

# WP1: Policy, Impact and Sustainability

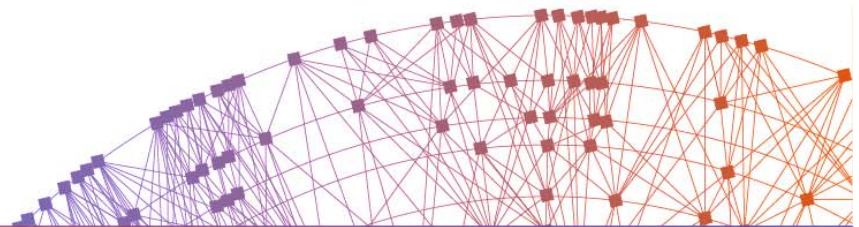
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Stefan Janusz, QMUL

WP1 Leader

[www.e-sciencetalk.org](http://www.e-sciencetalk.org)

- Overview
- How WP1 reports on the successes of e-science
- Methodologies used to collect feedback and measure impact
- Meetings, GridCast and 10<sup>th</sup> eConcertation Meeting
- Summary

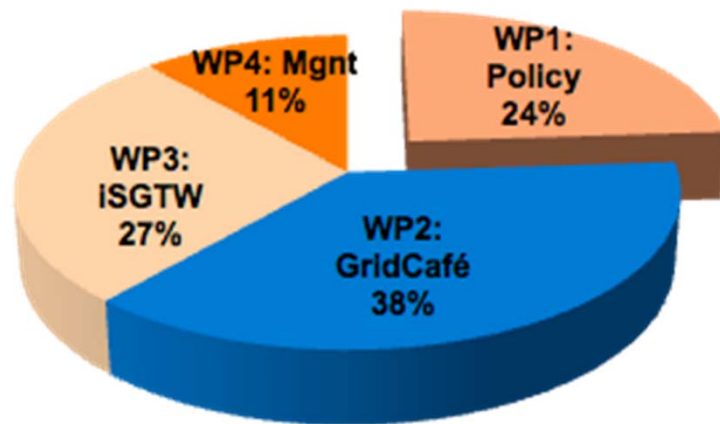


# WP1 Overview

3 Beneficiaries  
46 PMs  
1.6 FTEs

Participant no.	Name	Effort (PM)
2	QMUL	28
3	APO	5
5	CERN	13

## e-ScienceTalk Effort Distribution



**1.1 Production and distribution of e-science policy articles and reports**  
*(QMUL and APO)*

**1.2 Impact and sustainability**  
*(QMUL with CERN and APO)*

**1.3 Events attendance and media impact event organisation**  
*(QMUL with CERN and APO)*



# WP1 Objectives

- Produce reports targeting policy makers in government and business
- Expand the audience and distribution list
- Assess the impact of e-ScienceTalk's products and formulate a sustainability plan
- Identify, attend and disseminate the outcomes of meetings in order to influence scientists, funders and industry
- Assume a key leading and coordinating role in the EC concertation activities and meetings related to the e-Infrastructure area, maximising media impact

# E-Science Briefings



[www.e-science-talk.eu](http://www.e-science-talk.eu)

- Target policy makers in government and business
- Provide overview of relevant projects
- Leaders in the field
- Read in about 10 minutes; provide pointers for more in-depth coverage



With WP2-APO





**September 2012: Transferring Technology and Knowledge**  
 The computing power required by experiments at CERN, now realized for e-Science in the form of the WLCG, gave birth to the Web. Many other technologies, from system-on-chips to computer animations and medical imaging, have also benefitted from developments in e-Science and the skills it fosters in international collaborative research groups.



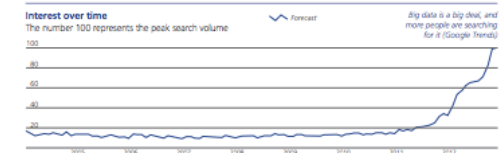
## November 2012: Big Data

The masses of data being generated by scientific experiments might threaten a data deluge, were it not for the rapid progress being made in systems and methodologies being developed to store, curate and make accessible this Big Data. From climate to eHealth, data is the new oil.

In November 2012, Mikko Tuomi of the University of Hertfordshire and Guillem Anglada-Escude of the University of Göttingen announced the discovery of a new 'Super-Earth' - a rocky planet five times larger than ours - orbiting around the habitable zone of its parent star, where surface water would be liquid. They did this by analysing old data sets using new methods. This discovery demonstrates the importance of keeping and curating data so it can be reused later. But as science continues to produce a deluge of data, is keeping it all even viable - and will a future researcher from a different or even completely new field be able to understand it? This challenge has led to the concept of 'Big Data'.

Big Data is about the petabytes of results from particle physics, systems biology and Earth simulation science - how we deal with that volume of data and how we use it. But it's also about the variety of data being produced. Life sciences, social sciences and cognitive sciences produce data of many different types, including images, for example.

Big Data is a big deal, and more people are searching for it (Google Trends)



With WP2-APO

February 2013 - 25

## e-Science Briefings

Talking about e-science

### Security and e-Science

**"Password": "123456": "12345678":** The top three most popular passwords of 2012, as published in lists by hackers, were identical to the top three of 2011. When it comes to security, popular passwords aren't to be celebrated – not only are these passwords easy to guess, but it's a safe bet large a majority of easily guessed passwords in 2012 were 'protecting' the very same files they did in 2011. And, more often than not, those same passwords are also duplicated across a range of online services. This creates an easy target for identity thieves, whose intent is much worse than those who publish

you would like. Any large corpus of knowledge could be vulnerable to attack by cybercriminals, and the hyperconnected 'smart objects' of the future might be an attractive target for acts of cyberwarfare. That is, if they're not quite smart enough to outsmart the bad guys.

e-infrastructures such as the grid also have a long history of managing security, access to services, and controlling privileges. These concepts are becoming more and more important to the rest of the online world, as the idea of universal 'web identities' takes hold. Indeed, multifactor authentication solutions (two stage sign-ins) employed by sites such as Facebook and Google generate one time passwords to

Popular passwords should be avoided at all cost

passwords online. What the fact that such lists can be published highlights is that total security is elusive: whether passwords are easy to guess or not, they are sometimes liberated, even from the biggest sites in social media and online gaming. Is the password reaching a crisis point? And what could replace them?

e-Science faces the same challenges as the rest of the online world – not least because many researchers are online outside of work, just like everybody else. But there are specific concerns: e-health will herald a new era of personalised medicine, but having your personal file compromised could reveal more about you than

be provided in addition to your normal password. At the same time, e-science services are beginning to adopt social media credentials to allow users access. While this may simplify access from a new user's perspective, opening up grids and academic clouds to more researchers in the life sciences and e-Humanities, it can present new security challenges.

**Stephan Lüders, CERN Security –**  
"Computer security is a sociological problem. It is time to teach our users and colleagues to stop-think-click when browsing the internet as they've been taught to look both ways when crossing a road."

## February 2013: The Security Issue

Looking at alternatives to the password, the comparative security of open source versus proprietary, how e-Science projects simulate hacking attempts to improve security, and future technologies for security.

April 2013 - 26

## e-Science Briefings

Talking about e-science

### e-Science in Horizon 2020

Horizon 2020, the European Commission's next funding cycle, is set to launch in January 2014. With less than a year to go, you may be wondering: what is Horizon 2020? What makes it different to the frameworks that preceded it? Why the break from the simple numbered iterations, FP7, FP6...which began, as you might expect, with FP1...all the way back in 1984?

The commission is the executive arm of the European Union, a unique union of nations that has recently found itself the recipient of the Nobel Peace Prize – an acknowledgement of the successes of the European experiment – just as economic difficulties threaten to cause social and political unease across the union. It is safe to assume that politicians throughout Europe will be scrutinising the outcomes of EU-funded projects more closely than ever before. The overarching goal is to strengthen the economic and social ties within Europe, and to bolster the European economy in the longer term.

In EU member states, the economic situation means there is a renewed focus on investments giving returns in the short term, and this includes research funding. Indeed, for the EC, too the economic vision has always been more pragmatic than purely Keynesian: there is room for 'blue sky' research, but projects have long been required to aim for sustainability post-funding. Now, there is likely to be a greater emphasis on public-private partnerships. For research e-infrastructures, new funding models are being tested. Variations of pay-for-use, a model familiar both to industry and increasingly to academic research when it comes to cloud services, are being tested for grid. The need to act synergistically, to coordinate at the level of national research centres, minimise overlap when it comes to large scale funding, emphasise centres of expertise and optimise governance, are all now acknowledged.

**e-infrastructures in 2020**

At its heart, the focus of Horizon 2020 rests on three pillars: excellent science, competitive industries, and better society. These are the broad objectives that are hoped to be achieved in Europe by Horizon 2020. At the 10th e-infrastructure consultation meeting in Brussels, Kostas Gilios, Head of eSANT & Infrastructure within the EC's DG Connect information society and media provided an overview of Horizon 2020 and what it would mean for e-science: e-infrastructures being developed need to reflect the societal and policy needs of Europe; they must integrate into the starting phase the specific innovation activities to be supported – the scientific projects they will allow. They must also go beyond science, reach out to industry and work for the benefit of society.

An important part of the Horizon 2020 strategy is a review of how e-infrastructures used for science operate, to maximise coordination and identify and build upon synergies across member states, so that successful areas can be developed while minimising overlap of effort. Developing a common infrastructure tool kit and for specific research communities are often of use to the wider community, and they should be identified and made universally available where appropriate. Similarly, governance should be optimised: expertise in managing

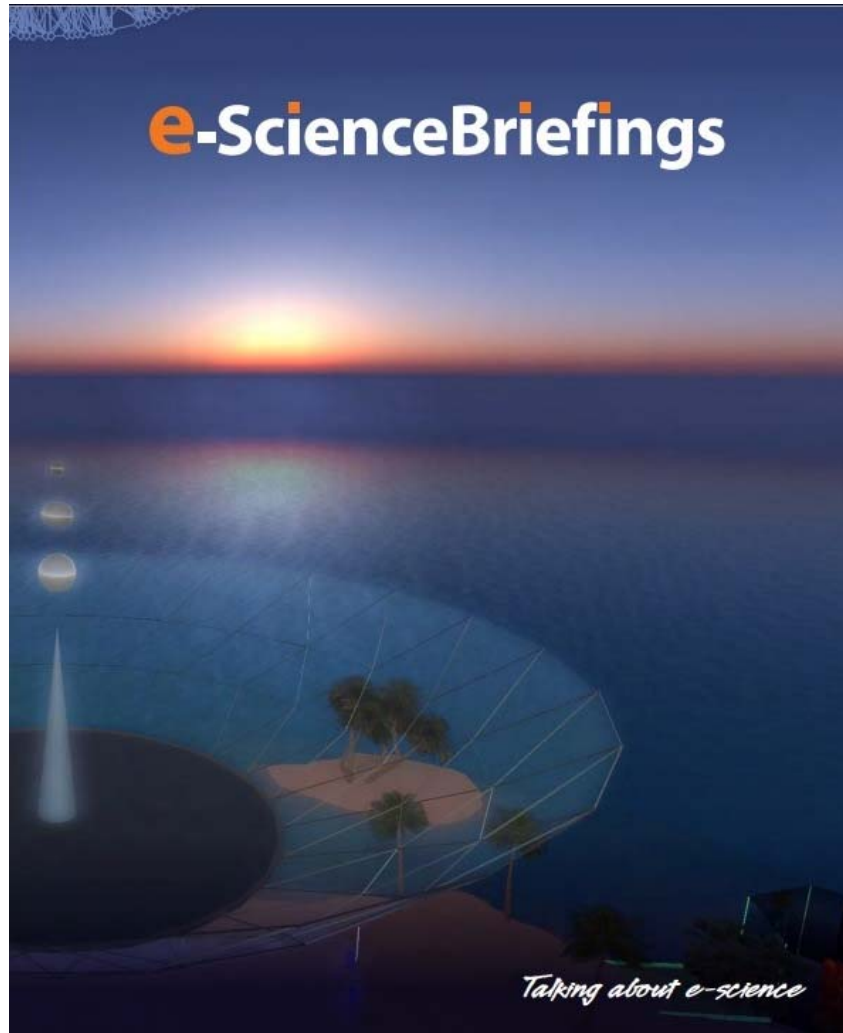
**Neele Kroes, Vice President, European Commission –** "As the Commission President has stressed, this budget can still be a catalyst for growth and jobs, and a tool to boost our competitiveness. The significantly increased investment Horizon 2020 will be making in EU research and innovation, including in the field of ICT, is a very vivid illustration of that. This is investing in tomorrow's growth, and helping European state-of-the-art research and its benefits spread as widely as possible, including across borders."

## April 2013: e-Science in Horizon 2020

Focusing on the impact of Horizon 2020 on how e-infrastructures will operate, including new funding models for grid, increased synergies across research areas, and the importance of communication with projects such as e-ScienceTalk.

With WP2-APO





- E-Science Briefing Compendium
- Includes all 12 briefings
- Foreword from Thierry van der Pyl, DG Communications Networks
- Mailed to policy makers directly
- Distribution at events e.g. EGI Technical Forum 2013, Madrid

**With WP2–APO**

## Reach

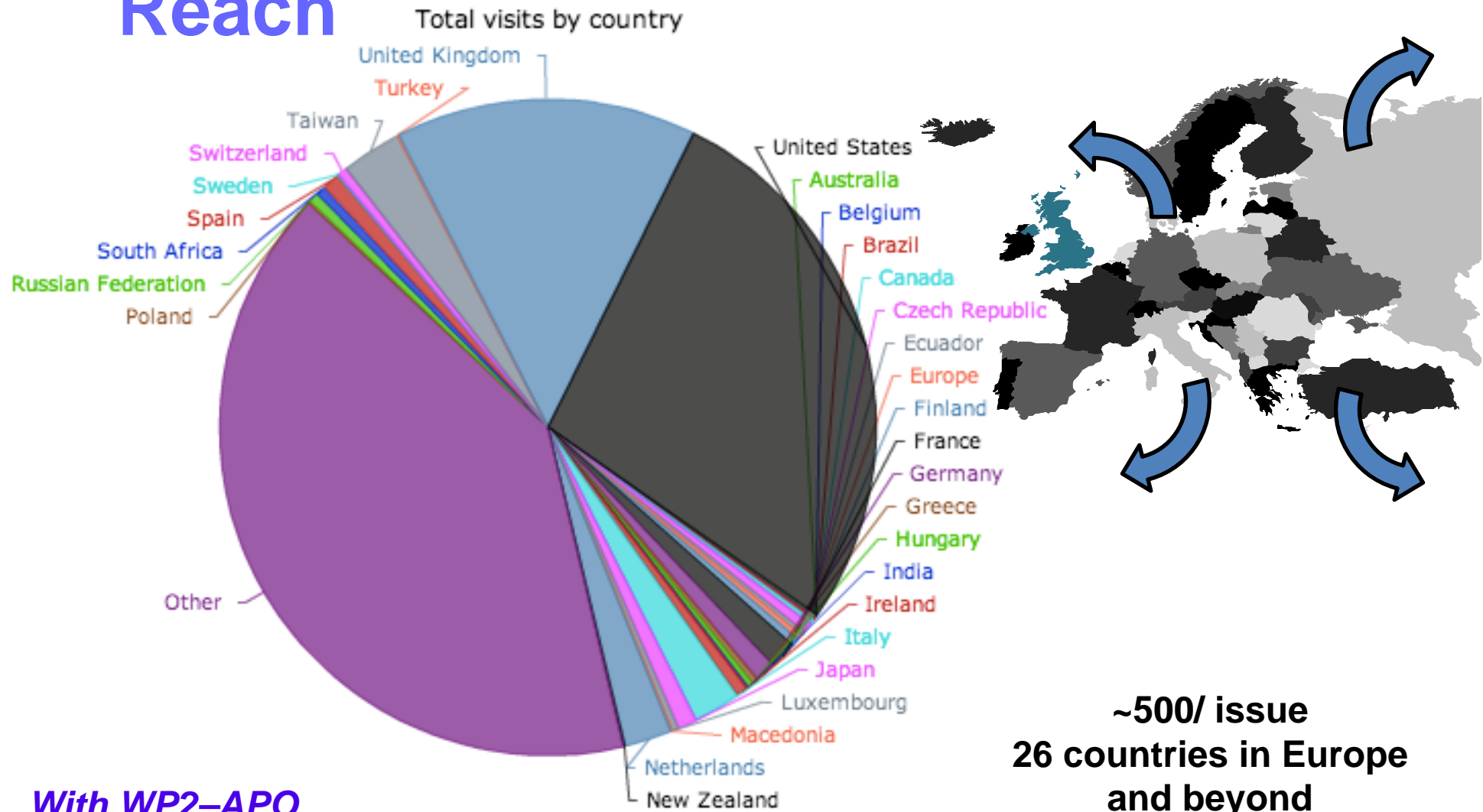
*How large is the briefings audience?*

- Email subscribers: 164
- Total number of downloads 17,300 times.
- AddThis shares (9 likes, 61 tweets, 16 Shares, 4 Google+)
- v.gd link shortening 1260 views of e-ScienceBriefings

*With WP2–APO*



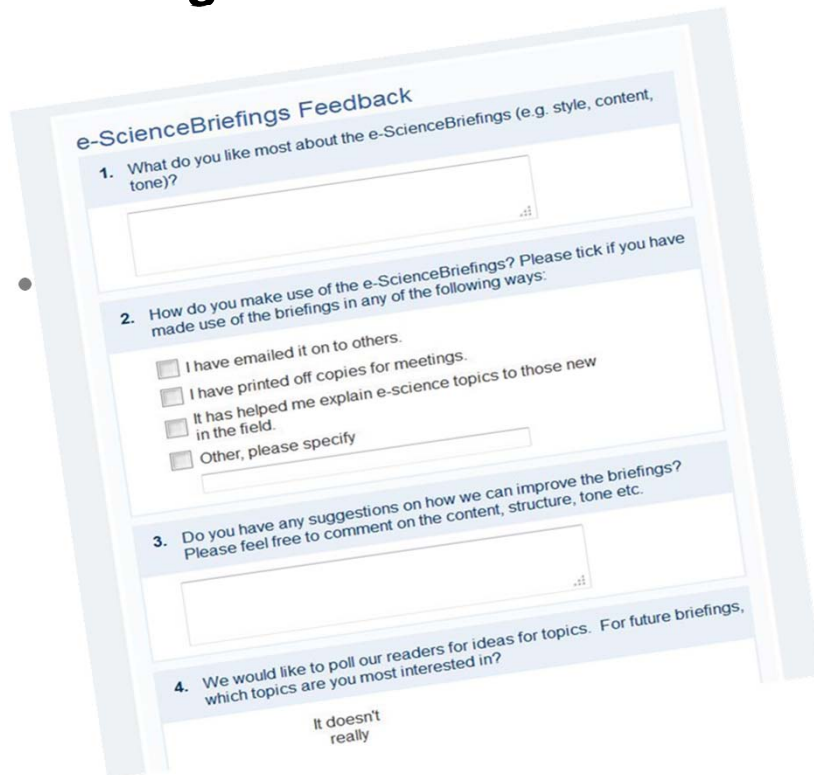
## Reach



*With WP2-APO*

## Significance

### *What do people use e-Science Briefings for?*



**e-Science Briefings Feedback**

1. What do you like most about the e-Science Briefings (e.g. style, content, tone)?

2. How do you make use of the e-Science Briefings? Please tick if you have made use of the briefings in any of the following ways:

- I have emailed it on to others.
- I have printed off copies for meetings.
- It has helped me explain e-science topics to those new in the field.
- Other, please specify

3. Do you have any suggestions on how we can improve the briefings? Please feel free to comment on the content, structure, tone etc.

4. We would like to poll our readers for ideas for topics. For future briefings, which topics are you most interested in?

It doesn't really

Helps explain e-science topics to those new to the field

“I've been told that on a national level these briefings are used as material to show others as a ‘Hey!—Look at this and what they are doing...’ or ‘...what **can be done.**’”

“It is a beautiful publication. I love that it is printed. It is so important because it is a very graphical snapshot of what’s important today for the hands of legislators and policymakers. I actually stole one to show the National Science Foundation.”

“Briefings [are] very interesting and cover the subject areas well”

*With WP2–APO*



## Sustainability

- e-ScienceBriefings are well-known in the research community
- Polls taken at meetings indicate that it is the publication that generates the most subscription interest

### *How might sustainability be achieved?*

- In order to develop future issues of the e-ScienceBriefings, time and effort would have to be funded (3 weeks for content curation)
- Sponsor would need to have over-arching aims e.g. e-IRG

*With (2)–APO*

# Impact and sustainability

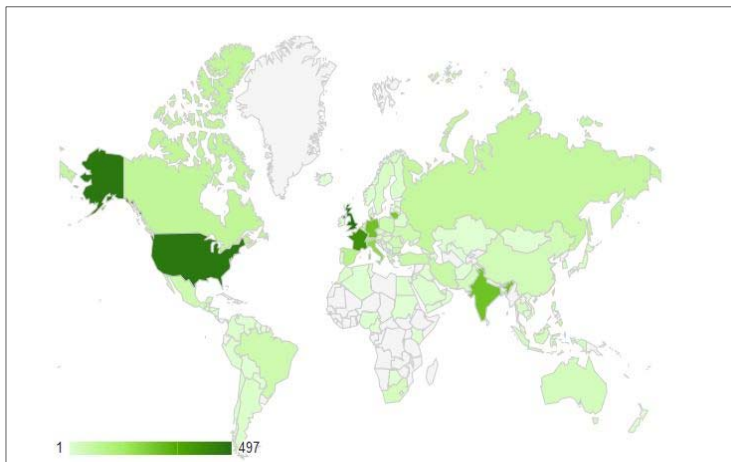


[www.e-science-talk.eu](http://www.e-science-talk.eu)

## IMPACT=REACH x SIGNIFICANCE



“...read an article in iSGTW, and had a new idea for research”



## Feedback: Quality Assurance

- Surveys – both web and of conference delegates to gauge e-ScienceTalk's perceived value
- Feedback sessions – focus groups
- Acting on feedback from the PMB
- iSGTW reader survey
- Unsolicited feedback
- Impact and sustainability reports





# Feedback Campaigns

	YEAR ONE	YEAR TWO	YEAR THREE
<b>e-ScienceBriefings</b>			
How do briefings aid policy makers in European science, government and business?	Face-to-face at meetings		Final year survey to policymakers (email)
To what extent respondents are aware of e-ScienceTalk's policy documents. How do readers use the briefings?	Canvassing at meetings	Canvassing at meetings/ mailing list survey	Final year survey to policymakers (email) /In-depth interviews
Do the briefings increase visibility for projects? How has it helped the projects?			Survey case studies
<b>GridCast/@e_scitalk</b>			
Is the blog/twitter helping to build a sense of community? In what ways is the blog helping the e-science community?	Unsolicited/Solicited feedback	Survey (June)/EGI Community Forum focus group	Focus groups/Survey (March)
<b>RTM and GridGuide</b>			
Is the GridGuide helping to foster cross pollination of expertise?	Unsolicited feedback	Solicited feedback	GridGuide survey/feedback
How is the RTM helping with outreach?		RTM user analysis	RTM User Interviews/Surveys at meetings
<b>e-ScienceCity/GridCafe</b>			
Are our products deepening the understanding of grid and cloud technologies amongst researcher?	Feedback scientists/science communicators		Survey
Do people find the website(s) useful?		Volunteer Garage/GridCafe online surveys	Focus groups

# Feedback Campaigns

	YEAR ONE	YEAR TWO	YEAR THREE
<b>iSGTW</b>			
Journalists from mainstream media will have established relationships with those within e science through iSGTW		iSGTW media 'pick' up analysis	Interviews with media sources
Centralises the communication effort and increase the visibility of e-science		MoU Thanks you emails	MoU interviews
Does iSGTW provide assistance to the community in finding future partners /collaboration?		iSGTW Survey	Interviews with authors (Top 10)
Does iSGTW help scientists informed on the latest technologies in e-science?		iSGTW Survey	Interviews with readership



## e-ScienceBriefings Feedback (July 2012)

50%

Welcome to my survey  
Thank you for participating in our survey. Your feedback is important to us, and your responses will help us improve the e-ScienceBriefings and shape future content and topics. This survey should only take two minutes to complete (only six short questions). Your responses will be kept confidential and will not be used for any other purpose.

Submit

*Zoomerang*

## Discrete banner after 30 seconds

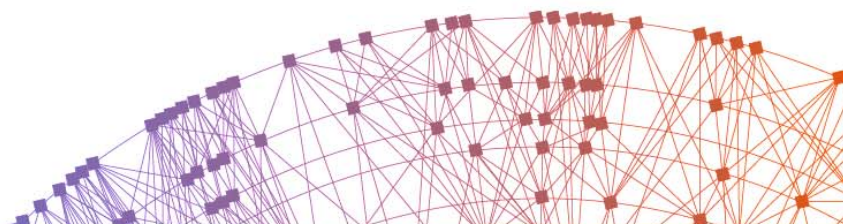
What do you think of GridCafé? Win a laptop case. [Click here!](#)

Grid computing in 30"

Grid computing is a service for sharing computer power and data storage capacity over the Internet.

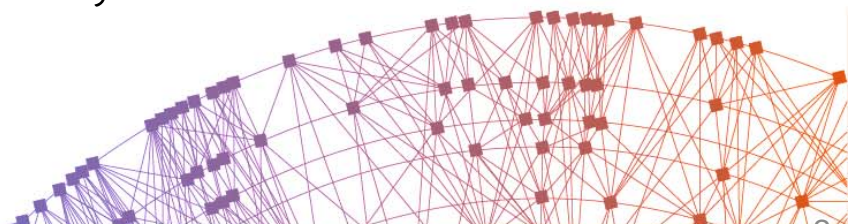
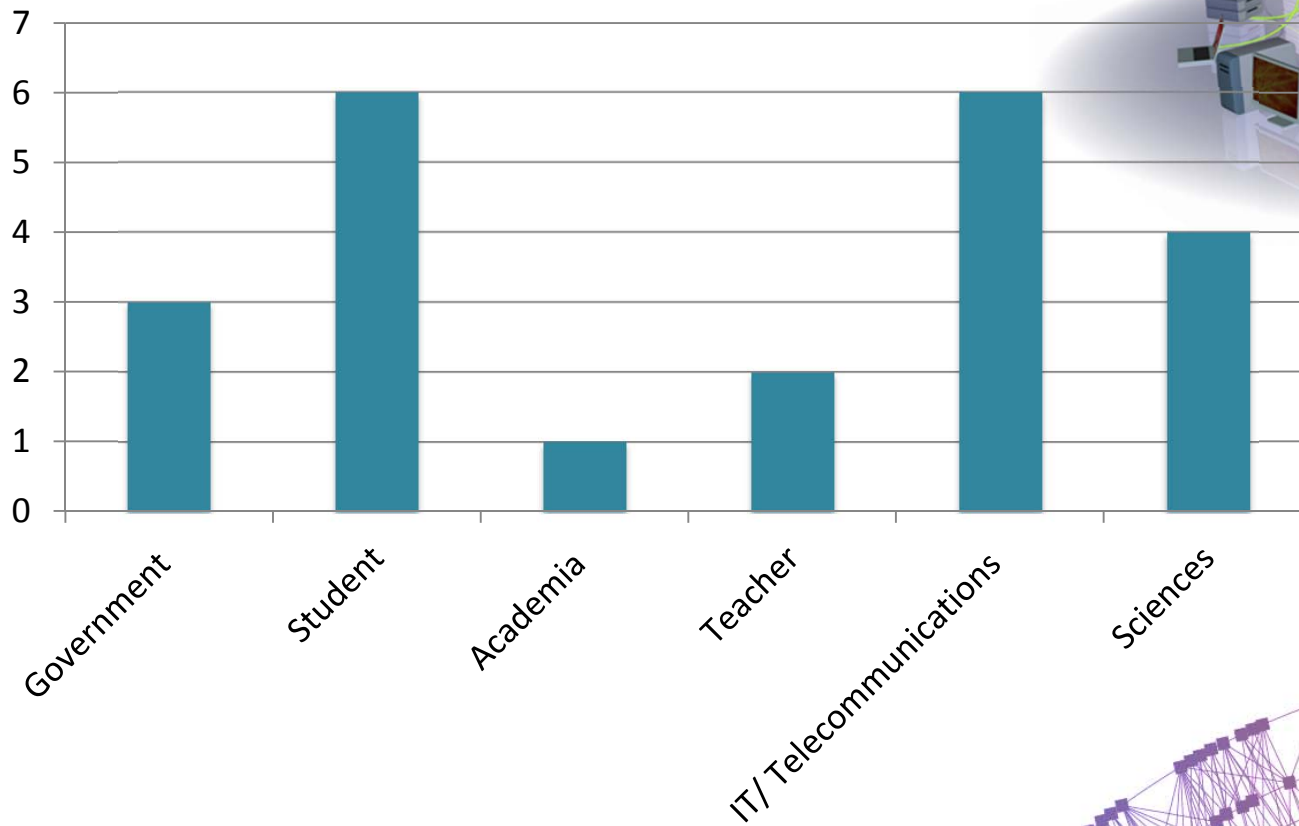
How is **grid computing** different from the **World Wide Web**? Simple. Grid computing uses the Internet to help us share computer power, while the Web uses the Internet to help us share information.

Grid computing is making big contributions to scientific research, helping scientists around the world to analyze and store massive amounts of data.



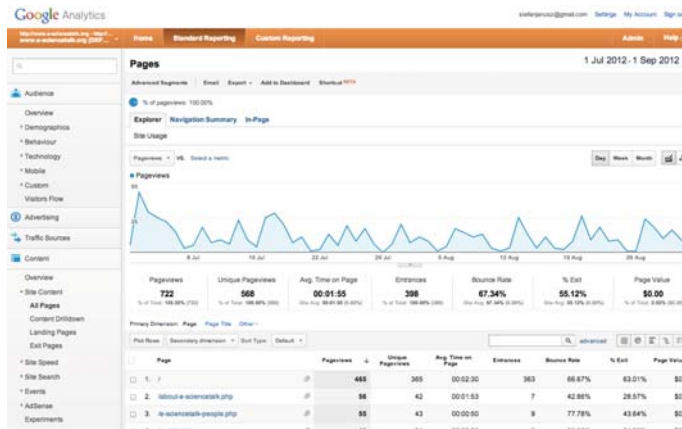
# Feedback Tools

*Reach: Diversity of GridCast audience*

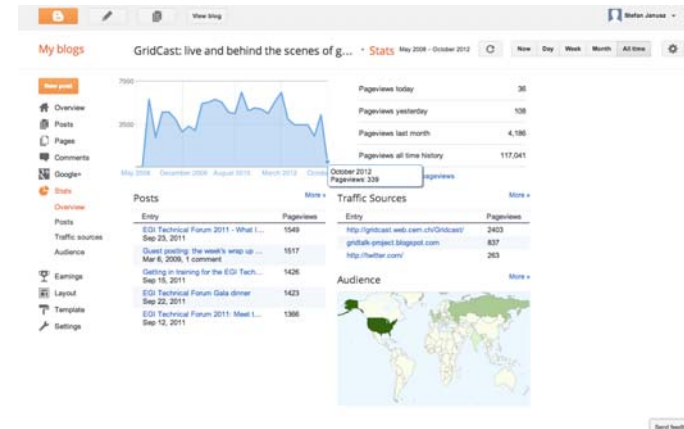




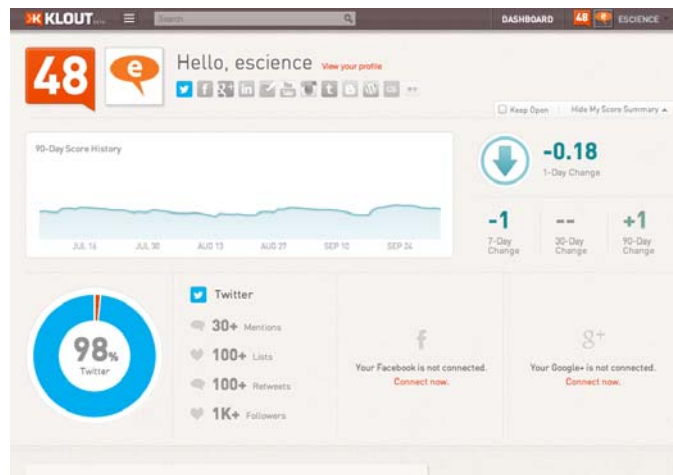
## Tools



Google Analytics



Blogger Stats



Klout





## *Sustainability*



Pass impact back on to stakeholders:

- Star Bloggers, top articles
- Creates a self-perpetuating cycle of information sharing
- Makes the channel sustainable



## *Paper at eChallenges* e-ScienceTalk: Measuring the impact of online outreach for e-infrastructures

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**Abstract:** Over the last decade, the European Commission and governments have invested substantial funds in distributed computing infrastructures. e-ScienceTalk disseminates the success stories and impact of these e-infrastructures. Stories come from the flagship pan-European projects but also from a host of smaller and emerging projects. For e-ScienceTalk's first year, outputs and outcomes were recorded through a range of methods, including tracking output metrics and by monitoring online traffic. This information collectively provided evidence of the project's wide global reach. Generally, most of e-ScienceTalk's target metrics for the first 12 months have been met or exceeded. For the future, metrics will be added to measure impact and track website usage in a more representative way. Evaluation

## *Training sessions*

Monday 22<sup>nd</sup> October

Time	Title/Topic
9:00 - 17:00	Data Training Sessions (Big Data and Making the Most of EUDAT's technologies)
9:00 - 16:30	Communications training with e-ScienceTalk
9:00 - 17:30	European Coordination Workshop: Accessing and Preserving Scientific Information



### EUDAT 1st Conference

Place: Barcelona, Spain

Date: 22 October 2012 - 24 October 2012

The 1st EUDAT Conference will take place from 22-24 October 2012 in Barcelona, Spain.

This international event will bring together data infrastructure providers and practitioners from across the globe to discuss current data infrastructure challenges and solutions, with a focus on interoperability, cross-disciplinarity and cross-border collaboration.

Plenary and parallel sessions will be organized on 23 and 24 October around the following topics:

- Cross-Disciplinarity and Open Science
- Global Collaboration on Data Infrastructure

Draft Programme
Important Dates
Training sessions
Venue
Registration & Accommodation
Call for Posters



- EGI Technical Forum 2012, Prague
- eChallenges 2012 – paper presented
- 10<sup>th</sup> eConcertation, Brussels
- International Symposium on Grid and Cloud 2013, Taipei
- EGI Community Forum 2013, Manchester
- Cloudscape V, Brussels
- E-IRG meeting, Dublin, & Amsterdam





- EUDAT 1<sup>st</sup> Conference, Barcelona
- Training at ILL, Grenoble
- CRISP 2<sup>nd</sup> Meeting, PSI Villagen

## 1. Overview of techniques for measuring impact



Facebook Analytics  
Get past the hype and look at the data.

Webtrends  
Social Measur

© e-ScienceTalk Consortium

## e-ScienceTalk objective

e-ScienceTalk provides a **service** to e-infrastructure projects offering a wide variety of communication channels so the results can be **disseminated far more widely** to broader range of audiences and regions.



www.gridcafe.org

GridGuide  
www.gridguide.org

YouTube  
gridtalkproject

www.isgtw.org

www.gridcast.org

http://www.e-sciencecity.org/briefings.php

http://rtm.hep.ph.ic.ac.uk/

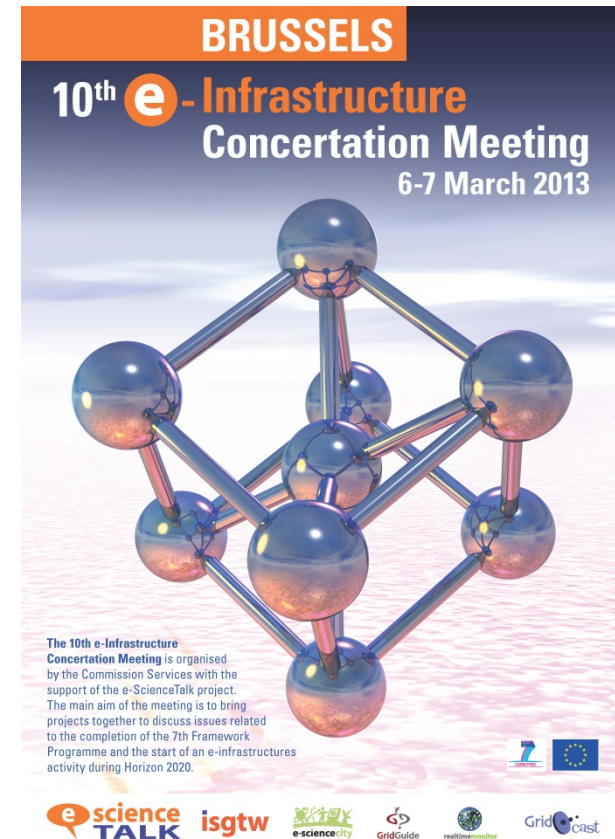
www.esciencecity.org

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## 10<sup>th</sup> e-Concertation, 6-7 March, Brussels

- 130 attendees, representing 80 projects
- Gridcast: 212 visits
- E-ScienceTalk: 51 visits
- Spotlight in iSGTW: 5 likes, 201 page views
- FP7 Success Stories competition
- 15 entries in 3 categories
- Success stories featured in iSGTW e.g. lead feature 11 September 2013



# WP1 Issues

- Reaching target audience with Briefings
  - ✓ Attend events where high level policy makers are in attendance
- Transient nature of web tools: Klout score change, Twitter API changes
  - ✓ Collect feedback and export data regularly
- Staffing issues
  - ✓ Balancing effort needed in WP3



- WP1 has expanded distribution of the Briefings to regions outside of Europe, with pick-ups from twitter, v.gd also important
- Feedback gathering and impact assessment has been integral to all e-ScienceTalk products
- Social media and online tools used for data gathering
- Event attendance, media impact – GridCast has large reach and viewed as significant to event success
- E-Concertation Meetings raised e-ScienceTalk and e-Infrastructures' profile with the media

