisted on the need to ensure overall robustness and sustainability of the system over time. This would require the system to evolve from a series of RTD-driven activities to full business operations. Other important GEOSS aspects mentioned during the second round table included the transparency, discoverability, availability of the data sets accessed via the GEOSS, as well as the documentation of data ownership along the value chain. In addition, GEOSS should interface at best with current businesses that increasingly rely on the combination of multiple data access, cloud services on the web and big data analytics.

Actions needed for involving the private sector in implementing GEOSS:

Several presentations emphasized the point that the private sector needs stability and data quality assurance in order to develop applications using GEOSS. It was noted that uncertainty is not a propitious climate for investment, and thus viable interfaces with GEOSS were needed if GEO wished to foster free market mechanisms. It was stressed that it is relatively easy to become involved in GEO through contributions to activities of the GEO Work Plan, but the question is how the EC or other national programmes can best provide support to the private sector as they seek to create business opportunities. It was also noted that governments are showing increasing interest in geospatial data and technology. It was suggested that GEO can show how data sharing works and model this for governments in order to stimulate business. This was supported by noting that up to 60% of decisions taken in European governments have a geospatial component and the EU therefore needs an efficient data ecosystem to manage this need, one that includes individuals, researchers and venture capital to collaborate and solve challenges. It was suggested that Public-Private Partnerships (PPPs) could be a viable means to address the data economy as a whole, with GEOSS potentially being a major contributors in terms of EO. As an example of a PPP, the EO Data Centre for Water Resources Monitoring (EODC) was mentioned which is an open international corporation that could serve as a community-driven model for cooperation, transparency and collaboration in the development of new EO data processing methods.

Furthermore the importance of citizen observatories as a cost-effective means to monitor the environment was highlighted. Moreover, these observatories represent an opportunity for collaboration where citizens can interact with scientific community within the GEO community and create new services through investments from the private sector. Another idea was for the private sector to take up development of sensor technology in response to gaps identified by GEO. New ways of monitoring the environment are needed, such as development of sensors with nano-chip technology, and the private sector has the engineering capacity to respond to this challenge with cost-effective solutions.

To ensure concerns from the private sector such as these are taken on board by the GEO community, participants identified the need for dialogue at various levels of GEO

governance. Workshops such as this one are a first milestone, and the dialogue should be continued on an open, fair and transparent basis. Part of that dialogue could include the establishment of a GEO-Private Sector Forum to provide for exchange on a regular basis, and assist GEO in planning its activities with input from the private sector.

Possible return in terms of resources from the participation of the private sector on GEO:

It was noted that, in the ever-expanding plethora of data portals available, the real added value of GEO could be in the establishment of web services to help find relevant data. This was added that one of the greatest functions GEO could provide to the private sector was to focus on being a collector of metadata to become the authoritative and user-friendly "Google for GEO data". Furthermore, it was suggested another service GEOSS could provide to the private sector would be to bring to its attention R&D projects funded by the EC that were reaching the end of their lifetime, to determine whether processing algorithms, software or other products developed within those projects could be extended or even operationalized by the private sector. This was complemented with a statement that given the amount of money poured into projects, a role GEO could play would be to insure the information was not lost when project ends through finding hosting capabilities with the private sector.

In a similar vein, it was suggested that an added-value role GEO could play would be to focus on lobbying for sustained coordination of EO, while creating a best practices compendium of engagement between the private sector and GEO. He added that, in his view, businesses are the generators of ideas and applications; something that GEO is not designed to do. In summary it was noted that GEO should be helping create the conditions for the private sector to flourish. As a political platform joining together governments interested in EO globally, GEO must avoid an "either/or" mind-set, but rather seek to establish conditions of mutual benefit with the private sector.

Actions needed to help the private sector in Europe to exploit GEOSS:

The European Space Agency (ESA) outlined its "Experiences of working with the private sector in ESA's Earth Observation (EO) exploitation activities". It is worth recalling that the attributes of any sustainable service are that it must be: **useful** (i.e. improve a user's operations by delivering a measurable benefit); **available** (i.e. readily accessible to users when needed, both now and in the future); **reliable** (i.e. consistently meeting user-defined quality and standards requirements); and **affordable** (i.e. the benefits arising will justify the investment costs and that it is competitive with conventional sources).

More colloquially, is the proposed EO service simply 'nice to have', or do the results significantly improve operations? If they do, is this accepted by the customer, who has to factor in both the costs and changes to existing working procedures?

ESA also noted that the EO route into large companies is often through their R&D departments and not the operations sectors, and that these departments frequently have different agendas. Hence when approaching an operations department, (that often has very little "free" time), it is critical to approach them with a well-addressed value proposition, and with mature, validated EO services (not R&D results). Furthermore, industrial guidelines/best practices are often in place, and compliance with these is mandatory. The inclusion of EO information in industrial best practice specifications may therefore be a mechanism to widen the uptake of EO products and services in private sector. However, it is also not sufficient to simply deliver the EO product. The user will also need the tools and support on how to use these unfamiliar products and services.

During the subsequent discussions, the delegates highlighted the need for GEO to develop better customer relationships, focussing on customers real needs and recognising the requirement for closer provider (supplier) / customer relationships. For example, success stories should be presented from a non-technical standpoint. GEO should also acknowledge that EO alone can often not provide the "complete solution" and it should avoid "overselling" what can be delivered.

The delegates also stressed that the private sector should not be seen as a single uniform entity, with different business sectors having different hurdles to overcome, e.g. small businesses can have problems of data access and access to the market.

To date, the primary end-user of EO data and services has been public sector customers, who have very specific information requirements and therefore require specialised services. To help broaden the user-base, GEO should look to engage large end-user groups on a societal basis, rather than simply on a commercial basis. GEO should make an effective case for the use of new data and technologies, demonstrating the real added-value, as in general, (as seen from the private sector perspective), EO seeks to enhance an existing capability, rather than bringing something completely new.

The delegates stressed that GEO must do much more to demonstrate what GEO and the use of the GEOSS can do to help solve problems and save money. Can GEO help address obstacles to the use of new monitoring techniques and technologies? Can GEO demonstrate the benefits of using new methods? The participants also reiterated the point that data availability and access is crucial. In addition, they emphasised that **data reliability is critical**.

The delegates also raised the importance of addressing the issue of "how to bridge the divide between the research and business domains?". Without providing any definitive solutions (and in addition to the many points made above) they raised a number of issues that they felt GEO should seek to address. How can GEO connect with intermediaries, (that vary in size from very small SMEs to very large companies), many of which are often serving a specialist niche. To bridge this divide, should GEO engage with actual end-users? And if so how should they be involved in GEO? Or should GEO focus its efforts on engaging with intermediaries? What is the nature of the EO market and does the potential exist to generate an EO mass-market?

There was also a recognition that whilst job creation is important, skill gaps remain. There is a growing need for: data scientists; data architects; data visualizers; data change agents; data engineers/operators; data stewards; data cloud specialists.

Suitable instruments to facilitate the use of GEOSS by the private sector:

A number of speakers outlined instruments that could be used to facilitate the use of the GEOSS by the private sector.

Carlos Morais-Pires, from the European Commission's Directorate General for Communications Networks, Content and Technology presented the European Commission's (EC) perspective on "*Data and Computing Infrastructures for Research and Innovation*". He stated that the EC, in coordination with EU Member States, now looks at research data as a valuable and strategic resource infrastructure. Within such a framework there are at least three key issues to be addressed: how can data be networked; how to envision and set up data governance on a global scale; and how the European Union (EU) can play a leading role in helping start and steer this global trend?

He stressed that the EU Research Framework Programme **Horizon 2020** is now about Research **AND** Innovation, not Research OR Innovation. Research activities must be undertaken with innovation in mind. And such innovation should enable job creation.

The Network of European Regions Using Space Technologies, (NEREUS), spoke about the potential of EO to facilitate solutions and add value for **European Innovation Partnerships** (EIPs). EO from space provides numerous opportunities to develop innovative services and products here on Earth. Space applications are an indispensable ingredient for the objectives of the EU 2020 Strategy - *smart, sustainable and inclusive growth* - and are a key driver for innovations. But reaping the socio-economic benefits of space-based EO and optimal exploitation of space flagships is a challenge.

NEREUS is bringing the benefits of space-based EO to the EU regions and their citizen by providing regional stakeholders with a platform for interregional cooperation and information / knowledge sharing.

EIPs are a unique tool to both reach out to a critical mass of societal and economic players and also to link space applications with the relevant societal challenges and EU-policies. By acting as a "key enabler", a Space European Innovation Partnership can bring solutions to existing EIPs (in particular SMART Cities, Water and Healthy Ageing) and EU-policy objectives.

The Copernicus Masters Initiative spoke about fostering downstream services. The Copernicus Masters scheme awards prizes to innovative solutions for business and society based on Earth observation data. Its objectives are to: create awareness of the Copernicus programme; promote the use of Copernicus data for commercial and societally relevant projects; and foster product development and entrepreneurship in Europe. It is oriented towards: students; researchers; entrepreneurs; start-up companies; and SMEs. It aims to: support the winners in the implementation of their business ideas;

initiate cooperation between winners and partners; and support the creation of new ventures being supported in the ESA Business Incubation Centres (BICs) across Europe.

The Copernicus Masters Initiative representative also outlined a further instrument, **the ESA Copernicus App Camp**. The App Camp aims at bringing forth Copernicus apps which are (almost) ready for the market. The developer camp targets young innovative app developers with proven experience in app development.

Summary:

The workshop provided a first opportunity to exchange ideas on the engagement of the European commercial sector with GEO/GEOSS, marking the starting point of a closer dialogue. Some clear recommendations related to actions needed on GEO level and on European level were given, which include:

On GEO level:

- The importance and success of GEO as a political initiative to promote and facilitate full and open access to data was highlighted. Many participants at the workshop expressed the view that this should be GEO's future core activity, maintained as a 'public good'.
- There is great interest within the private sector in utilizing GEO's knowledge base. In particular it was stressed that models should be also made available through GEOSS.
- The utilisation of GEOSS by the private sector would require a reliable steady flow of data (at least key data which would need to be defined), following quality assurance standards as specified by GEO. Thus, an operational and sustained GEOSS information system would be required. Modalities and clear boundary conditions need to be defined up-front stating clearly where the GEOSS public services stop, the “boundaries” within which the private sector could operate and how GEO will engage with the private sector. This would also require a clear definition of the different data policies used by different entities and sound open data licenses to assure commercial users. All these issues need to be reflected in the on-going discussion on the next phase of GEO, assuring that GEO is not perceived as a competitor to the private sector but rather as a facilitator.
- The GEOSS also appears attractive to the private sector for the promotion of their services, if the rules are clearly defined.
- It was proposed that a continuous dialogue between GEO and the private sector needs to be established. This could take the form of an appropriate forum, one that should be independent of (but connected to) the GEO governance structure.

- New ways to attract the private sector in GEO/GEOSS need to be explored such as cash contributions through the marketing of private sector products and in kind contribution through maintaining specific GEOSS operational services, including core GEOSS services, which potentially could be better implemented by the industry (e.g. cloud based services).

On European (regional) level:

- Increase awareness of GEO/GEOSS in 'local' companies in particular SMEs and start-ups of young entrepreneurs that could potentially benefit from GEOSS. Create/take advantage of regional geospatial fora as e.g. present in some German Landers.

- In addition, implement support mechanisms (business incubators, incentives) fostering service uptake by young entrepreneurs for the development of "Earth observation products and services of the future".

- In Europe, several cloud service providers are interested in offering their services through GEOSS, including those who prepare dedicated cloud services for Copernicus Sentinel data. IPR rules and the highest level of security standards would be applied. Resources would need to be made available through the GEO process to secure the support of the cloud companies (e.g. link up cloud processing service providers such as those federated through "Helix Nebula" to GEOSS)

- The use of European Public-Private Partnerships should be considered in order to take advantage both of the benefits arising from industry know-how and investments in the service domain, and of Research and Innovation activities supported through public funding. Different PPP models such as the European Innovation Partnership or European Technology Platforms should be assessed for suitability to accommodate the dialogue on a European level.

Enclosure: Annex 1: Programme
Annex 2 Participants List

Annex 1

Engaging the Private Sector in GEOSS – A European Perspective
PROGRAMME

Charlemagne, EC building CHAR
Room: Lord Jenkins (JENK), and Room: Durieux
Rue de la Loi, 170 (close to Place Schuman), Brussels

Friday 26 September 2014

***Room* JENK**			
8:30 – 09:00	Registration and Welcome Coffee		
Opening Session – Setting the Scene (Chair: Rudolf Strohmeier)			
09:00 – 09:40	Welcome Addresses	Rudolf Strohmeier Maria Betti Thierry van der Pyl Mauro Facchini	DG-RTD JRC DG-CNECT DG-ENTR
09:40 – 10:10	Global Earth Observation Systems (GEO, Copernicus, etc.): State of Play and possible Scenarios of GEO engaging with the Private Sector	Alessandro Annoni	JRC
Coffee Break: 10:10 – 10:30			
Round Tables:			
Round Table 1: Interest of various business sectors in Earth Observation and initiatives such as GEO/GEOSS *(Moderator: Gilles Ollier, Rapporteur: Michael Berger, DG-RTD)*			
10:30 – 11:45	*Potential questions:* How are you using EO in your business; what are your expectations regarding initiatives such as GEO/GEOSS? (GEO component, knowledge base, data and information system) What are the products/services that can integrate Earth observation – is there scope for market with the emergence of new application /technologies.	*Panellists:* **Marcello Maranesi**, eGEOS **Thomas Heege**, EOMAP **Christophe Sannier**, SIRS **Joanna Nowakowska**, Forest Stewardship Council **Jaap Schellekens**, DELTARES **Walter Mayer**, PROGIS **Dominique Dubucq**, TOTAL	
Round Table 2: Best modalities, communication and liaison between GEO and the Private Sector *(Moderator: Marta Nagy-Rothengass, DG-CNECT, Rapporteur: Michel Schouppe, DG-RTD)*			
11:45 – 13:00	*Potential questions:* What are the most important issues (governance, IPR, data policy issues, security issues, robust and sustainable system, SLAs…) which would need to be addressed with priority in a cooperation framework with GEO? What would be the best mechanisms to facilitate collaboration of the PS with GEO in particular regarding the conditions and practicalities for the establishment of a steady flow of Earth Observation data that can be exploited by the Private sector. How would you position yourself with respect to an initiative like GEO (GEOSS implementation? GEOSS exploitation? Both?)	*Panellists:* **Geoff Sawyer**, EARSC **Axel Penndorf,** BlackBridge **Emmanuel Mondon**, CloudEO **Thomas Haeusler**, GAF **Alain Arnaud**, ALTAMIRA **Ralph Rayner**, BMT Group	

Lunch Break: 13:00 – 14:00		
Parallel Breakout Sessions:		
	***Breakout Session1:* Room JENK**	***Breakout Session2:* Room Durieux**
14:00 – 15:30	*Chair: Heike Bach, VISTA;* *Rapporteur: Douglas Cripe, GEO-Sec:* ***Actions needed for the Involvement of the PS in the GEOSS implementation.*** *Presentations around seed questions:* What could be the role of the PS in the implementation of the GEO/GEOSS 10-Year implementation plan and the relevant GEO tasks of the GEO multiannual workplan? What can be done at the level of the GEO planning to involve the PS early enough in the preparation of the GEO Implementation Plan and subsequent multiannual Work Plans? Is there a possible return in terms of resources from the participation of the private sector in GEO?	*Chair: Mark Noort, HCP International;* *Rapporteur: Alan Edwards, GEO IPWG:* ***Actions needed to help the PS in Europe to exploit GEOSS.*** *Presentations around seed questions:* What are potential stumbling blocks (governance, IPR issues, Data policy, techn. issues…) which need to be addressed with priority? Which instruments (Horizon 2020, Copernicus) would be suitable to facilitate the use of GEOSS by the Private Sector?
14:00 - 14:15 (10+5min)	**Mick Symonds** (ATOS): Helix-Nebula - a potential Market Place for EO	**Stephen Coulson** (ESA): Experiences of working with the private sector in ESA's EO exploitation activities
14:15 – 14:30 (10+5min)	**Arne Berre** (SINTEF): Innovation opportunities for private sector in Citizens Observatories	**Walter Pecorella** (NEREUS): The Potentials of Earth Observation to facilitate solutions and added value for European Innovation Partnerships
14:30 – 14:45 (10+5min)	**Christian Briese** (EODC): EODC and its potential contribution to GEOSS	**Ulrike Daniels** (Copernicus Masters): fostering downstream services
14:45 – 15:00 (10+5min)	**Marta Nagy-Rothengass** (EC DG-CNECT): Big Data Value Partnership	**Carlos Morais-Pires** (EC DG-CNECT): Data and Computing Infrastructures for Research and Innovation: an EC perspective
15:00 – 15:30	Discussions	Discussions
Coffee Break: 15:30 – 15:50		
Closing Plenary: (Chair: Kurt Vandenberghe DG-RTD)		
Room JENK		
15:50 – 17:00		
	Summary of RT-1	Michael Berger	DG-RTD
	Summary of RT-2	Michel Schouppe	DG-RTD
	Summary of BS-1	Douglas Cripe	GEO Sec
	Summary of BS-2	Alan Edwards	GEO IPWG
	Discussion		
	Closing remarks and Next Steps	Rudolf Strohmeier	DG-RTD

Annex 2

Participants List

Engaging the Private Sector in GEOSS – A European Perspective

26 September 2014

	Mr	NAME	First	Company
1	Mr	ALMEIDA	Nuno	Aerospace Systems DEIMOS Engenharia
2	Ms	ANTONIOU	Natassa	Geospatial Media and Communications
3	Ms	AYAZI	Roya	NEREUS-Secretariat
4	MS	BACH	Heike	VISTA
5	Mr	BAUMANN	Ingo	BHO Legal
6	Mr	BERRE	Arne	SINTEF
7	Ms	BORDELOT	Federica	NEREUS aisbl
8	Mr	BRACKIN	Roger	ENVITA
9	Mr	BRIESE	Christian	EOWD Vienna University of Technology
10	MS	BYE	Bente Lilja	BLB
11	Mr	CAELEN	Florent	Hexagon Geospatial
12	Mr	CAUMONT	Hervé	Terradue
13	Mr	CECCARONI	Luigi	Barcelona Digital
14	Mr	CESPA	Stefano	TRE
15	Mr	CLANDILLON	Stephen	SERTIT
16	Mr	DE BOECK	Frank	Eurosense
17	Mr	DE LATHOUWER	Bart	Open Geospatial Consortium (OGC)
18	Mr	DOULAVERAKIS	Charalampos	(ITI) of the Centre for Research and Technology Hellas, CERTH
19	Mr	DUBUCQ	Dominigue	TOTAL
20	Mr	HAEUSLER	Thomas	GAF
21	Mr	HAVLIK	Denis	Austrian Institute of Technology
22	Mr	HEEGE	Thomas	EOMAP (Earth Observation and Mapping)
23	Mr	HIGGINS	Micheal	CloudSigma
24	Mr	KABAMBA	Alain	Hexagon Geospatial
25	Mr	KEYWORTH CGEOG	Steve	Environment Systems
26	Mr	LEDENT	Philippe	Spacebel
27	Mr	MACINNES	Iain	Digitalgobe
28	Mr	MAES	Emile	Eurosense
29	Mr	MASÓ	Joan	CREAF
30	Mr	MATHEUS	Andreas	Secure Dimensions
31	Mr	MAYER	Walter	PROGIS Software
32	Mr	MONDON	Emmanuel	CloudEO
33	Mr	NOORT	Mark	HCP Int
34	Mr	PAOLONI	Marc	Business Bridge Europe
35	Mr	PAPAKOSTAS	Nikolaos	Fugro Survey
36	Mr	PARMENTIER	Noel	RHEA company /ADGA group
37	Mr	PENNDORF	Axel	BlackBridge
38	Mr	PHILP	Martin	DMCii

39	Mr	POSTMA	Rob	Airbus Defence and Space/Astrium
40	Mr	PRADHAN	Chetan	CGI UK
41	Mr	PRANDI	Federico	GraphicsMedia.net/ Fondazione GraphiTech
42	Mr	RAYNER	Ralph	BMT limited
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56	Mr	VREČAR	Simon	EUROGI
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59	Mr	VAN DER PYL	Tiery	EC DG-CNECT
60	Ms	BAMPS	Catharina	EC DG-ENTR
61	Mr	BRUNET	Philippe	EC DG-ENTR
62	Mr	MASSART	Michel	EC DG-ENTR
63	Mr	ZEIL	Peter	EC DG-ENTR
64	Ms	MASSON	Josiane	EC DG-ENV
65	Mr	OLLIER	Gilles	EC DG-RTD
66	Mr	RUBIO IGLESIAS	Jose	EC DG-RTD
67	Mr	SCHOUPPE	Michel	EC DG-RTD
68	Ms	SHIEL	Jane	EC DG-RTD
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70	Mr	TILCHE	Andrea	EC DG-RTD
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