

Discover the opportunities for using Geographic Information Systems (GIS) in your organisation!

Benefits

- ✓ Enabling tool for decision making
- ✓ Reduce cost savings due to greater efficiency
- ✓ Target your customers better
- ✓ Improve communications (through GIS maps and visualization)

The market for Geo services has been estimated to be worth up to \$270 billion per year^[1]. The high cost of proprietary software can be a limiting factor for many government organisations, SMEs and start-ups. Developments in Open Source, Open Standards and Open Data mean that there are now huge cost savings and big opportunities for organisations exploiting Geospacial software and technologies. Many organisations (government, SMEs, corporations) now use GIS to map, visualise and analyse / interpret geographic data.

[1] http://www.oxera.com/Oxera/media/Oxera/downloads/reports/Wat-k-tie-economio-impact-of-Geo-services_1.pdf

Date: 8th October 2015

Where: A20, Nottingham Geospatial Institute, University of Nottingham

Time: 10am to 4pm (including free lunch)

Eligibility: NO need of previous GIS experience.

Criteria: Bring your laptops.

Booking: Register for the FREE event [here](#) OR email info@grace.ac.uk. For more info, visit www.nottingham.ac.uk/grace/events

Seats are limited so **book your place ASAP** - selected participants will be confirmed by email before 30 August 2015



GIS Info
Workshop

Are you involved in any of these sectors?

Agriculture

Healthcare

Housing

Market Research

Town Planning

Transport

Who should this workshop be for?

Anyone interested in exploring opportunities for using Open geospatial technologies in your organisation

SMEs

Staff in Local Government

Individuals / Organisations thinking of initiating their own start-up

NGI & GRACE

Paul Bhatia

GIS Workshop
8th October 2015

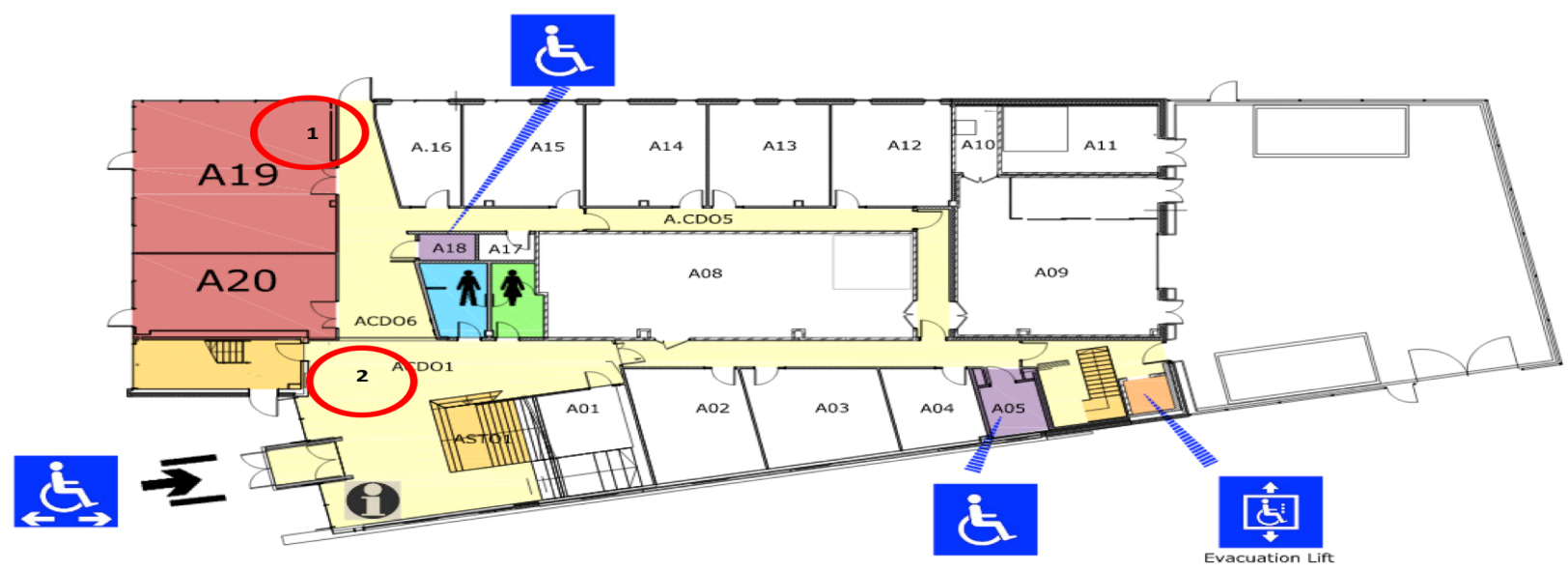
- Don't worry, if you have never used GIS before
- Key aims:
- Give all participants overview of the opportunities in Open Source GIS, open data and open standards
- Provide resources for further learning and development
- Build future collaboration opportunities for joint bids/proposals

- 09:00 -09:30 – Registrations, Tea/Coffee
- 09:30 -10:00 – Welcome and NGI/GRACE Introduction – Paul Bhatia
- 10:00-10:30 – Introduction to GIS – Suchith Anand
- 10:30 -11:30 – Using GIS –Example applications – Simon Roberts
- 11:30- 11:45 – Tea/Coffee Break
- 11:45-12:15 – Opportunities of Open Source, Open Standards, Open Data in GIS – Suchith Anand

- 12:15 – 13:00 - Think Tank based Open Discussions in groups and reporting (A19 and A20)
- Why was “gvSIG” experiment successful in Spain in attracting strong collaboration between SMEs, local government and academia in Open Geo Services? How can UK replicate this model ? -
- Group 1 – lead by Steve Fuller
- Group 2 – lead by Simon Roberts
- Group 3 – lead by Trevor Wright
- Group 4 – lead by Suchith Anand
-
- 13:00 -14:00 – Lunch/Networking/Exhibition
-

- 14:00 – 15:00 – OSM-GB – Open Source, Open Standards, Open Data example– Amir Pourabdollah
- 15:00 -15:30 - Geo Open Data – Ant Beck
- 15:30 -16:00 – Tea/Coffee Break
- 16:00 – 16:30 – Funding opportunities (Horizon 2020, KTPs etc) opportunities and How GRACE/NGI can collaborate – Steve Fuller/Paul Bhatia/Trevor Wright
- 16:30 -17:00 – Open Discussions and follow up ideas

The Nottingham Geospatial Building - A Floor Plan



Key

- | | | | | |
|--|--|--|--|--|
| | | | | |
| | | | | |
| | | | | |
| | | | | |

www.nottingham.ac.uk/

- More than 43,500 students
- 34,000 based in UK
- 19,000 International students
- 20% are postgraduate students
- 7000 staff
- Research income over £160M per year
- Top three in the UK for Engineering



- **more than 98%** of research is of international quality, **with 85%** graded as **'world-leading'** or **'internationally excellent'** (2014 Research Excellence Framework (REF))
- ranked **7th in the UK** and **74th in the world** for teaching, research and international outlook. (The 2014-2015 Times Higher Education World University Rankings for Engineering and Technology Teaching)
- faculty with over **100 years** engineering expertise
- group of exceptional and highly cited academic staff and **world-leaders** in their fields of research
- team committed to **inspirational teaching**

Semenyih, Malaysia
Opened in 2000 and 2005
About 4400 students



Ningbo, China
Opened 2004 and 2006
About 5300 students



Research Institute NGI formed in 2011 from:

- Institute of Engineering Surveying & Space Geodesy (1988)
- Centre for Geospatial Science (2005)
- GNSS Research & Applications Centre of Excellence (2006)

- Builds on the IESSG, CGS and GRACE collective success to give new strategic growth across the geospatial field
- Conduct World Leading research
- Attract new collaborations and strategic alliances
- Strengthen the Knowledge Transfer and Business Engagement activities
- Respond to Government and other strategic opportunities

Teaching

- Undergraduate Courses
- Masters Courses (full-time & part-time)
- Short courses for industry
- Education Outreach

University Strategic Research Priority Groups

- Operations in a Digital World (Horizon)
- Aerospace Technology
- Global Food Security

Knowledge Transfer & Business Engagement

- GRACE
- Sino-UK Geospatial Engineering Centre

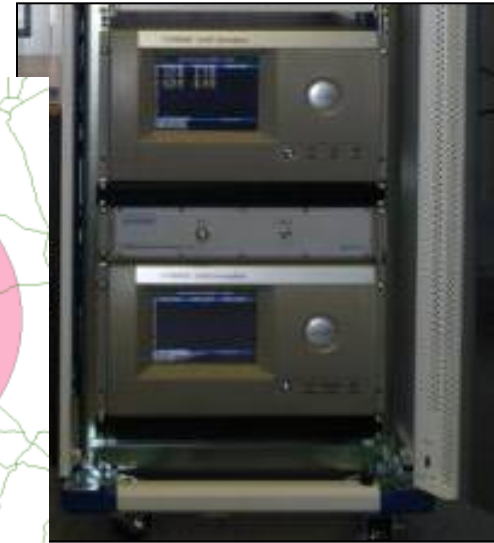
Core Research Themes

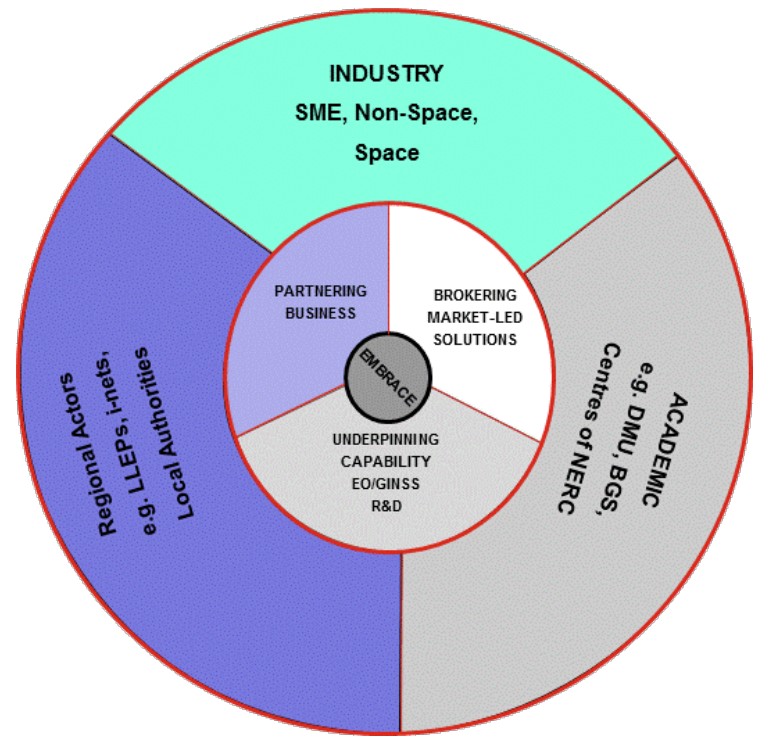
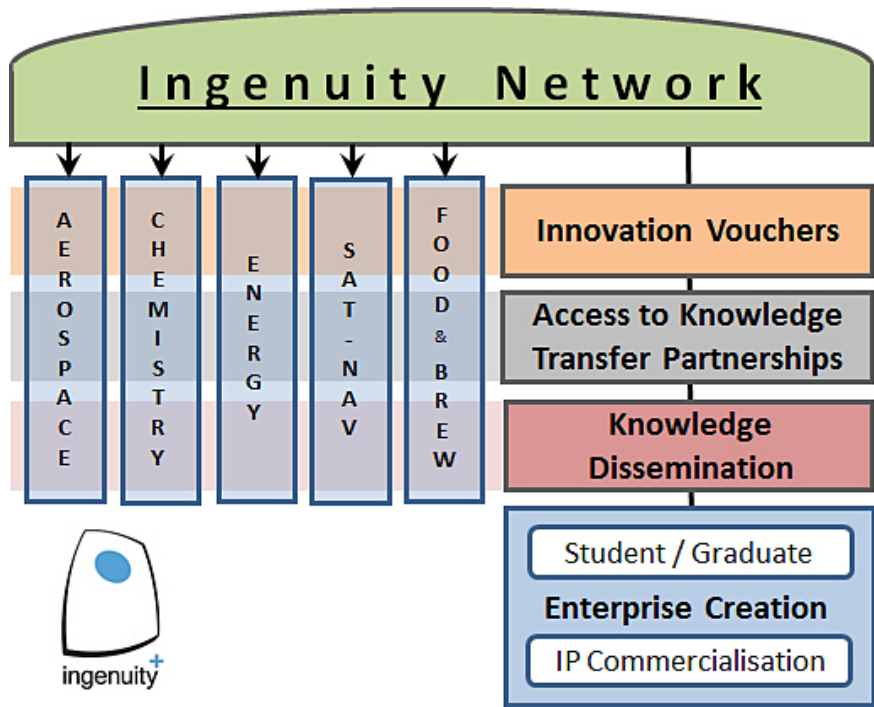
- Engineering Surveying & Remote Measurement
- Geospatial Science
- Positioning & Navigation Technologies
- Propagation Effects on GNSS

Application Themes

- Environmental monitoring
- Global Food Security
- Intelligent Transport
- Disaster Response and Mitigation

- ✓ Simulation & testing facilities
- ✓ Integrated positioning testbeds
- ✓ Business support & consultancy
- ✓ Training services
- ✓ Business accommodation & incubation





EMBRACE
East Midlands Business and Research
satellite Applications Centre of Excellence




SABRE



BIS
Department for
Business Innovation
& Skills



ENTERPRISE ZONES

The sites for the pilot UEZs are:

- Bradford (Leeds City Region)
- Bristol
- Liverpool
- Nottingham

The Absolute Beginner's Guide To Sat Nav

Thursday 19th June 2014, University of Nottingham Jubilee Campus

Many of us use Satellite Navigation technology in our everyday lives without realising its numerous potential applications for building our businesses. This free one-day workshop for small and medium sized businesses will provide an introduction to Satellite Navigation technology on a non-technical level.

If you are curious about how this everyday technology works and how it could be applied to your business, join us as we explore:

- The absolute basics of how Sat Nav works
- The many applications of Sat Nav
- The future of the technology
- The myths and realities of Sat Nav

<http://www.genui.org.uk/absolute-beginners-guide-sat-nav-19th-june-2014/>

Autonomy in Transport

A joint IMPETUS - EMBRACE event to identify and discuss the requirements of the Transport Systems and Satellite Applications Catapults around Autonomy, and how the expertise across the two specialist centres of excellence can meet those requirements.

Vaughan Parry Williams Pavilion
University Park, Nottingham NG7 2RD

Thursday 3rd December 2015 | 10:00 - 15:00

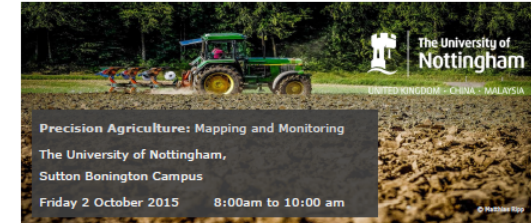
To register for this free workshop, please visit:
www.grace.ac.uk



IMPETUS is a joint venture between The University of Nottingham and the University of Leicester, supporting the Transport Systems Catapult's work on 'Intelligent Mobility'-the optimised movement of people & goods.

EMBRACE is a collaborative partnership between the University of Nottingham, University of Leicester and the British Geological Survey, working with business to develop a regional infrastructure for satellite applications.

Your invitation to a Business Breakfast



Precision Agriculture: Mapping and Monitoring

The University of Nottingham,
Sutton Bonington Campus

Friday 2 October 2015 8:00am to 10:00 am

Business Breakfast for Precision Agriculture: Mapping and Monitoring

Exploring geospatial technologies that work to improve farming efficiency

Date: 2nd October 2015

Time: 8:00am to 10:00am

Location: Room B13, Main Building,
The University of Nottingham, Sutton Bonington Campus
Sutton Bonington, Leicestershire, LE12 5RD

GRACE is the Business Engagement Unit within the Nottingham Geospatial Institute, a specialist research institute at The University of Nottingham. It brings the latest research and developments in navigation, positioning and earth observation to companies who wish to improve performance and efficiency.

Discover how micro-managing a farm using geospatial technology is not a luxury restricted to large farms and estates, or multinational crop development companies; the technology can be inexpensive, easy to use, and open to all.

- Farm planning and record keeping
- Field mapping for problem areas or precise acreage
- Soil sampling
- Precise vehicle guidance even in reduced visibility
- Automated machinery for 24 hour working
- Reduced soil compaction
- Crop scouting
- Accurate, variable rate applications of pesticides, herbicides and fertilizers.
- Higher yields and yield mapping
- Reduced costs
- More environmentally friendly farms

GRACE

Geospatial Research & Applications
Centre of Excellence



The University of
Nottingham

UNITED KINGDOM · CHINA · MALAYSIA

GRACE (supported by EMBRACE & SABRE)
Invites you to a lecture

Update on the Indian GNSS Programme By Dr Suresh Kibe

The Indian government have now launched more than three satellites as part of their GNSS programme which includes:

- GAGAN (GPS Aided GEO Augmented Navigation - Technology Demonstration System)
- IRNSS (Indian Regional Navigational Satellite System)
- Potential plans for the creation of GINS (Global Indian Navigation System).

Dr Kibe, former Head of Indian GNSS Programme at Indian Space Research Organisation (ISRO), will give an update on the status of the Indian GNSS programme.

On 10th November 2014, Monday, 12.30pm

Room B27, Energy Technologies Building,

Jubilee Campus, Triumph Road, The University of Nottingham,
Nottingham, NG7 2TU.

Cost: Free (includes networking lunch)

To register, contact info@grace.ac.uk or phone 0115 823 2337



UAV Demonstrator and Showcase

A19, Nottingham Geospatial Building
Jubilee Campus

Friday 25th September 2015 10:00-15:30

UAV = Unmanned Aerial Vehicle

Unmanned and Autonomous technology will be a BIG part of our future. It will provide low-cost solutions to a wide range of activities: environmental and infrastructure monitoring, planning, health, public safety, research, and wider commercial activity. Up until now this has required expensive infrastructure: helicopters, or has been impossible to achieve in safety.

Meet the experts to discover the benefits to you.

- Flight Demonstration by Ocuair.com
- History and technology
- Legal and safety considerations
- Case Studies
- Consultations with experts

Open Exhibition (12:00-13:00)

For more information and to register, visit Events at:

www.grace.ac.uk



Business Breakfast

What can satellite navigation do for your business?

The UK government has an ambition to grow a £30 billion space industry by 2030 and are making an extra investment of over £200 million in Europe's space programme (gov.uk 2014). **How can your business benefit from this?**

The workshop will provide business owners information on:

- What is navigation? What is satellite navigation?
- What are the applications? How are people making money?
- What are the key sectors - Location Based Services, Transport, Finance, Agriculture?
- What funding is available (grants ranging from £5,000 to £1 million)?
- How can you access this funding?

Breakfast – presentations – Q&A - Networking

Wednesday, July 8, 2015

8.30 – 10.30 am (breakfast served 8:30)

A19, Nottingham Geospatial Institute, Innovation Park,
University of Nottingham, Triumph Road, Nottingham, NG7 2TU

To register: Complete form or email

For more information: Visit website or
contact Paul Bhatia 0115 82 32337



International Navigation Conference

Manchester Conference Centre
24th – 26th February

TUTORIALS

new science | new technology | new practice

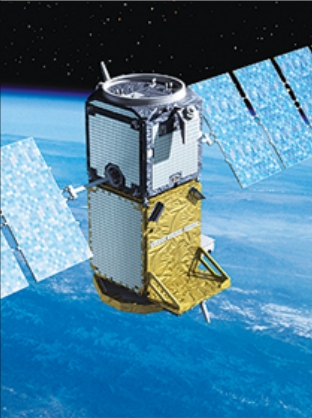

23rd Feb



Case Study

Nottingham Scientific Ltd

Enabling integration between GPS receiver and measurements from Inertial Sensors unit.





Intern	Company	Internship Project title / tasks	Start Date	End Date
Jan Sanroma Sanchez	Johan Sports	Finding, testing and implementing different types of settings for a GPS receiver (U-blox PAM-7Q) used for tracking of players during field sports	02/07/2014	09/09/2014
Niccolò Pastori	M3 Systems	Interferers Investigation	05/07/2014	12/09/2014
Juan Ibanez Noguera	Nottingham Scientific Ltd	Ultra-Tight Integration of a GPS SW Rx and an Inertial System	07/07/2014	05/09/2014
Chris Knight	Race Technology	Investigating RTK systems and performance - evaluating a number of different RTK setups to assess 2cm accuracy and reliability of solution.	01/07/2014	08/09/2014
Petra Pisova	Rockwell Collins	GNSS Navigation API development	07/07/2014	05/09/2014
Jan Stastna	SpaceTec Partners	5 tasks: (1) Sat-tracker phone applications. (2) Equity Crowdfunding in EU. (3) Galileo image database. (4) Space inducement prizes. (5) Geocaching LBS and GSA	30/06/2014	29/08/2014
Philippa Cowles	Surrey Satellite Technology Ltd	Using MATLAB to derive GPS position solutions from SCR-10 receiver pseudoranges	30/06/2014	19/09/2014


Case Study

JOHAN Sports

Developing GNSS hardware for sport tracking



JOHAN



Case Study

M3 Systems

Investigation and recreation of GNSS interference




Case Study

Race Technology

Investigating RTK systems and performance



Race Technology

NGI & GRACE

Paul Bhatia

Thankyou