



GRACE

G-STEP

GNSS Research & Applications
Centre of Excellence

Fostering GNSS and GMES Developments

Paul Bhatia – General Manager of GRACE

GMES – Global Monitoring for Environment and Security



- **GMES** is a European programme implementing an Earth observation service system with satellites, sensors on the ground, floating in the water or flying through the air to monitor our planet's environment and to support the security of every citizen.
- **GMES** will provide decision-makers who rely on strategic information with regard to environmental and security issues with an independent and permanent access to reliable data.



Space applications (UK)

	Navigation	Earth Observation	Telecomms Broadcasting
Global (\$B) (2003/4)	\$11B	\$1.3B	\$80B
UK Turnover 2004/5	N/A	£41M	£3B
Estimated UK benefits* by 2015	£15B pa	>£1B pa.**	£Billions pa Growth @ X6 GDP

Value added services (downstream)

Source:

* Case4 Space Oxford Economic Forecasting

** Includes valuation of use of satellite data in weather forecasting to UK economy

GNSS Research & Applications Centre of Excellence (GRACE)



Aim:

To secure international leadership in research, training and industrial applications development of Global Navigation Satellite Systems (GNSS) - within the East Midlands.

Built from a core of :

- World leading University research & training capability
- Innovative SME industry base
- Close collaborative links with industry
- Extensive user base potential

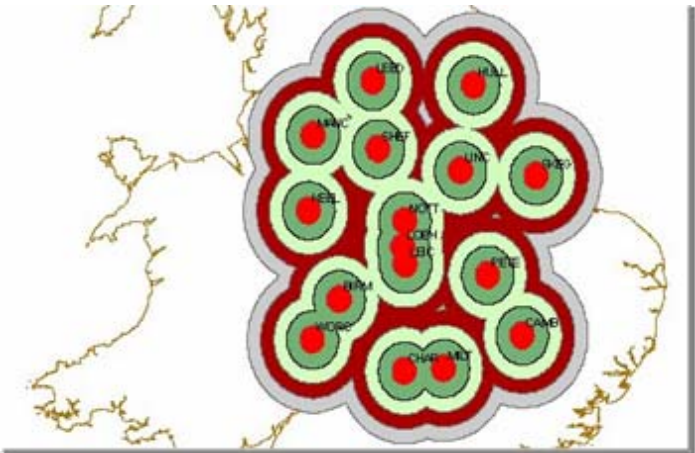
A new centre, a new building, a new focus; encompassing:

- GNSS Research Laboratory and Training Services
- GNSS Applications Development Support
- Access to GNSS simulation, test-bed and testing facilities

- Dedicated Training Suite
- Business Incubation Units
- Business Support Services
- Supported Consultancy Activity

- Potential venue for virtual & physical National Offices
- A Hub for a *GNSS Cluster*

GNSS Simulation and Test-bed Facilities



University of Nottingham Jubilee Campus Expansion



Nottingham Geospatial Building



Completion mid-end September 2009

Hand-over early October 2009

G-STEP (GMES Space Technology Exchange Partnership)



G-STEP is the satellite data solutions service from the University of Leicester that is enabling business and organizations to access and apply complex Earth Observation data in a simple and tailored way.

east midlands
competitiveness programme
european regional development fund



What is G-STEP

- ❖ **G-STEP** is a University of Leicester based knowledge-exchange hub.
- ❖ **G-STEP** has been set up to support the exploitation of Earth Observation (EO) data and information, supporting business and public sector organisations in the use of EO data.
- ❖ **G-STEP** will use European Union and European Space Agency (GMES) data and programmes supplied from satellite, aerial and ground based observations.
- ❖ **G-STEP** will exploit these GMES technologies and the wider R&D base to advance business innovation and competitiveness.



What can **G-STEP** offer?

- Innovation
- Partnering
- Brokering



Land



Atmospheric



Marine

G-STEP (GMES Space Technology Exchange Partnership)



- Offer to all companies, that we can set up individual consultations to assess their needs and explain how G-STEP can assist
- G-STEP can “help” business with demonstration proto-projects.
- G-STEP has a dedicated operational & training facilities at Readson House, 96-98 Regent Road, Leicester
- With (6) fully equipped work-stations for EO training & development



GRACE

G-STEP

GNSS Research & Applications
Centre of Excellence

Fostering GNSS and GMES Developments

Fostering GNSS and GMES Developments



- Working together to develop the downstream applications centre
- Providing expert tools and consultancy
- Delivering expert advice, training and support
- Organising workshops, seminars and conferences
- Facilitating cross disciplinary research and development
- Promoting Integrated Applications

Fostering GNSS and GMES Developments

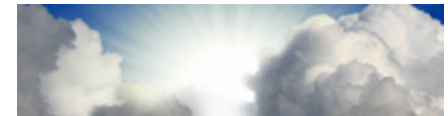


- Supported by government and industry
- Investment in new state of the art facilities with business incubation, science park and project offices, secure laboratories and testing facilities
- Encouraging collaboration between industry and academia
- Kick-starting new business creation through technology transfer and mentoring
- Measured on new job creation and economic impact

Fostering GNSS and GMES Developments

Three Service areas

- Land Monitoring: initially European land cover & urban spots
- Marine Monitoring: sea state & ecosystem characteristics over global ocean & European regional seas
- Atmospheric Monitoring: atmospheric composition for air quality (European) and climate forcing (global), ozone monitoring (global) and solar energies



Further, horizontal components:

- Emergency Response
- Security
- Climate Change

Contact details



Paul Bhatia

General Manager of GRACE

GNSS Research & Applications Centre of Excellence

University of Nottingham

University Park

NG7 2RD

+44 (0) 785 753 940

paul.bhatia@grace.ac.uk