# Measuring the impact of communication

*e-ScienceTalk*
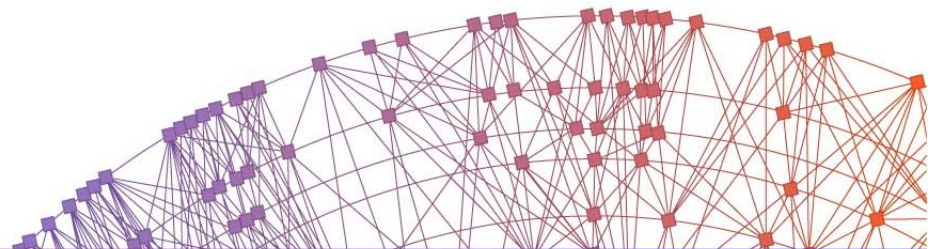
Zara Qadir

e-ScienceTalk, Dissemination Officer

**www.e-sciencetalk.eu**

# Agenda

- Overview of techniques for measuring impact
- Focus groups as a qualitative research method
- Practical suggestions on moderating a focus group
- Identifying stakeholder needs and developing central questions
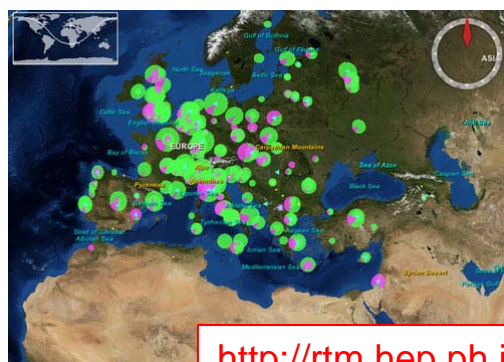- Online survey tools
- Analysing and reporting your results

# e-ScienceTalk objective



www.gridcafe.org



www.gridguide.org

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.
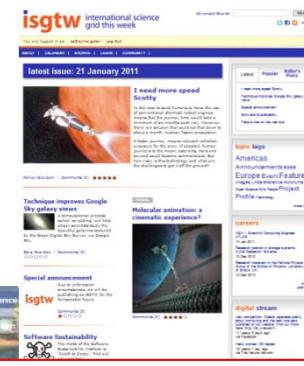


gridtalkproject



www.gridcast.org



www.isgtw.org



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



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



www.esciencecity.org

# So why measure impact?

| 1. Funders | 2. Internal | 3. Users |

- ✓ maximise impact of activities and investments
- ✓ identify drivers of success
- ✓ feedback into sustainability plan
- ✓ attract more funding
- ✓ assess achievement of project aims
- ✓ monitor quality of existing outputs
- ✓ discover any intended/unexpected benefits
- ✓ provide feedback/impact indicators for our partners
- ✓ improve the products
- ✓ assess tools and provide recommendations
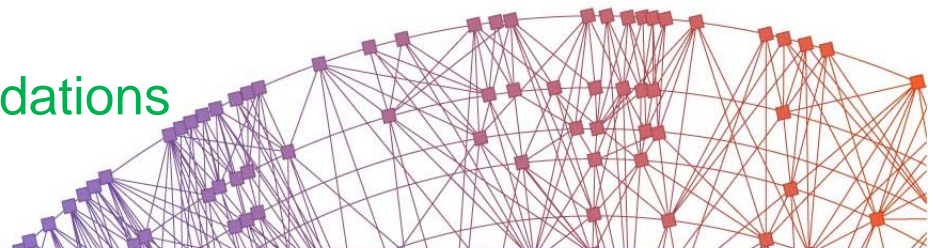
# So what are the challenges?

- Economic, science, policy level & social impact
- Qualitative vs. Quantitative
- Wide variety of communication channels: websites, blogs, social media sites, weekly publication, events, conference, materials
- Diverse number of audiences = difficult to capture
- Transient nature of web tools e.g. Twitter API changes
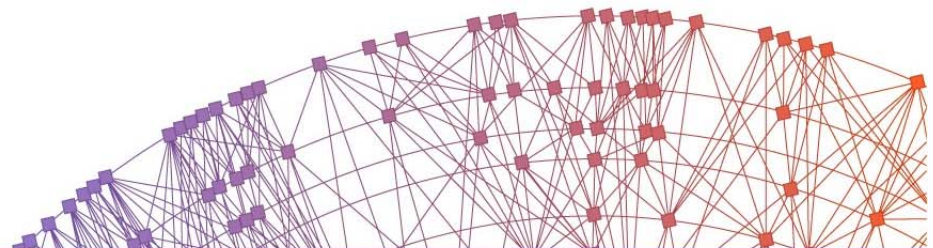- Relatively small community aware of e-science
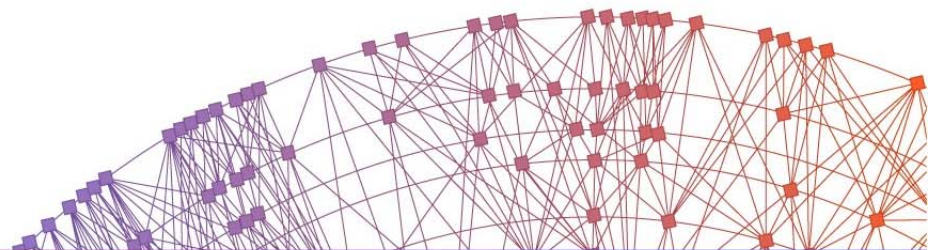
# Five simple questions

1. What is the project's purpose?
2. What do you want to do?
3. What are you/users going to gain from it?
4. How do you know you got it right?
5. What else is it going to do?
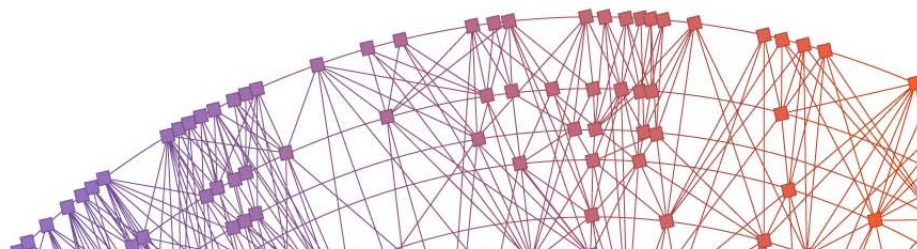
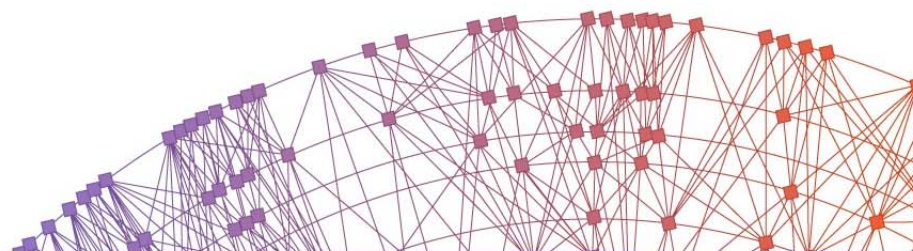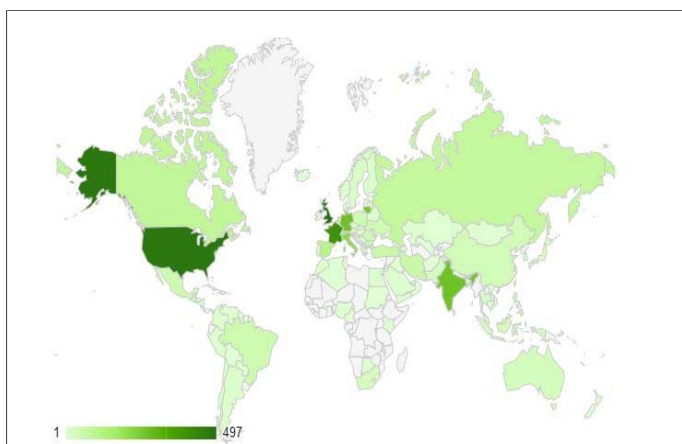# 1. Overview of techniques for measuring impact

# Defining impact

## IMPACT=REACH+SIGNIFICANCE



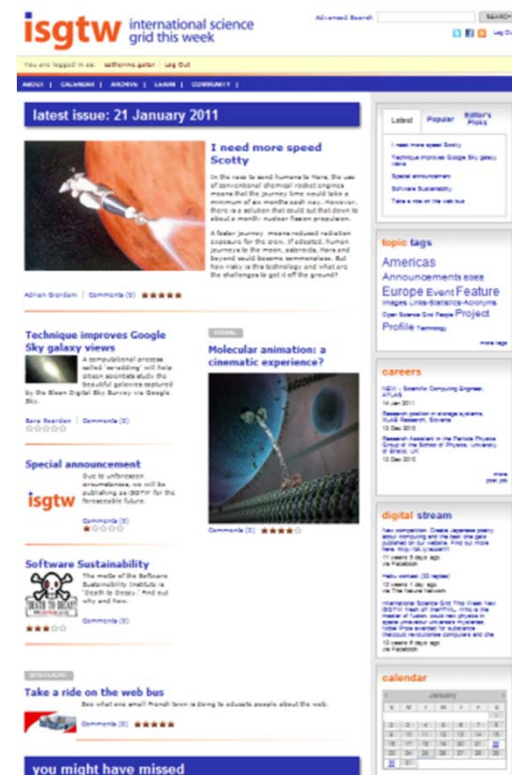"…read an article in iSGTW, and had a new idea for research"

# Three minute brainstorm

NEWSLETTER:

- What are the important metrics (reach) that a newsletter should be measuring?
- What does impact look like (significance)?
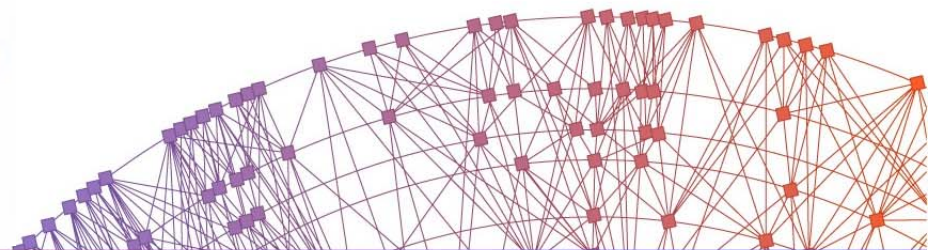- What tools might you use to capture them?
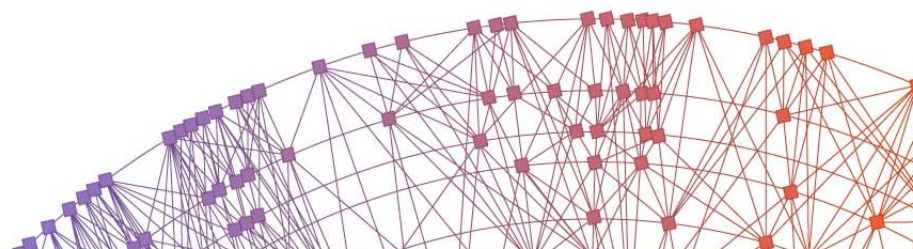
# Your toolkit includes…

## Quantitative (Reach)

- Deliverables/Milestones
- Production
- Online surveys
- Twitter tools
- Google analytics
- Social engagement
- Webometrics
- Facebook analytics
- Counting
- Usability testing
- Online Klout Scores

## Qualitative (Significance)

- Interviews (e-interviews/face to face)
- Focus groups
- Feedback from unsolicited emails
- Solicited emails
- Online surveys
- Recording people's impressions
- Thank you letters/compliments
- Ethnographic-observations

# Monitor throughout

**Review**

Revise/
Improve
Measure
outcomes

**Plan**

Formative
Evaluation
Measurement Plan

**IMPACT
CYCLE**

**Assess
(Metrics)**

Outputs
Quality

**Do**

Continually
Monitor
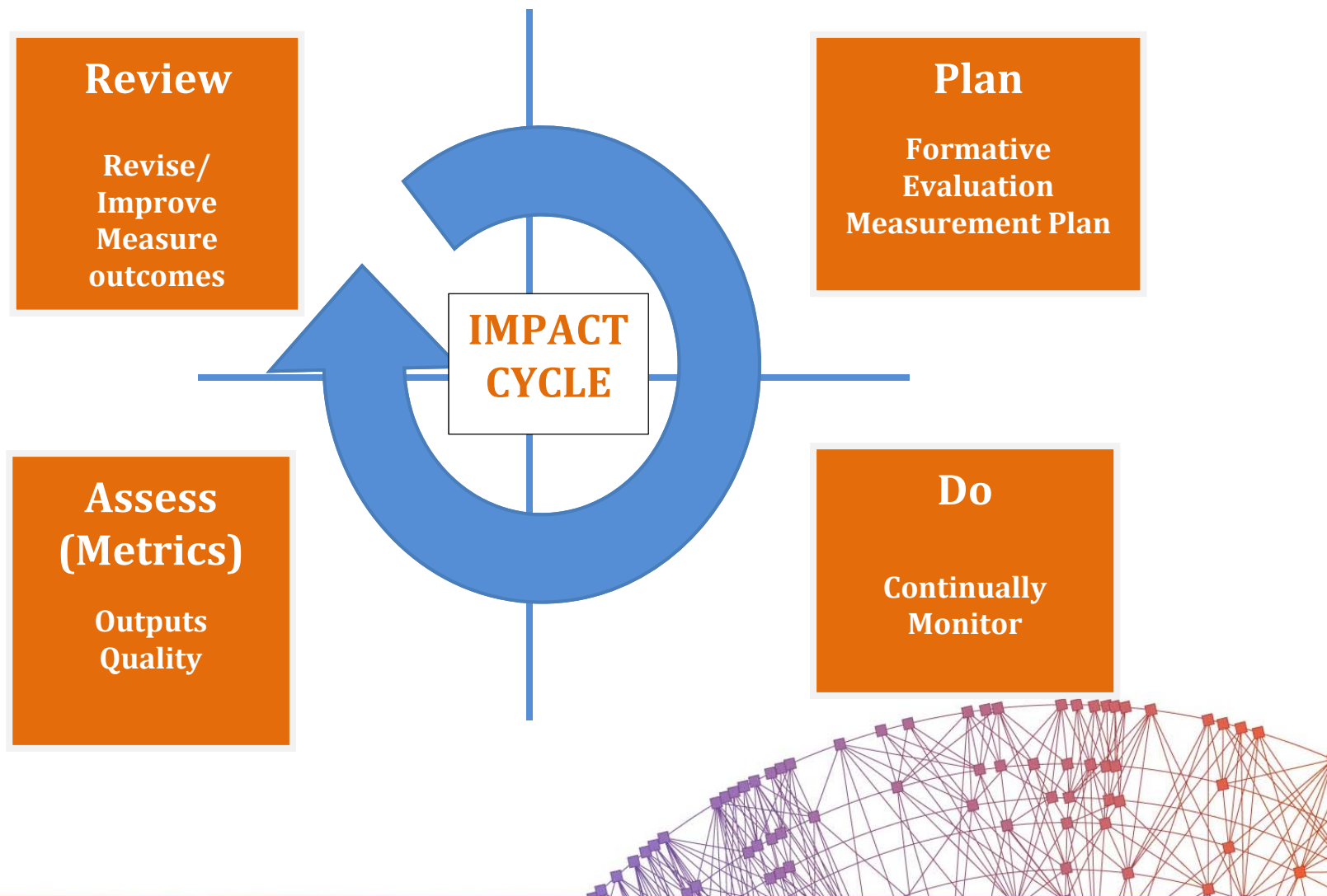
# Measurement Plan
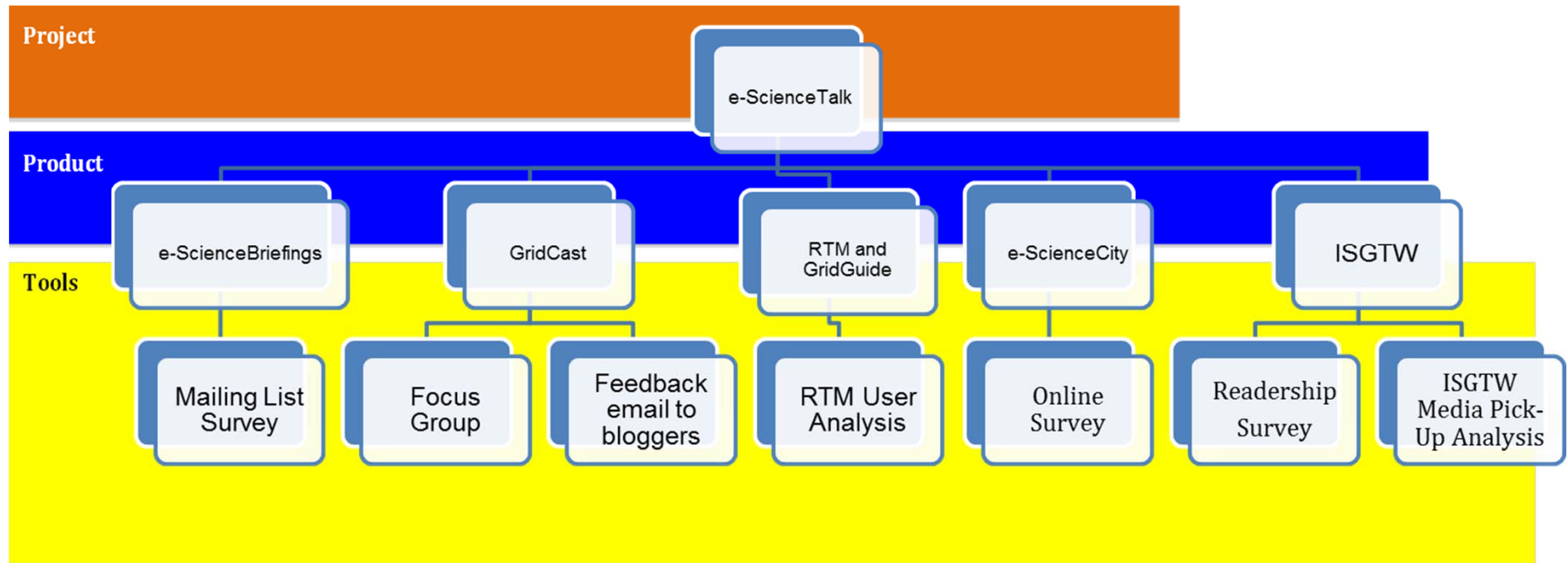


A. Brainstorm impact goals/questions
B. Match goals to tools

# A. Brainstorm Impacts

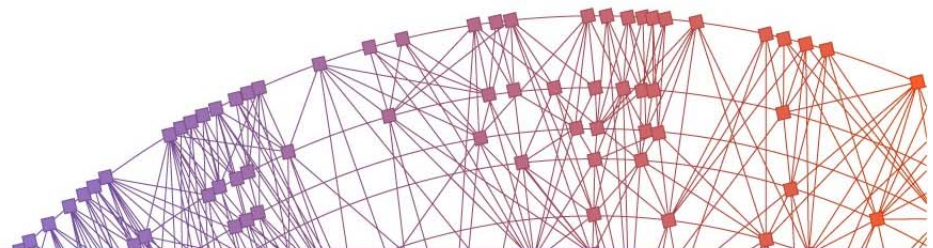Scientists will be informed of the latest technologies in e-science

Provide assistance to the community in finding future partners /collaboration

iSGTW newsletter Impacts

Journalists from mainstream media will have established relationships with those within e-science through iSGTW
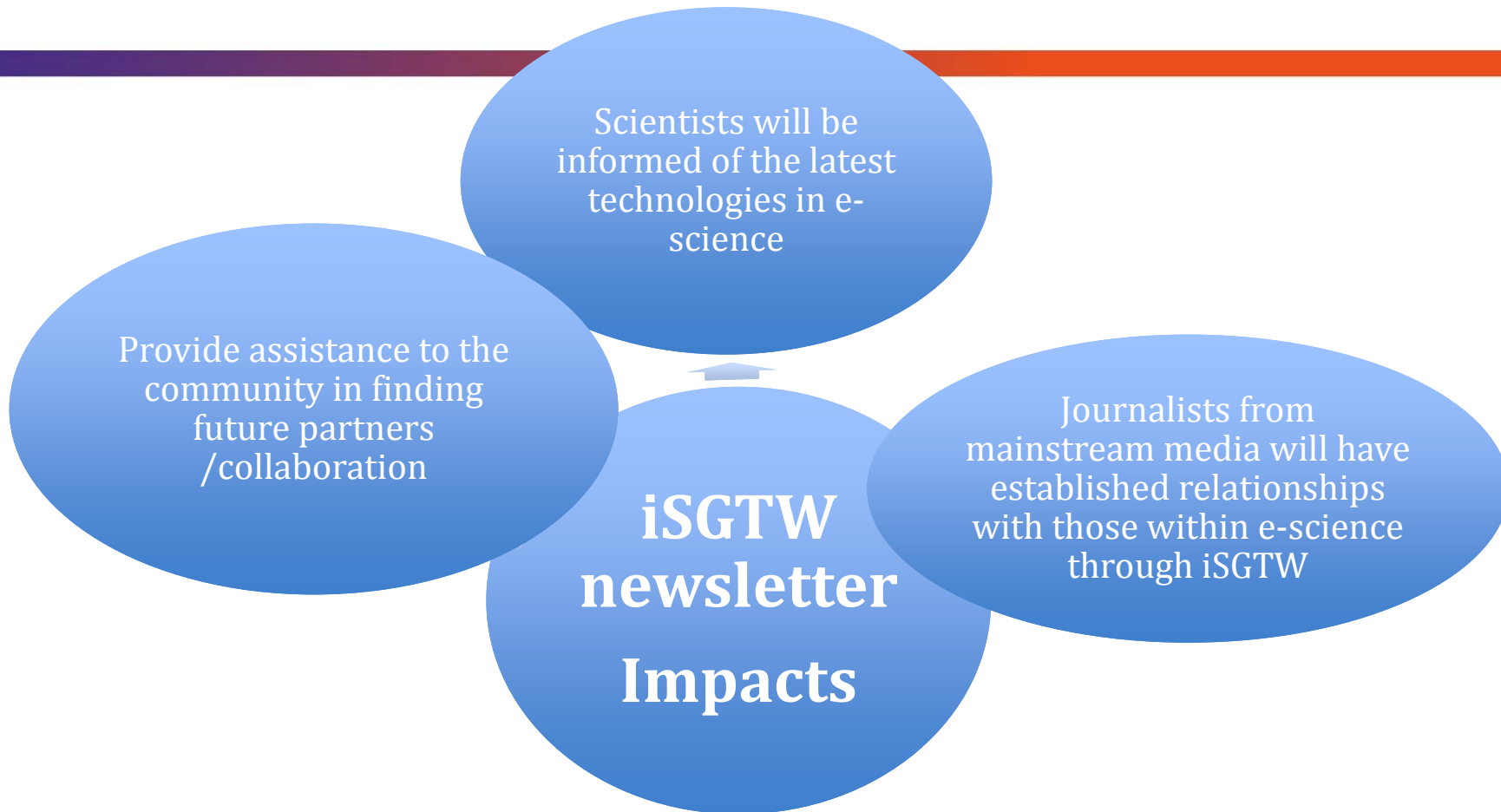
# B. Match goals to tools

**Reach**

How many people are receiving?

*Quantitative*
Subscribers, visitors

**Significance**

How many people are engaging with content?

*Quantitative*
Sharing, and interactions
Followers, Media Pick ups

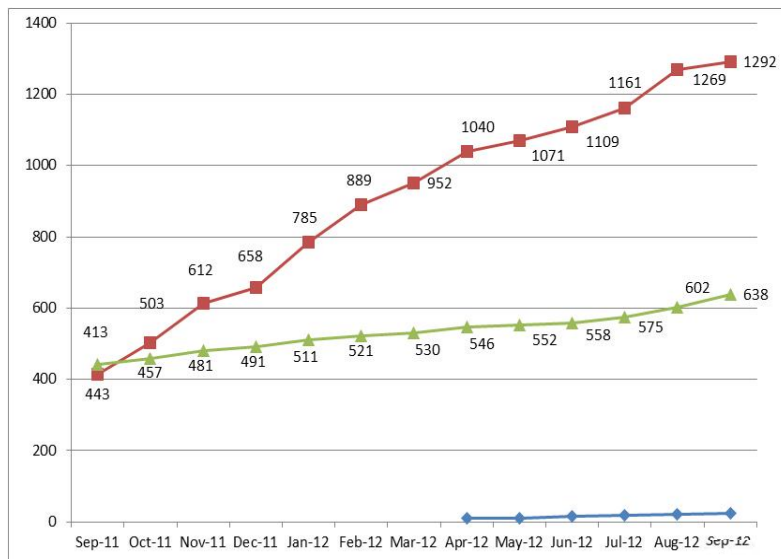How is the magazine influencing its audiences?

*Qualitative*
*Interviews*
*Open-ended survey questions*

# iSGTW reach

Number of subscribers (8,250)

Tool: Newsletter stats

Monthly newsletter subscriptions
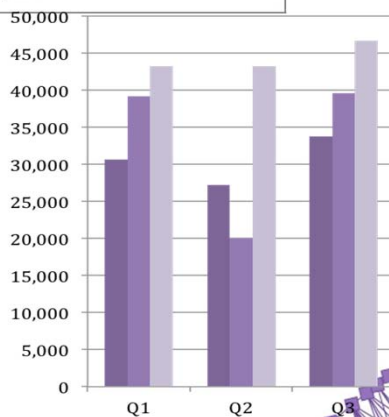
Number of followers (i.e. 645 Facebook + 1,306 Twitter + ~900 RSS)

Tool: Nutshell, Facebook

Page views/unique visitors

Tool: Google Analytics

2009/2010 Unique visitors to the website
2010/2011 Unique visitors to the website
2011/2012 Unique visitors to the website

www.isgtw.org

# iSGTW significance

*Is iSGTW influencing mainstream media? Are people reusing iSGTW content?*

Google alerts, googling iSGTW titles, readership survey, webometrics

– Media pick-ups from HPC Wire, Cosmos Magazine, Wired and Symmetry.

– 11% of readership are mainstream media

*Are people outside the community reading the magazine?*

*Is iSGTW helping researchers with their work?*

Readership survey, focus groups, interviews

– 81% discussed or forwarded an article and 21% cited/linked an iSGTW article

– Provides assistance to the community in finding future partners /collaboration/helping with new idea
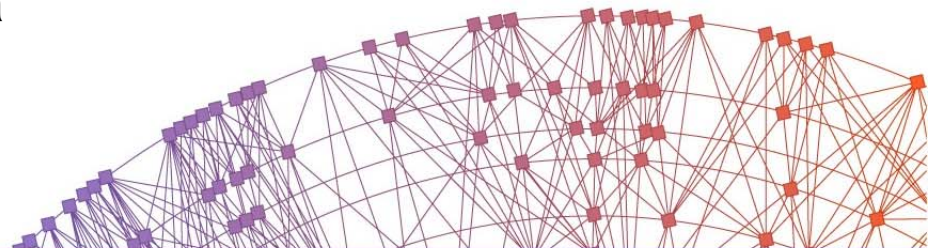
# 2. Focus groups as a qualitative research method

# Planning a focus group

- Practical suggestions on moderating a focus group
  - ❑ Why are they useful?
  - ❑ Pros and cons
  - ❑ Steps involved
  - ❑ A few practical suggestions
  - ❑ Qualifications of a good moderator
  - ❑ Sampling and recruitment
  - ❑ Focused activity
  - ❑ Data collection and analysis

- Identifying stakeholder needs and developing central questions
  - ❑ Workshop

# So why are they useful?
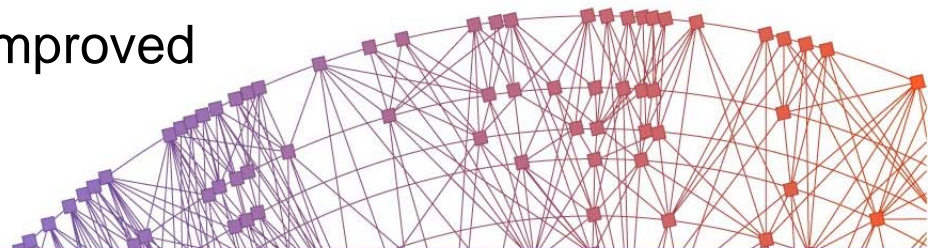
**At the start (formative):**

- expectations and aims of being involved in the project
- potential impact of the project on individual stakeholders
- needs analysis/user requirements

**During:**

- the project process
- feedback on the project

**After (summative):**

- what worked well and what didn't work
- how the project could have been improved

# Pros and cons

## Benefits

- Group dynamic
- Snowballing
- Excitement
- Security-feel more confortable than speaking alone
- Serendipity
- Speed/Immediacy

## Limitations

- Difficult to moderate
- Difficult to code, analyse and interpret
- Not representative
- Individual perspectives are not easy to distinguish
- Sensitive vs. controversial issues-data is not fully anonymous
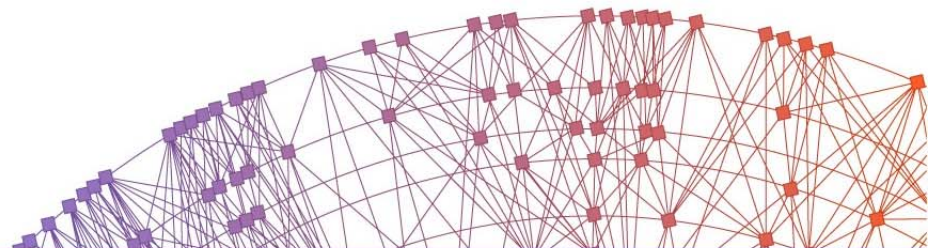
# Steps involved

1. Define objectives- <span style="color:red">Has to have a focus!</span>
2. Develop a moderator outline- Questions, activity
3. Sampling and recruitment
4. Conduct the focus group
5. Review tapes and analyse data
6. Summarise findings and plan follow-up research
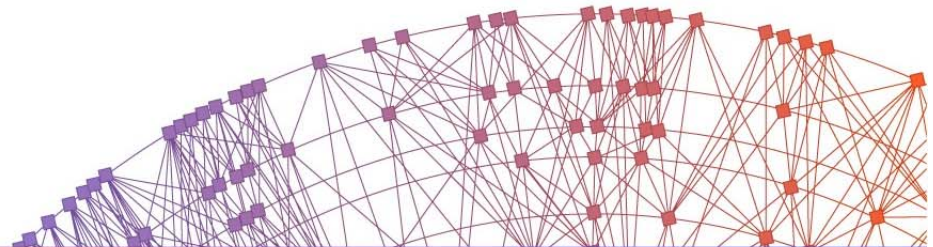
# Sampling and recruitment

- Direct vs. indirect recruitment
- Small vs. big groups
- Representative vs. structured sampling
   -group size and number of groups
- Recruit eight for six attendees
- Pre-existing groups
   - user communities, stakeholders, scientists
- Informed consent
   - Ethics, data protection
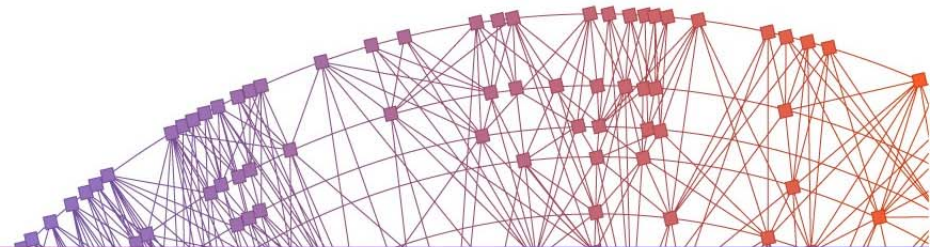
# a few practical suggestions

- Plan ahead:
    - How long? Ideally 1-2 hours
    - How many? 3-12 people
    - Focussed activity
- Attend, observe, moderate with observer, moderate
- Incentives, support for travel and subsistence
- Location-'private', comfortable, relaxed
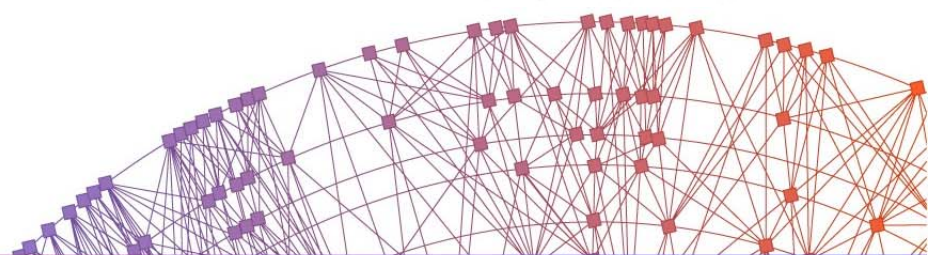
# Qualifications of a moderator

- Detached but approachable
- Be flexible with pacing the activities
- Alert to signs that the group is disintegrating and know when to intervene
- Good motivator
  - Stimulate interaction and establish rapport
  - Encourage respondents to be more specific about generalised comments
  - Encourage unresponsive respondents to participate
  - Dominant/passive voices
- Leave the room!
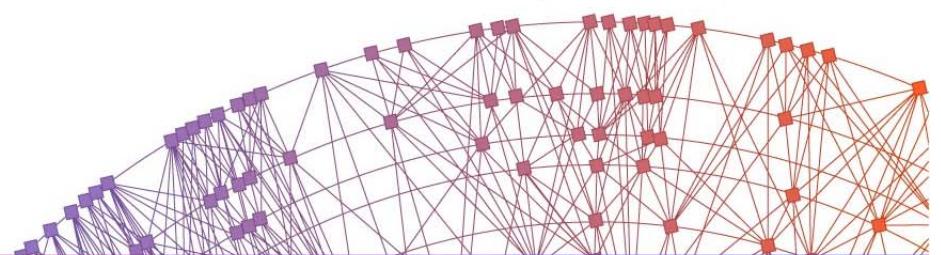
# Focussed activity…

Possible activities include:

- Write down 3 to 4 strengths and weaknesses about the project/topic and then to rank these in order of priority
- Arrange aims/impacts of a project in order of importance
- Write down one word or phrase that describes the issue being discussed
- Using pictures (magazine clippings, photos, drawings) and games
- Something fun!
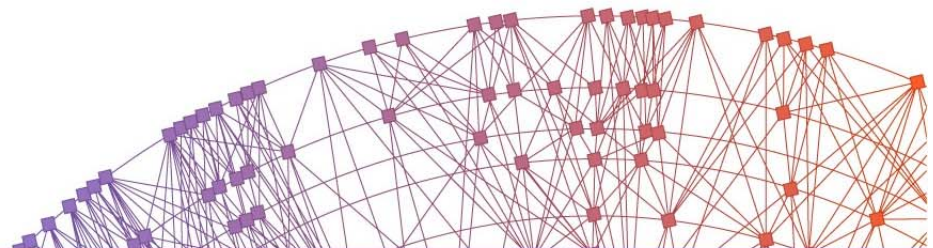
# Data collection and analysis

- Equipment- Tables, circle, pens, recording equipment x 2
- Try and record all information including facial and body expressions
- Write up your initial thoughts immediately after the focus group
  - permanent record/audit trial
  - audio file
- small data sets
  - sentiment analysis
- open coding
  - disagreements, arguments, commonality
- large data sets
  - spreadsheets (e.g. CAQDAS)
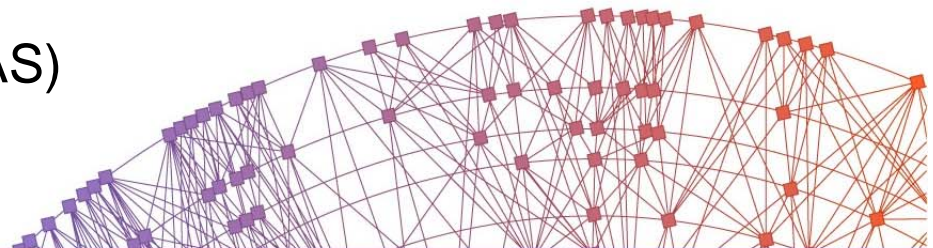
# Identifying & Involving Stakeholders

- Look back at your communication plan.
- Identify what is most essential for your audience, their needs, and any organisational priorities.
  - steering or advisory committees
  - working groups
  - surveys
  - newsletters
  - personal meetings
  - social media
  - authors feedback
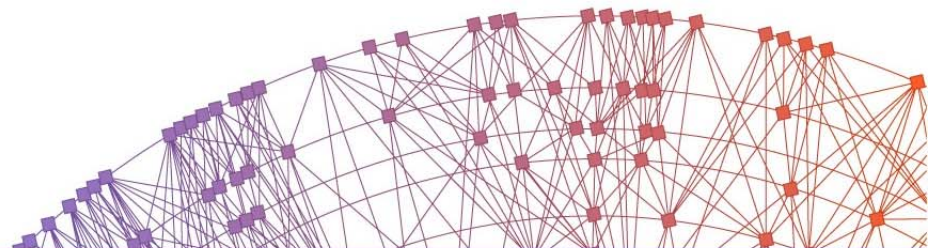
# PRACTICAL

- Your task is to think about how you would you organise a focus to evaluate a communication tool (e.g. newsletter, blog, video, podcast, website).

- Groups of 2-3 (20 minutes)
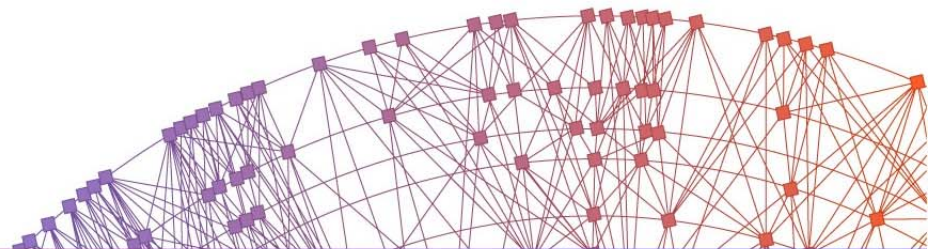
# Newsletter

- Why did you decide to subscribe to the newsletter?

- Which sections do you find most interesting?

- How do you spot an interesting article (i.e. is it the title, a photo etc.)?

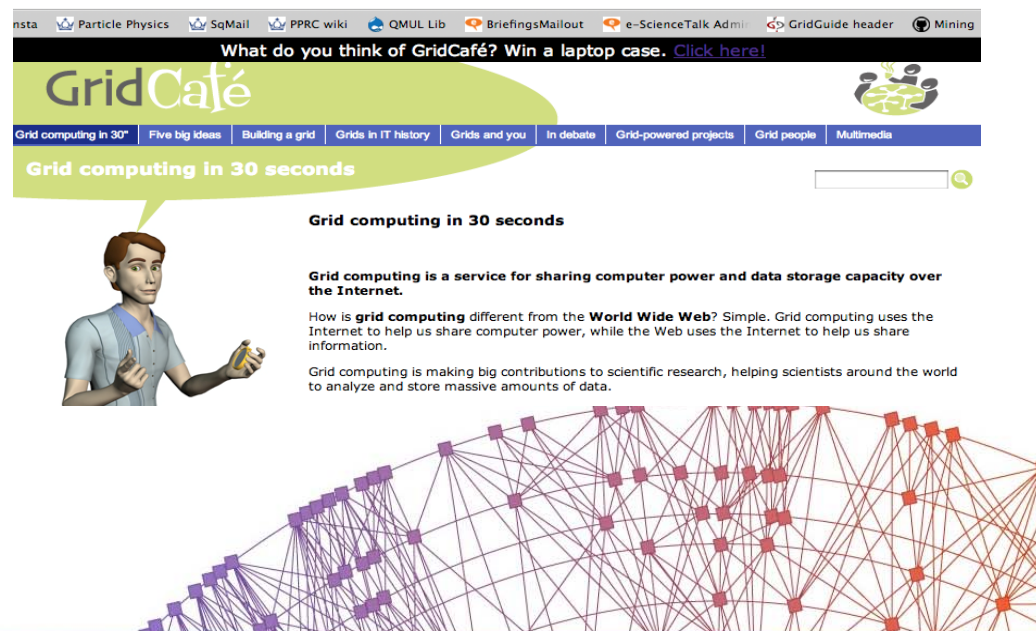- Can you recall any stories that particularly grabbed your attention?
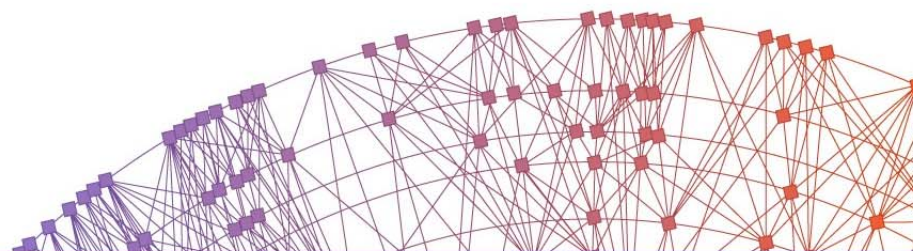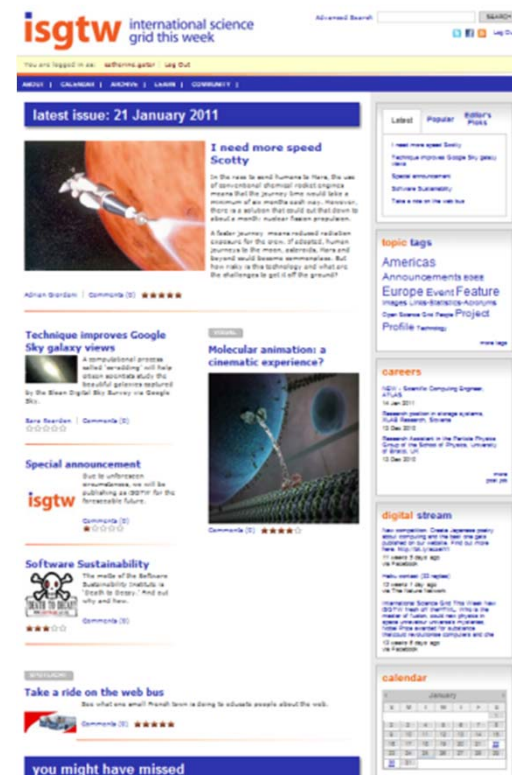
# 3. Online Surveys
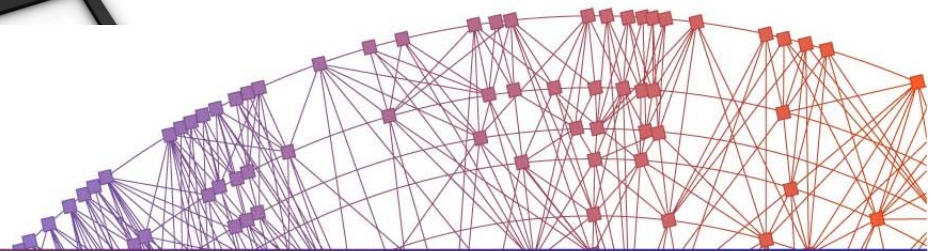
# We've used…

- **Google Forms:** Best part? It's free. Discrete banner after 30 seconds-Google docs

- **Zoomerang**- data analysis is easy, import files

- For more sophisticated analysis for professional research (**Surveyz**)

- Match technology with end users

# Sometimes not appropriate

Question: How do briefings help policy makers, European science projects, government and business?

- Online survey mailing list
- Informal chat at conference
- Personal emails

# Developing your questions

- It's definitely an art form! 6-10 questions.
- Try to begin the survey with interesting questions
- Locate personal or confidential questions at the end of the questionnaire
- Be brief and concise; use lots of white space
- Try a reminder mailing/emailing after the natural response (three)
- Pilot -5-6 people
- Always incentivise
- Ask one question: avoid double-barrelled questions
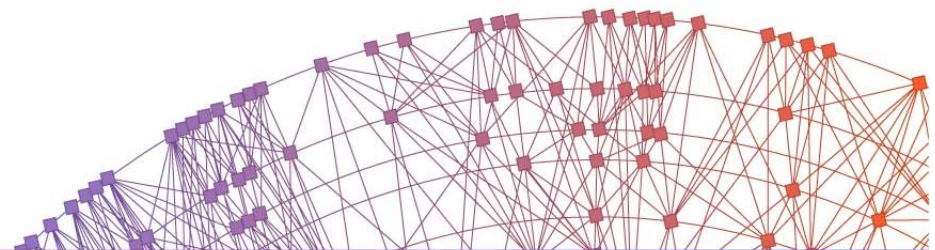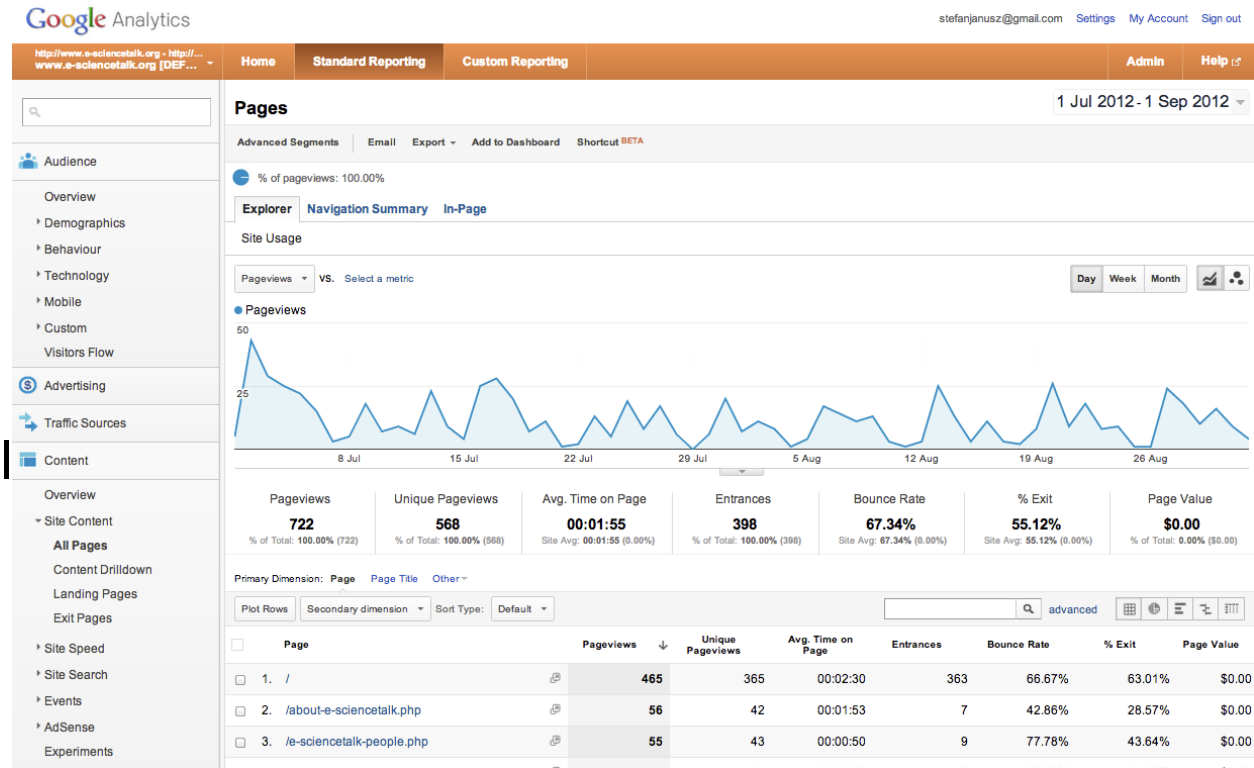- Be precise about what's being measured
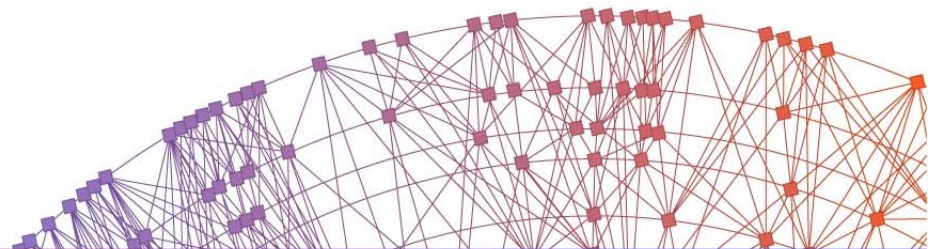
# Network analysis

- The **active audience for online media:**
- – Influenced: listen, alter views
- – Share & Repeat: bookmark, retweet, mention
- – Respond: blog, take action offline
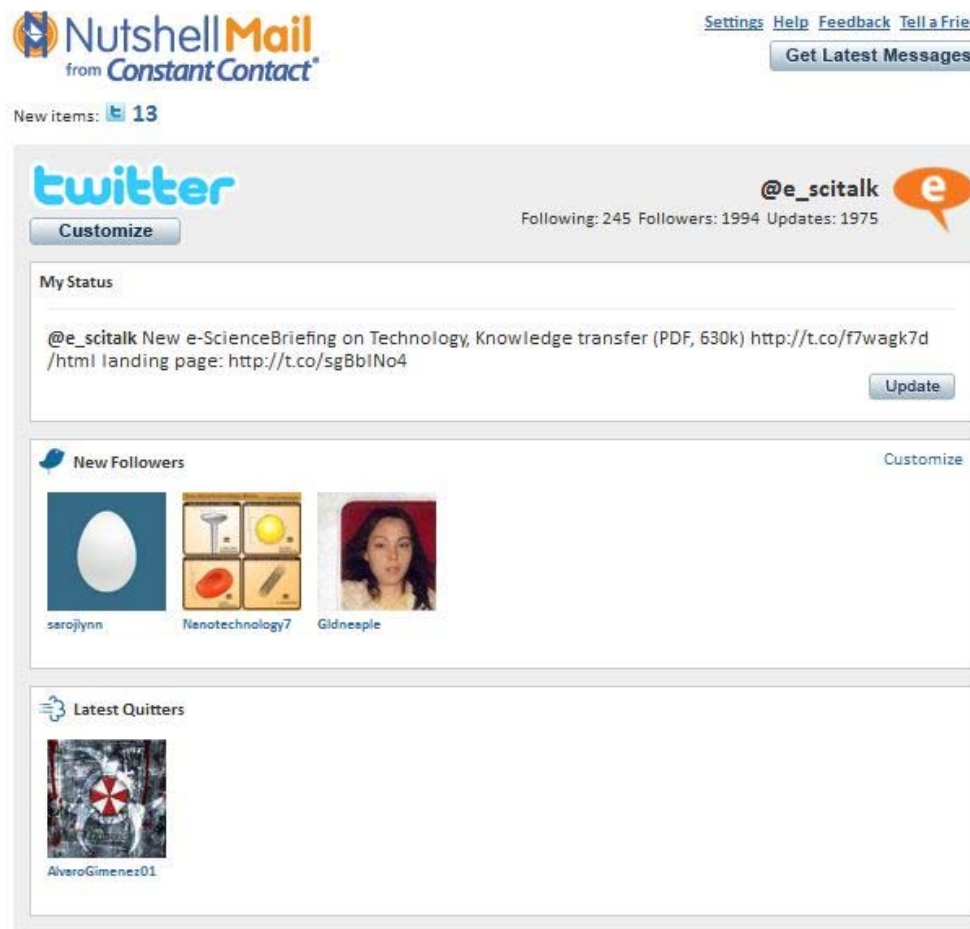- – Reuse and extend: remix, pick ups

# Google Analytics
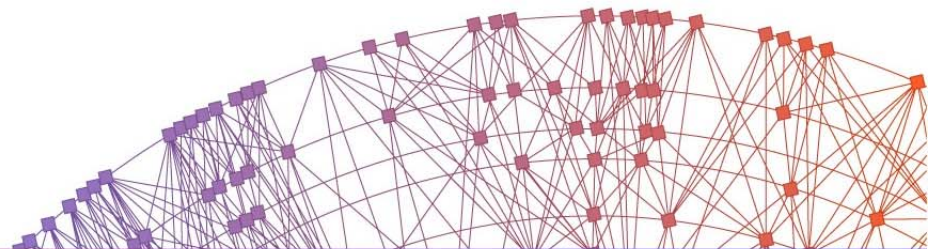
- Visitor duration
- Social Engagement
  - Conversations
  - Events
- Set goals
- Set up alerts
- Referrals from social media

# Nutshell

- New followers
- Quitters
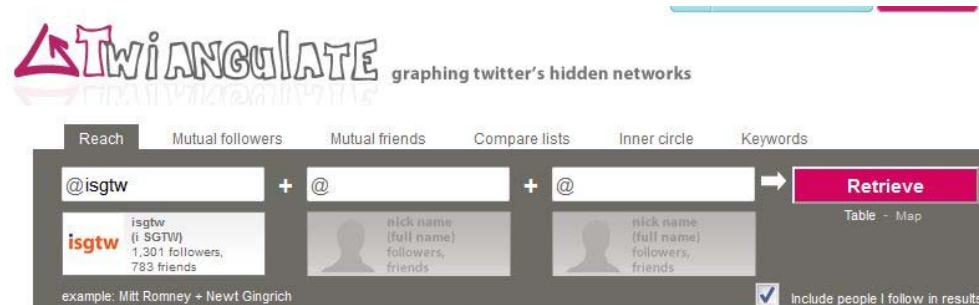- Daily alerts and record of twitter followers

# Klout

- Measure of influence
- Can be used as a comparison

# Twiangulate
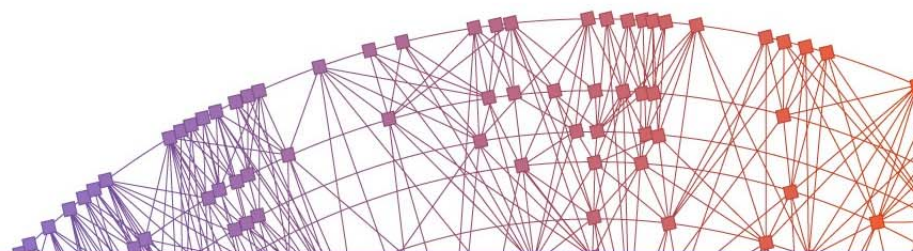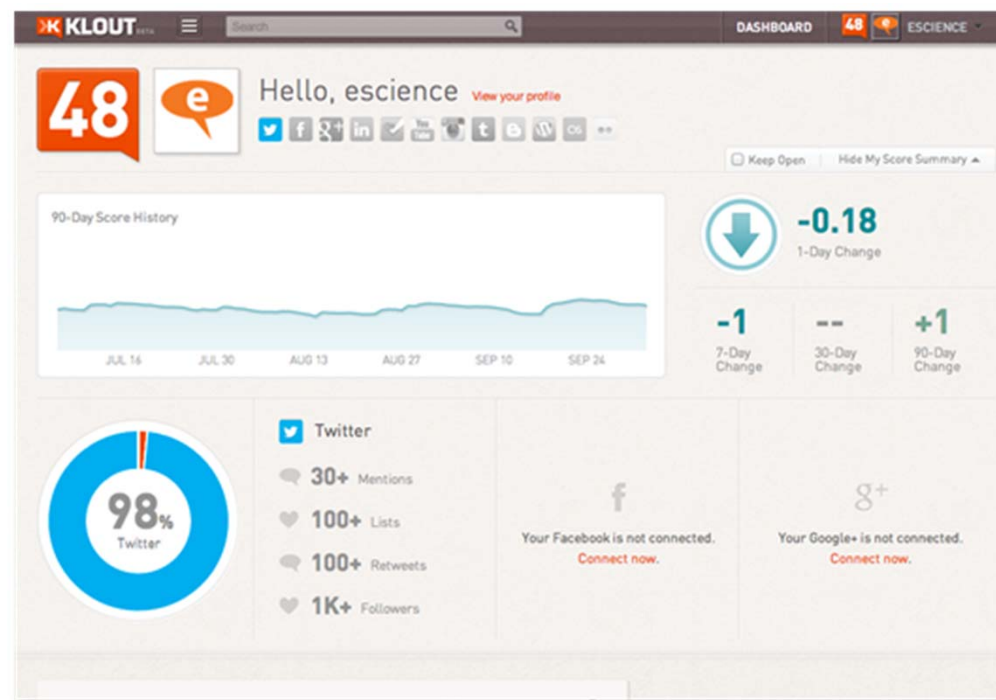
- Compare followers
- See your biggest followers and their connections

# Other tools

- Hootsuite
- IFTTT
- Tweetreach
- Socialmention
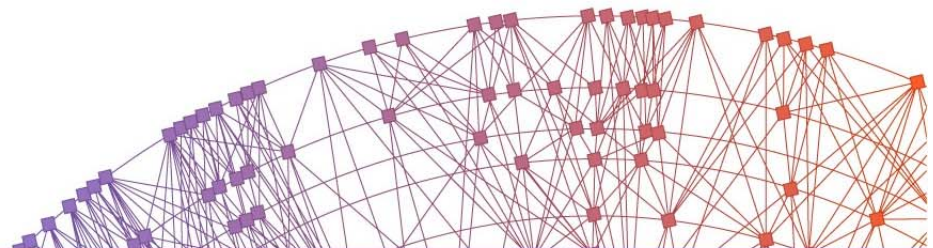
# 4. Reporting your results



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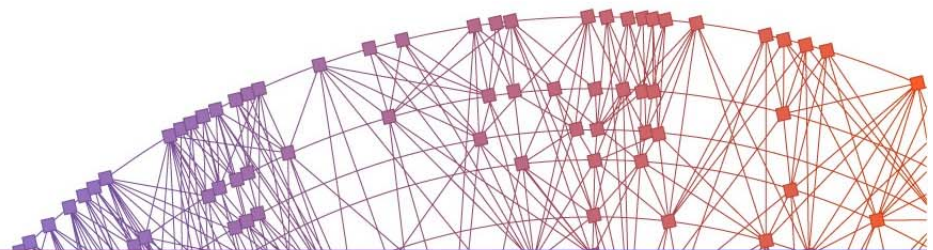
# Who is your audience?

| 1. Funders | 2. Internal | 3. Users |
|------------|-------------|----------|

- ✓ maximise impact of activities and investments
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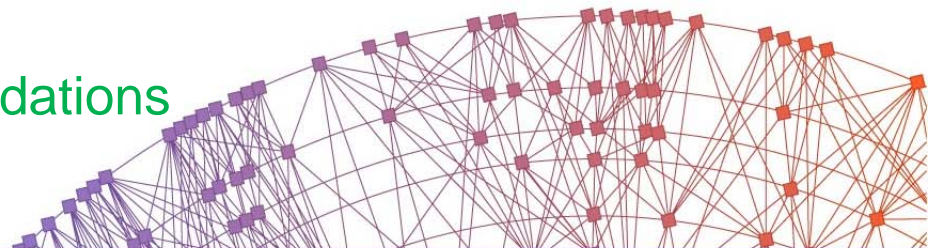
# Reporting your results

- Be aware of any biases
- Disseminate good and bad (internally)
- Use to spread the word about your program's outcomes in other ways. Use your impact data when you:
  - design press releases
  - create member recruitment fliers
  - develop community outreach materials
  - write newsletter articles
  - provide recommendations
  - posters, info graphics
  - training slides
  - infographics



e-ScienceTalk.org

## e-Science reporting for Europe

e-ScienceTalk brings the success stories of Europe's e-infrastructure to a wider audience. The project enhances the value of research infrastructures by reporting their results in print and online.

### e-ScienceTalk

e-ScienceTalk is co-funded by the European Commission and is a collaboration between the European Grid Infrastructure, Queen Mary University of London, Imperial College London, CERN, and design firm APO.

e-ScienceTalk runs five websites and has more than 2,500 followers on various social media channels. With a varied skill set, the small team can provide a host of services, from creating video and design consultation to feature writing and promotion of events.

*Talking about e-science*

# General measurement tips…

- Structure project around measurable goals
- Brainstorm and refine your impact goals regularly
- Match your tools to the questions and audience
- Face-to-face can work better
- Make sure you know what statistics you will get from each tool
- Take advantage of all opportunities to gather feedback (e.g. competitions)
- If one methodology doesn't work, try another.
- Always incentivise (even if it's just providing reciprocal feedback).
- No magic formula use triangulation approach
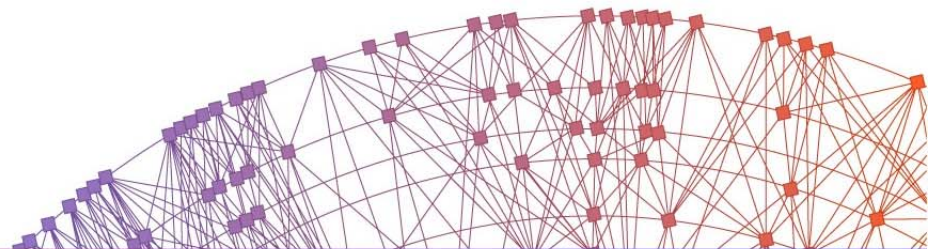
# e-ScienceTalk: Measuring the impact of online outreach for e-infrastructures

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Tel: +31 6 30372738, Email: Catherine.Gater@egi.eu
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Tel: +44 (0)207 882 3763, Fax: +44(0) +44(0)20 7882 7033, Email: z.qadir@qmul.ac.uk

**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

https://documents.egi.eu/public/ShowDocument?docid=1253
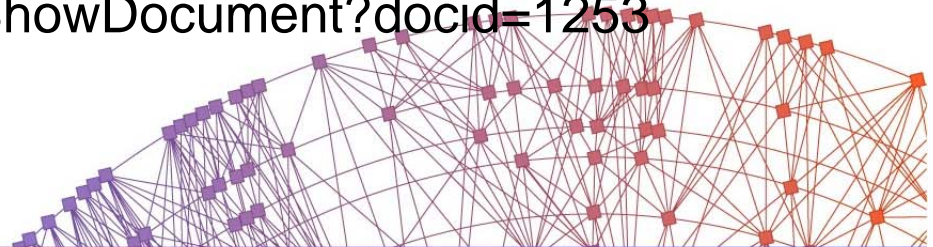
# Follow us live

- Blogging live at www.gridcast.org

- Follow us on Twitter at www.twitter.com/e_scitalk.

- Follow iSGTW on Twitter at www.twitter.com/isgtw
  (also on Facebook and Nature Networks Forum)

- Sign up to our e-ScienceBriefings
  info@e-sciencetalk.org.