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# EUROPEAN SATELLITE NAVIGATION **COMPETITION** 2010 01 | may - 31 | july

powered by



Submit your application innovation from 1st May to 31st July 2010 at www.galileo-masters.eu

Øresund United Kingdom Holland Lithuania Niedersachsen North Rhine-Westphalia & Ireland @ Hessen Baden-Württemberg Switzerland Prague Lombardy Gipuzkoa Nice / Sophia Antipolis Madrid @ 👩 Valencia

Arab Middle East & North Africa (MENA)

Israel 🧑



In cooperation with:



















































Awards Ceremony 2009 in the Munich Residence



Pedro Pedreira Executive Director European GNSS Supervisory Authority (GSA)





## EGNOS, it's there. Use it.

Last October, the European Commission declared EGNOS officially ready to use as an open and free satellite-based navigation service. This marked an important step forward for the European satellite navigation programmes.

Later this year the EGNOS' Safety-Of-Life Service, which will provide a valuable integrity message warning the user of any malfunction of the GPS signal within six seconds, will be open. This integrity message is essential when satellite-based navigation is used for applications where lives are at stake, such as in aviation.

Europe's first satellite navigation system users in a new era for innovative products and services that harness the increased accuracy and reliability provided by EGNOS.

In this important year, our aim is that the 2010 GSA ESNC Special Topic Prize helps to further raise awareness of the commercial opportunities created by EGNOS, demonstrates its business potentials and encourages innovation.

Hosting the kick-off of the 2010 European Satellite Navigation Competition together with the Galileo Applications Days Conference & Exhibition, in Brussels, the GSA is bringing its support of the ESNC to an unmatched level. We sincerely hope that our increased cooperation in 2010 will bear new fruits regarding the stimulation of the satellite-based navigation market, leveraging on the potential provided by EGNOS.

Forum

MARCH		
3rd - 5th	Galileo Application Days	Brussels / Belgium
5th	Kick-Off	Switzerland
9th -11th	Munich Satellite Navigaton Summit - Conference	Munich / Germany
18th	Kick-Off	Bavaria / Germany

APRIL	_							
8th	Workshop	Arab MENA - Damascus / Syria	26th	Kick-Off	Aquitaine / France	28th	Kick-Off	South Holland / The Netherlands
13th	ESNC work-	Manama / Bahrain	27th	Kick-Off	Øresund / Denmark & Sweden	29th	Kick-Off	Nice Sophia-Antipolis / France
shop at	shop at GSI-ME	GSI-ME	27th -	Kick-Off &		30th	Kick-Off	Valencia / Spain
20th <b>Kic</b>	Kick-Off	United Kingdom & Ireland	28th	Galileo Executive				vatericia / Spairi



# The European Satellite Navigation Competition – Generating globally networked innovation since 2004

What was started in the Free State of Bavaria in 2004 has since matured into a global network for high-tech regions and international technical experts. The ESNC community now encompasses 23 regions, with more about to sign up in the weeks to come before the start of round seven.

The ESNC network is strongly geared towards the requirements of the industry and, together with the partner regions, has supported rapid implementation of the numerous product and service innovations generated in the past few years. The initiative also prides itself on having the support of the European GNSS Supervisory Authority (GSA) in stimulating innovation and entrepreneurship in Europe's GNSS markets.

Under the patronage of the Bavarian State Ministry for Economics, Infrastructure, Transport and Technology, the Application Center for Satellite Navigation "Anwendungszentrum GmbH Oberpfaffenhofen" (AZO) planted the seed of this international ideas competition in 2004, aiming to trigger early development of applications based on satellite navigation systems available today (GPS, for example) that should gain a significant enhancement from Galileo. With the special topic prizes sponsored by industrial and institutional partners, the ESNC has also established itself as a think tank for industry-specific needs: On average, 80% of all participants take the opportunity to submit their ideas for both regional evaluation and consideration for a special topic prize.

In 2010, the concept is continuing with challenges presented by the European GNSS Supervisory Authority (GSA); T-Systems; the European Space Agency (ESA); the German Aerospace Center (DLR); the world's leading provider of digital maps, NAVTEQ, and the Forum SatNav MIT BW.

The GSA will award the most promising application idea exploiting the unique features of the European Geostationary Navigation Overlay Service (EGNOS). The title sponsor T-Systems will award the GMES Masters prize to the downstream application that makes the best use of GNSS and space- and ground-based communication infrastructures based on dynamic earth observation data. Meanwhile, the ESA's Technology Transfer Programme is seeking innovative and creative business ideas with the potential for quick market implementation and high value capture using satellite navigation in non-space business environments. NAVTEQ is looking for the most innovative developments in the field of navigation and location-based services for mobile devices.

Moreover, a special topic prize offered in cooperation with the European Network of Living Labs (ENoLL) – a user-driven innovation platform in real-life environments – is set to facilitate yet another step towards seamless integration of downstream GNSS application services. This GNSS Living Lab prize will primarily address applications related to the themes of health, energy, and media, and is supported by the FP7 project GAINS. In addition, the first ESNC University Challenge will be launched with the support of the CIP project KIS4SAT and Awapatent AB, awarding a prize with a particular focus on students and young researchers involved in GNSS and its manifold application areas.

On 1st May 2010, the idea database for application innovations in satellite navigation will be opened for the seventh time at www.galileo-masters.eu. Participation in the European Satellite Navigation Competition is your chance to play a part in shaping the dynamic, growing market for navigation applications. We look forward to your application idea!

The GALILEO Masters team



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1st     Opening of the ideas database     7th     Kick-Off     North Rhine-Westphalia / Germany       6th     Kick-Off     Hesse / Germany     12th     Kick-Off     Prague / Czech Republic       6th     Kick-Off     Germany     12th     Kick-Off     Madrid / Spain       6th     Kick-Off     Gipuzkoa / Spain     13th     Kick-Off     Israel	MAY					
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Germany 12th <b>Kick-Off</b> Madrid / Spain	6th	Workshop	Obernfaffenhofen /	12th	Kick-Off	Prague / Czech Republic
6th <b>Kick-Off</b> Gipuzkoa / Spain 13th <b>Kick-Off</b> Israel	our works	Workshop	•	12th	Kick-Off	Madrid / Spain
	6th	Kick-Off	Gipuzkoa / Spain	13th	Kick-Off	Israel

JUNE		
9th	Kick-Off	Baden-Württemberg / Germany
10th	Galileo Concert	Graz / Austria
11th	Kick-Off	Lombardy / Italy
16th / 17th	"Wo-congress"	Duisburg / Germany

JULY			
31st	Closing of the ideas database		
AUGUST			
	Evaluation of the ideas		

OCTOBER		
18th	Awards Ceremony	Munich / Germany





# How to participate

# 1. Register at www.galileo-masters.eu

Create your own profile and choose a username and password. It is possible to submit more than one idea, but each project has to be registered separately. Once registered, you will be able to log into the database to continue developing your idea as often as you like before the end of July.

# 2. Select a region

You are free to choose which of the partner regions you would like to represent. Only one region can be selected per idea. The region you choose should correspond to the place where you would establish your business if chosen as regional winner or GALILEO Master.

# 3. Indicate whether you would like to submit your idea for one of the special topic prizes

In addition to recognising outstanding applications in the overall field of satellite navigation, the European Satellite Navigation Competition awards special topic prizes sponsored by industrial and institutional partners who are searching for innovative solutions in certain satnav-related fields. These are intended as a format encouraging joint realisation of the winning idea by the winner and the sponsor. Last year, 83% of all participants took advantage of the opportunity to submit their ideas for both regional evaluation and consideration for one of the special topic prizes. Participants who also submit their innovations for one of the special topic prizes are twice as likely to be nominated. It is even possible for a participant to be nominated as a regional winner, a special topic

prize winner, and as the overall winner, the GALILEO Master! Only one special topic prize can be selected per idea. In 2010, the concept will be continued with challenges presented by the European GNSS Supervisory Authority (GSA), T-Systems, the European Space Agency (ESA), the German Aerospace Center (DLR), the world's leading provider of digital map data, NAVTEQ, and the Forum SatNav MIT BW. In addition, a University Challenge and a GNSS Living Lab Prize will be awarded.

#### 4. Ideas database

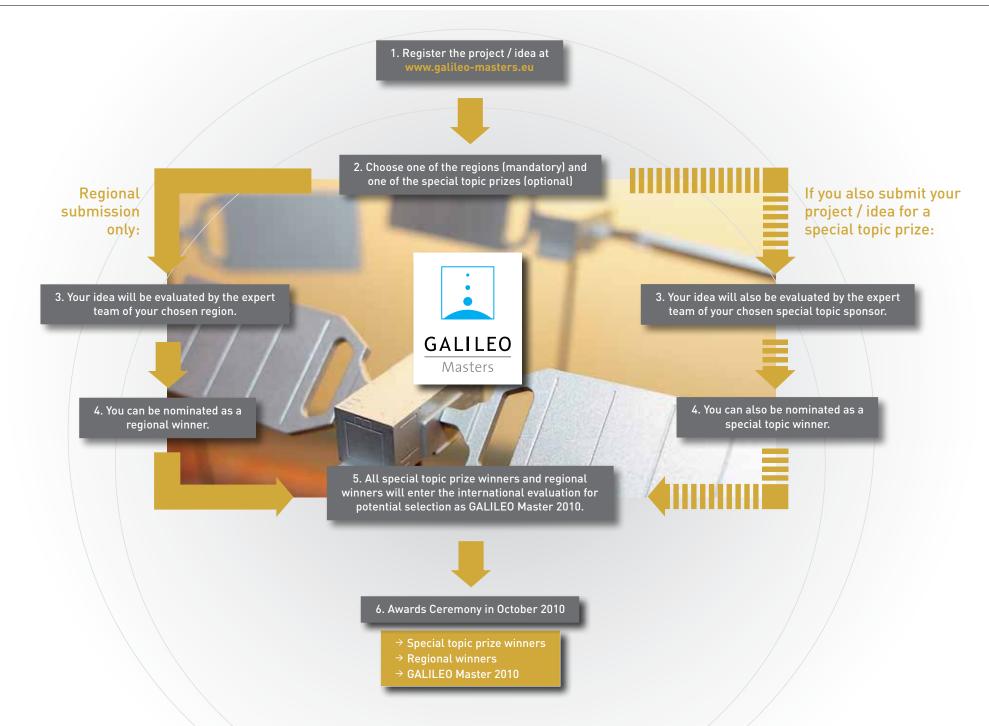
The idea database is divided into three sections. In the first section, you are asked to describe your idea as clearly and accurately as possible; the second section is about the market potential of your idea; and the last section deals with formal project aspects of and the trademark and patent rights to your idea.

### 5. Evaluation

Once the database has been closed, panels of experts from each region and special topic prize sponsor will select their respective winners. In September, an international panel of experts will meet in Madrid, Spain, to select the overall winner – the GALILEO Master – from among all the regional and special topic prize winners.

# 6. Awards Ceremony

On 18th October 2010, the GALILEO Master, regional winners, and special topic prize winners will be recognised and their ideas presented to the public at an official state reception at the Munich Residence.





# MAIN PRIZE:



The overall winner – the GALILEO Master – will be chosen from the regional winners and the special topic winners. The main prize will be a grant of **EUR 20,000**, awarded by the Anwendungszentrum GmbH Oberpfaffenhofen (AZO) and the European GNSS Supervisory Authority (GSA). In addition, the GALILEO Master will get the chance to enter a six-month incubation programme in his favoured region to realise his idea.

# SPECIAL TOPIC PRIZES:

# **GSA** Special Topic Prize:



The winner of the prize will have the opportunity to realise his/her idea at a suitable incubation centre of his/her choice within the EU27 for six months, with the option of an additional six months based on evaluation after the first period.\*

(\* costs should not exceed EUR 20,000 per six-month period)

# **T-Systems** Special Topic Prize:



T-Systems, supported by the European Space Agency (ESA), will assist the winner of the GMES Masters in getting the awarded project off the ground.

T-Systems will support the winner in realising an innovation project, which could lead to a long-term partnership. ESA may provide technical expertise and business development support at one of four ESA Business Incubation Centres (ESA BICs).

# **ESA** Special Topic Prize:



ESA is looking for ideas that can be implemented immediately and quickly nurtured into a profitable business with the technical and financial assistance of an ESA business incubator. Along with this extensive support package, the winner will also receive a EUR 10,000 award.

# **DLR** Special Topic Prize:



The winner will receive a voucher for five man-months of DLR services (an equivalent to EUR 50,000 value) in the further development of his idea, such as feasibility studies, concept studies, and prototype or business development. The prize, therefore, leads to direct implementation.

# **NAVTEQ** Special Topic Prize:

NAVTEO

- A 12-month incubation programme that consists of one year of free access to NAVTEQ map data, content, and services
- The incubation programme will assist the winner of the NAVTEQ special topic prize with coaching, technical and business development support, and web promotions through NAVTEQ Network for Developers™ (NN4D)
- A personal technical consultant will assist in seeing the winning idea through to successful implementation.

- The opportunity to present the final application to NAVTEQ partners and customers, including leading handset manufacturers, platform and technology providers.
- The prize is worth in total approximately EUR 75,000.

# **University Challenge** Special Topic Prize:



ESNC 2010



KIS4SAT will provide 10 days of work with an individual coach to be selected by the winner from within the KIS4SAT consortium. The coach will e.g. consult on IPR issues, technological feasibility and business plan in order to prepare the application to a suitable incubation programme as offered by ESNC partner regions. In addition Awapatent AB, one of the leading IP-firms in Europe, will provide patent consulting worth EUR 8,000 aiming at filing a patent for the nominated idea. Furthermore the Universität der Bundeswehr München will sponsor a ticket for the Munich Satellite Navigation Summit 2011, worth EUR 650,-.

2nd prize: The Universität der Bundeswehr München will provide the first runner-up with a free-of-charge ticket for the ESA International Summer School on GNSS 2011.

# **GNSS Living Lab Prize** Special Topic Prize:



GNSS Living Lab Prize

The GNSS Living Lab Prize will be awarded to three winners, who will get the opportunity to conduct a "reality check trial" in a suitable Living Lab with the involvement of relevant user communities and potential future customers. The nominated innovators will thus benefit from the validation of their ideas, the user-oriented engineering of their products and services, the development of their entrepreneurial team and the intensifying of their network of industrial relationships.

In addition the three winners will receive prize money of EUR 10,000 each.





# **REGIONAL PRIZES:**

# Aquitaine / France:

The organiser will award three different prizes worth a total of approximately EUR 40,000. Each prize consists of a full one-year paid residency at one of the regional incubation centres (Bordeaux or Biarritz) including continuous coaching, complementary training, and access to public funding and private venture capital to successfully transform the winning idea into a great start-up.

## Arab Middle East & North Africa (MENA)



The regional Arab MENA winner will receive a six-month incubation package at an Arab Science and Technology Foundation (ASTF) regional incubation center, or at the affiliated incubation center most suitable for the winner. This will include an appropriate level of technical and business development support, as well as the opportunity to access a pool of venture capitalists, entrepreneurs, and philanthropists. The shortlisted participants will also have sufficient access to technical and business strategy support and assistance. In addition, a special prize will be offered to the overall Arab MENA regional winner.

## Australia:



IGNSS will provide Australia's regional winner with promotion at IGNSS events, ten days strategic consulting and other support in the Australian innovation sector.

# Baden-Württemberg / Germany:



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- Prize money of EUR 5,000
- A full one-year paid residency at one of the regional technology centres, such as TTR in Reutlingen
- Targeted support for promotion, intellectual property, funding and networking
- Presentation and promotion of the winning organisation and its concept during the regional awards ceremony, with regional and national media in attendance

# Bavaria / Germany:



The Bavarian Ministry of Economic Affairs is sponsoring a prize incubation package (valued at EUR 35,000) at the Anwendungszentrum GmbH Oberpfaffenhofen (AZO). Those applying to the ESA Business Incubation Centre Oberpfaffenhofen (ESA BIC OPF) will be eligible for an additional EUR 25,000 in incentive funding from the ESA, as well as an optional loan from the local bank Kreissparkasse München Starnberg. Through your involvement in the ESA BIC OPF, you can also benefit from the technical expertise of DLR and of AZO's extensive network.

#### Brazil:



- Consulting and/or incubation at the Instituto de Tecnologia para o Desenvolvimento (Technology Institute for Development) LACTEC
- Annual subscriptions to the publications InfoGEO, InfoGNSS, and InfoGPS
- Consulting and/or incubation at Atech Foundation (to be confirmed)

# Gipuzkoa / Spain:



A 12-month incubation phase in BicBerrilan, including:

- Expert consulting: advice, monitoring, business plan design, IP protection
- Specialised business training courses held by prestigious entities like IESE (MBA)
- Possibility of attending a one-week course on the MIT if selected as the best entrepreneur of the year
- Access to infrastructure such as meeting rooms, teleconference equipment, etc.
- Access to public-private venture capital

# Hesse / Germany:



The regional winner will receive a EUR 5,000 prize from Hessen-IT, the action initiative of the Hessian Ministry for Economics, Transport, and Urban and Regional Development in the ICT sector. In addition, the Centre for Satellite Navigation Hesse (cesah) will support the winner with coaching and expert consulting to help them prepare their application for ESA Business Incubation, cesah is a partner of the ESA Business Incubation Initiative and is located in the direct vicinity of the European Space Operations Centre (ESOC) in Darmstadt, Germany.

#### Israel:



MATIMOP will provide Israel's regional winner with strategic consulting, tailored promotion and public representation services, and other support in the Israeli innovation sector.

# Lithuania:



Lithuania's regional winner will be provided with facilities and services at one of the country's incubation facilities, such as the Science and Technology Park in Sunrise Valley, Vilnius (conditions may slightly differ).

## Lombardy / Italy:



The Italian Space Agency (ASI) is offering a EUR 10,000 prize to Lombardy's regional winner. Navigate Consortium will provide six months of free office space in Milan and 10 days of consulting to the entrepreneur(s) behind the best proposal.



# **REGIONAL PRIZES:**

# Madrid / Spain:



The winning application will undergo a tailored six-month incubation phase at facilities in the Madrid region. This start-up programme, which takes advantage of the madrimasd system and the Madrid Science &Technology Parks and Clusters Network – Madridnetwork, will include free office space, infrastructure, and telecommunications, as well as a marketing budget and 10 days of coaching. The aim of the programme is to accompany entrepreneurs through the pre-seed phase, as well as the initial founding and growth of their company.

# Nice - Sophia Antipolis / France:



Six months of free office space in Sophia Antipolis and 10 days of consulting in order to establish and develop the winning project.

# Niedersachsen / Germany:



GAUSS – the Galileo Centre for Safety-critical Applications, Certification and Services – will award a prize money of EUR 5,000 to the Niedersachsen winner.

# North Rhine-Westphalia / Germany:



The regional organiser will promote the winner with benefits worth EUR 1,200:

- Free one-year membership in Navisat e.V.
- Presentation and free display of the awarded idea at the 2nd Wo?-Congress 2011
- Free one-year subscription to GIS-Business magazine and announcement of the awarded idea in the same publication

## Øresund / Denmark & Sweden



The regional winner of Oresund will receive a 6 month support programme in the incubation center of the Innovation Center Denmark in Munich. In addition Awapatent AB, one of the leading IP-firms in Europe, will provide patent consulting worth EUR 2,000.

# South Holland / The Netherlands



De CLERCQ Attorneys-at-law • Civil law notaries • Tax advisors provides legal services and has always had affinity with innovative initiatives since many of its clients are in the business of developing innovative products. De Clercq is offering a prize consisting of EUR 1,600 worth of legal support – commemorating its 160th anniversary – to the winner of the European Satellite Navigation Competition. Moreover, the winner get a free booth at the annual South Holland Knowledge Festival 2010 and consultancy assistance offered by Logica and the Netherlands Space Office valued at EUR 10,000, enabling development of the winning idea in its next step to success.

## Switzerland:



The regional winner will receive a one year free membership in clusteraviatik.ch (value CHF 1,000) and will be supported in that time by experts with respect to the preparation of the application in response to national and international ITTs, e.g. through coaching and consulting activities.

# Taipei / Taiwan:



- 1st prize: EUR 10,000

A round-trip air ticket to and accommodation in Europe for one person. (One round-trip air ticket to and accommodation in Taiwan if the first-place winner is not from Taiwan)

- 2nd prize: EUR 3,5003rd prize: EUR 2,500
- Shortlists (five ideas at most): EUR 1,500 for each

For all winners in Taiwan, ITRI will provide 10 days of coaching and consulting for preparation of each respective application (valid from Dec. 2010 to Dec. 2011).

# United Kingdom:



First prize: GBP 10,000 cash prize + free business incubation support with GRACE Second prize: GBP 1,000 cash prize

#### USA:



The regional winner will be presented in an exclusive cover feature in the November/December 2010 issue of Inside GNSS magazine. Coverage will include photos of the winning submission and/or the creator, a profile highlighting the credentials, and, as appropriate, either an engineering case study of the winning entry or an interview with the creator. The winning entry will be presented in both print and digital editions of Inside GNSS, as well as on a special section of the magazine's website, insidegnss.com. A cash prize will also be awarded.

# Valencia/Spain:



A six-month incubation phase at the CEEI Valencia (incubator centre) including:

- Free office space, infrastructure, and telecommunications
- A marketing budget
- Ten days of coaching

The aim of the programme is to accompany the winner through the pre-seed phase up until the founding of their company.





# The most promising EGNOS application idea

# **Starting Position**

By developing a new generation of Global Navigation Satellite Systems (GNSS), Europe is opening new doors in high-tech industry development, job creation, and economic growth. Given the strategic nature of European satellite positioning and navigation programmes (which include both EGNOS and Galileo) and the need to ensure that essential public interests in this field are adequately defended and represented, the European GNSS Supervisory Authority (GSA) was established as the regulatory authority for the European GNSS programmes. Along with assisting the European Commission in matters related to the execution of the programmes, the GSA will focus on technical certification, security accreditation, and the market preparation and commercialisation of the system. EGNOS (European Geostationary Navigation Overlay Service) is Europe's first venture into satellite navigation. It augments the US GPS and Russian GLONASS systems, and makes them suitable for safety-critical applications. The EGNOS message that is broadcasted by satellite provides corrections and integrity information on GPS.

# **Objectives**

GSA is actively promoting the development of downstream applications that create demand for EGNOS and Galileo and provide economic and social benefits. With the EGNOS open service now free and ready to use the focus of the GSA prize will be on EGNOS, looking for innovative satellite navigation applications that make use of EGNOS signals or services and meet the following criteria:

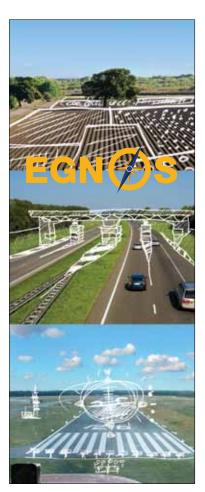
- The application should deliver end-to-end functionality to customers using new or existing equipment and systems.
- Positioning should be a key enabler of the application.
- GPS + EGNOS should be the primary means of positioning.
- EGNOS functionality should be used.

#### Prize

The winner of the prize will have the opportunity to realise his/her idea at a suitable incubation centre of his/her choice within the EU27 for six months, with the option of an additional six months based on evaluation after the first period.\* Award criteria will be the uniqueness and originality of the idea, its business potential (including technical feasibility, commercial feasibility, size of addressable market, and time to market), and the credibility of the corresponding team, as well as the application's use of unique EGNOS features.

\* costs should not exceed EUR 20,000 per six-month period

www.gsa.europa.eu







# Special Topic Prize GMES Masters

under the patronage of: • Cesa



# **Starting Position**

Global Monitoring for Environment and Security (GMES) is driven by the requirements of sustainable development and the need to improve the monitoring of the European and global environment, especially in view of the sustainable management of resources and the security of citizens. The GMES market includes public policy domains and a downstream services sector. The total market volume of the public policy domains is estimated to comprise a turnover of EUR 35 billion based on a 25-year appraisal period\*. The worldwide turnover of the downstream services sector could achieve a similar size. GNSS services will complement GMES applications in emergency services such as SAR and disaster relief, as well as in environmental monitoring like tracking floods, fires, oil spills, and earth quakes. The relevant EU/ESA projects in this domain are MARISS, SAFER, and RESPOND. In addition, GNSS in combination with GMES may support security-relevant EU operations, such as in maritime security and border control. The European Space Agency (ESA) is the Coordinator of the GMES Space Component and leads its development and implementation. T-Systems operates information and communication technology for large corporations and public institutions. For example, T-Systems is the company behind the world's most sophisticated road-charging system - Toll Collect - and operates the innovative ICT systems that make use of GNSS in monitoring and charging traffic. Today, T-Systems runs one of the global networks through which GMES data is distributed to users around the world.



# **Objectives**

T-Systems, assisted by ESA, will award the GMES Masters prize to the best application based upon a sound business model in a GMES core service area - land, marine, or emergency. The application should be based on dynamic earth observation data and make use of GNSS and space- and ground-based communication infrastructures.

# Prize

T-Systems, supported by ESA, will assist the winner of the GMES Masters in getting the awarded project off the ground. T-Systems will support the winner in realising an innovation project, which could lead to a long-term partnership. ESA may provide technical expertise and business development support at one of four ESA Business Incubation Centres, ESA Business Incubation Centres (ESA BICs) are designed to create new business opportunities and jobs for non-space companies and broaden the market for the space industry by translating space technologies, applications, and services into viable business ideas in the non-space marketplace. The ESA Technology Transfer Programme Office coordinates the four ESA BICs throughout Europe, which are located at the European Space Research and Technology Centre (ESA/ ESTEC) in Noordwijk, The Netherlands; the European Space Operations Centre (ESA/ESOC) in Darmstadt, Germany; the European Centre for Earth Observation (ESA/ESRIN) in Frascati, Italy, and near the German Aerospace Centre (DLR) site in Oberpfaffenhofen, Germany.

www.t-systems.com www.esa.int









# ESA innovation prize

## **Starting Position**

An international organisation comprising 18 member-states, the European Space Agency (ESA) is Europe's gateway to space. Its mission is to shape the development of Europe's space capability and ensure that investment in space continues to deliver benefits to the citizens of Europe and the world. ESA designs and implements the European space programme, including efforts to find out more about our Earth, our solar system and the universe we live in; develop satellite-based technologies and services; and to promote European industries.

The mission of ESA's Technology Transfer Programme Office (TTPO) is to facilitate the use of space technology and space systems for non-space applications and to demonstrate the benefit of the European space programme to European citizens. The office is responsible for defining the overall approach and strategy for transferring space technologies, which involves, for example, the incubation and funding of start-up companies.

# **Objectives**

The European Satellite Navigation Competition is a great source of innovative business ideas in virtually all industry fields. The TTPO also aims to find new ideas for the commercial use of space technology and launch new businesses in this area in Europe. Among the innovative ideas for satellite navigation applications originating from the competition's previous years are systems that report flooding in real-time, track carbon footprints, and provide location-based information no matter what the user's whereabouts are.

## Prize

ESA will award its innovation prize to whoever comes up with the best business idea for using global navigation satellite systems. It is looking for ideas that can be implemented immediately and quickly nurtured into a profitable business with the technical and financial assistance of an ESA Business Incubation Centre. The winner will also receive a cash award of EUR 10,000.

www.esa.int/ttp







# Next Generation Navigation

# **Starting Position**

DLR is Germany's national research center for aeronautics and space. Its extensive research and development work in aeronautics, space, transportation and energy is integrated into national and international cooperative ventures. As Germany's Space Agency, the German federal government has given DLR responsibility for the forward planning and implementation of the German space programme as well as international representation of Germany's interests. Furthermore, Germany's largest project-management agency is also part of DLR. In determining the focal points of its research, DLR is to a large extent guided by industry's demand for innovative products and services. Besides, it also invests in promising technologies and offers its research and development capacities to customers for their own use. Numerous products have been successfully developed in this way and launched on the market in cooperation with innovative enterprises.

Approximately 6,500 people work for DLR; the center has 29 institutes and facilities at 13 locations in Germany: Berlin, Bonn, Braunschweig, Bremen, Cologne (headquarters), Goettingen, Hamburg, Lampoldshausen, Neustrelitz, Oberpfaffenhofen, Stuttgart, Trauen and Weilheim. DLR also has offices in Brussels, Paris and Washington, D.C.

# Objectives

NEXT GENERATION NAVIGATION: The GNSS infrastructure is undergoing dynamic expansion, and the demand for navigation-related solutions is growing at least as fast along with it. Smart applications designed to master existing use cases are to be complemented through "greenfield" innovations driven by technological development and various markets.

We are looking for creative ideas for new applications, products, and services, as well as concepts transferable from nature. Better understanding and usability

will pave the way to a new quality of navigation with remarkable added value. The stakeholders who will profit daily from these innovations include private endusers, the public sector, and professional customers. In addition, social and environmental benefits and increased public safety will be further key criteria for realisation.

The best entry will undergo further development and implementation jointly with DLR, leading on to the next generation of navigation.

Specifically, we are looking for the brightest ideas in two major fields with the following aspects:

#### Theme 1: SECURITY-CRITICAL APPLICATIONS

#### ACCURACY and AVAILABILITY:

Enhancement through methods such as multi-frequency usage, local augmentations, hybrid sensors, and redundant systems

#### INTERFERENCING SIGNALS:

Recognition and suppression within the GNSS receiver, as well as through the signal processing chain

#### SECURITY-RELATED TASKS:

Use of GNSS applications and integrated solutions for rescue and police operations, crisis management, and disaster relief

## TRAFFIC and TRANSPORT:

Robust navigation with maximum security and reliability in real time

In this first major topic, DLR is seeking technical and application-oriented solutions with outstanding innovative character.



## Theme 2: **BIO ENGINEERING in NAVIGATION**

LOCALISATION and ORIENTATION:

Methods transferred from nature to applications

BACK-UP of GNSS POSITIONING:

New approaches – also without complex infrastructure

In this second major topic, DLR is looking for interdisciplinary ideas generated from engineering and natural sciences, especially biology.

Please note that the best proposals from Germany will be submitted to German Space Agency for potential founding in the framework of a research project.

## Prize

The winner will receive a voucher for five man-months of DLR services (an equivalent to EUR 50,000 value) in the further development of his idea, such as feasibility studies, concept studies, and prototype or business development. The prize, therefore, leads to direct implementation. While all contestants will demonstrate their innovation competence merely by participating, the winner will enjoy the added benefit having the DLR Special Topic Prize on his record as a testament of quality.

www.dlr.de







# In the field of navigation and location-based services for mobile devices

## **Starting Position**

NAVTEQ digital map data is fuelling a new era of innovative thinking and inventions and sparking the development of precise, reliable navigation products and services. NAVTEQ is the means of developing a virtually limitless range of location-based services (LBS) – services that will connect people for lunch, for meetings, for life. Indeed, with its high level of detail and accuracy, NAVTEQ digital map data is the sure route home in the storm, the smart way around a problem, the guide through one's busy business day. NAVTEQ's Points of Interest (POI) data, mapping software, and exciting new technologies such as voice-enabled data are the building blocks of a whole new generation of location-based services and applications. NAVTEQ also offers real value for consumers and developers through its LocationPoint Advertising solution. Developers receive a share of revenues, while consumers value their timely, interactive, and relevant offers based on proximity and profile information. This ad-supported model can be applied across all location-aware devices with connectivity.

# **Objectives**

NAVTEQ is looking for developers to submit innovative location-based ideas that work with mobile phones and/or wireless handheld devices using satellite positioning technology and NAVTEQ map data. Here are some suggested use cases for your LBS idea submission.

- Content: use of content from NAVTEQ or third parties that enhances functionality or is the main feature of the solution
- Enterprise: applications related to helping inventory and people to function efficiently, plus local search advertising, buying, and billing
- Entertainment/leisure: gaming, location-based imaging, sport, travel, and tourism applications
- Navigation: routing and turn-by-turn directions, POI look-up, and traffic and pedestrian applications
- Social networking: peer and "find-me" applications, or applications related to child/senior monitoring, safety alerts
- Location-based advertising: use of mobile advertising that combines precision proximity, contextual and demographic targeting

### Prize

- A 12-month incubation programme that consists of one year of free access to NAVTEQ map data, content, and services (please register and download the competition tender for details).
- The incubation programme will assist the winner of the NAVTEQ special topic prize with coaching, technical and business development support, and web promotions through NAVTEQ Network for Developers™ (NN4D)
- A personal technical consultant will assist in seeing the winning idea through to successful implementation.
- The opportunity to present the final application to NAVTEQ partners and customers, including leading handset manufacturers, platform and technology providers.
- The prize is worth in total approximately EUR 75,000.

www.navteg.com www.nn4d.com













# Safety and security in the logistics and transport sectors

## **Starting Position**

Forum SatNav MIT BW believes in the enormous economic potential satellite navigation presents, especially for Baden-Württemberg. The forum focuses on the development of applications and services based on navigation, information, and communication technologies. In particularly, it seeks to support small and medium-sized companies in launching innovative products and services, as well as in the creation of strategic alliances, cooperations, and partnerships. Furthermore, the association considers itself a platform for opening up new fields of business. It is open to all organisations connected to the field of satellite navigation. The association also represents the interests of its members at the political level. Among its further goals are the advancement of scientific and entrepreneurial competence in satellite navigation and mobile IT, and, by extension, the development of new business models. Additionally, the association wants to bring research and the economy closer together in order to create a network of companies and research institutions.

# **Objectives**

Forum SatNav MIT BW is participating for the second time with a special topic prize for safety and security in the European Satellite Navigation Competition 2010. All interested companies, research institutions, and stakeholders are asked to hand in their submissions.

Several criteria have been defined for the prize; submissions to be shortlisted should:

- Involve an innovative solution, application, and/or process from the areas of satellite navigation and mobile IT
- Be market-ready and oriented along the value chain
- Feature either an enhancement of an existing solution or a radical innovation

#### Prize

Will be given later.

www.galileo-bw.de









& MAWAPATENT

# Special Topic Prize ESNC University Challenge

# **Starting Position**

High quality GNSS education is a driver for innovation, an enhancement for companies' competitiveness and a valuable opportunity for international cooperation. To bridge the gap from GNSS research and academia to entrepreneurship the ESNC University Challenge particularly addresses students and research associates with the aim to foster the creation of commercial ventures from bright ideas. Furthermore the University Challenge will leverage exposure and credibility of student innovations on a global level and establish links to the world of business. The ESNC University Challenge is being carried out by Anwendungszentrum GmbH Oberpfaffenhofen (AZO) and supported by the CIP project KIS4SAT (Knowledge Intensive Services in the satellite downstream applications and services sector) and Awapatent AB.

# **Objectives**

The ESNC University Challenge not only addresses students and research associates with a background in aerospace and GNSS-specific courses of study but aims at reaching out to any young researcher dealing with areas of potential applications, be it prospective automotive engineers, logistics providers, game and other mobile application developers, or health promoters. The evaluators will focus on creativity and market needs rather than technological perfection of the business idea.

## Prize

The aim of the ESNC University Challenge is the realisation of the winning idea in form of founding a start-up company. KIS4SAT will provide 10 days of work with an individual coach to be selected by the winner from within the KIS4SAT consortium. The coach will e.g. consult on IPR issues, technological feasibility and business plan in order to prepare the application to a suitable incubation programme as offered by ESNC partner regions. In addition Awapatent AB, one of the leading IP-firms in Europe, will provide patent consulting worth EUR 8,000 aiming at filing a patent for the nominated idea.

Furthermore the Universität der Bundeswehr München will sponsor a ticket for the Munich Satellite Navigation Summit 2011, worth EUR 650,- incl. the opportunity to present the awarded project at the exhibition booth of Anwendungszentrum GmbH Oberpfaffenhofen.

2nd prize: The Universität der Bundeswehr München will provide the first runner-up with a free-of-charge ticket for the ESA International Summer School on GNSS 2011.

www.anwendungszentrum.de www.europe-innova.eu/kis4sat www.awapatent.com www.unibw-muenchen.de







# **Special Topic Prize**GNSS Living Lab Prize

# **Starting Position**

Living Labs are User Driven Open Innovation Platforms. Stakeholders, including firms, public agencies, universities, institutes and users are all collaborating for creating, prototyping, and validating new service-products and societal infrastructures in real-life contexts in a Public-Private-People-Partnership (PPPP). The Living Labs are grouped under the European Network of Living Labs (ENoLL), which was launched in November 2006 by the EU Finnish Presidency and supported by the subsequent ones.

129 Living Lab sites are already operational in domains, spanning from eHealth to Energy Optimisation and Efficiency, from Intelligent Mobility to Inclusion of the elderly and disadvantaged people and Rural Development. The project GAINS (Galileo Advanced INnovation Services) funded under the European Union's Seventh Framework Programme (FP7) and supervised by the GSA, supports the establishment of a dedicated GNSS Living Lab special topic prize in line with the ESNC 2010. It aims at facilitating the emergence of User Driven Open Innovation Demand for services and applications enabled by satellite navigation technologies.

# **Objectives**

The GNSS Living Lab Prize calls for developers and users, engineers of research institutes, and development departments but also from new ventures to submit proposals for GNSS-related products and services ready to be tested and ideally implemented in a suitable Living Lab. Submissions to the prize shall focus on one of the following themes: health, energy and media.

# Theme 1: GNSS for health, ageing and inclusion

This theme calls for highly innovative services and integrated solutions with the aim of a triple win: unlocking the huge business opportunities in Europe and in the global market, containing the costs for society, and improving the quality of life (including good health) in general and in particular for the elderly and disab-







# **Special Topic Prize**GNSS Living Lab Prize

led. Submissions for this theme should address one or more of the following topics: GNSS technologies for

- patient-centred health services
- innovative eHealth tools and services in real life
- learning together, including inclusion, accessibility and coverage
- ageing well / independent living
- support of health information systems and telemedicine
- systemic and managerial innovation, efficiency and process improvement

# Theme 2: GNSS for energy efficiency and environment

GNSS technologies can play an important role in reducing the energy intensity / consumption of the economy and at the same time in reducing carbon emissions. Hereby urban areas are of high importance to provide the right setting for testing, validating and deploying GNSS-based solutions for improved energy efficiency. Innovative GNSS solutions and applications can help reduce energy consumption in private households and public buildings and spaces. In the area of environmental management, they can enable a rapid and efficient response to extreme incidents induced by climate change. GNSS technologies can bring about substantial improvements in monitoring and situation awareness, data sharing and interoperability, and decision-support and communications. Applications to be submitted for this theme should address prevention, preparedness and response to climate-induced incidents concerning both urban and rural settings with solutions e.g. for:

- environment and energy efficiency in private households and in public buildings
- prevention, alert and rescue to minimise impacts of climate change
- mobility efficiency
- efficient lighting

#### Theme 3: Media

In the last ten years, digital media have succeeded in transforming the global media landscape. Every part of the industry, from television to movie industry, from newspapers to music has seen the way people consume media content change dramatically. The media creation, promotion, delivery and buying act have all been impacted. Business models are changing so fast that the industry has difficulties catching up with the trends. Web 2.0 technologies have even amplified this change of behaviour by providing cheaper disseminating technologies allowing new media to reach millions of readers with almost no capital expenditures. Media have an important role to play in e-participation and e-democracy as they foster new ways of developing user participation as active co-producers of content and services. They contribute to strengthen the process of open innovation, to maximise impacts in terms of social cohesion. New telecommunication networks as 3G+, 4G, Wimax, FTTx and new devices as smartphones, and netbooks generate new types of consumer behaviour in the media industry. In this context, GNSS technologies and services can complement the offer generated by the above mentioned technologies and provide citizens and people with added value services in the sectors of:

- tourism
- e-participation and e-democracy
- education
- leisure
- gaming
- social networks

## **Prize**

The GNSS Living Lab Prize will be awarded to three winners, who will get the opportunity to conduct a "reality check trial" in a suitable Living Lab with the involvement of relevant user communities and potential future customers. The winning innovators will thus benefit from the validation of their ideas, the user oriented engineering of their products and services, the development of their entrepreneurial team and the intensifying of their network of industrial relationships.

In addition the three winners will receive prize money of 10,000 EUR each.

www.openlivinglabs.eu

funded under:





# Choose one of these 23 high-tech regions for your future business

The European Satellite Navigation Competition is designed to provide entrepreneurs and international researchers a way to create GNSS applications as well as providing a route to market via the most appropriate participating high-tech region. The participating high-tech regions all boast sustained success in satellite navigation and communications segments and are about to further develop their efforts in these sectors. Within the European Satellite Navigation Competition the partner regions compete to create the best of the best - the GALILEO Master - as well as turning the new ideas into successful business cases and / or new companies in their regions. Each region has its own advantages and characteristics which may better suit an individual applicant. In 2010, the competition will be carried out in 23 regions which are represented below:

# Aquitaine / France



TOPOS // Located in the south-western part of metropolitan France, the Aquitaine region is bordered by the Atlantic Ocean and the Pyrenees. Aguitaine offers a mix of economic dynamism, fascinating landscapes, and cultural heritage that contributes to the success of entrepreneurial ideas and defines a unique perspective of welfare and personal development. A leading region in per capita R&D investment, Aquitaine promotes start-ups and their potential innovations in the avionics, aerospace, composites, and photonics sectors. The region is also home to the world-famous Bordeaux wines.

TOPOS is a non-profit organisation that facilitates partnerships and fosters networking and collaborative activities to further develop regional ventures and activity in the downstream GNSS market. Our members represent industrial groups, entrepreneurs, academic researchers, and regional institutions focused on the emergence, economic growth, and success of EGNOS/GALILEO projects.





TOPOS Aquitaine

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#### **Australia**

IGNSS Society // The IGNSS Society is a market driven not for profit association providing services such as workshops, conferences, trade exhibitions and awards for excellence programmes. IGNSS is interested in air, land, marine, space and cyberspace applications. Australia is an advanced user of satellite technologies including Global Navigation Satellite Systems and was amongst the earliest adopters of GPS for mining, agriculture and civil engineering. It's large land mass and widely separated cities also make Australia a centre of innovation in the application of GNSS to long haul sea, road, rail and air transport. The Australian region is particularly interested in the application of GNSS to the economic, social and environmental issues associated with developing large regional areas with limited infrastructure.





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# Arab Middle East & North Africa (MENA) (new!



ARAB SCIENCE AND TECHNOLOGY FOUNDATION (ASTF) // The Arab Science and Technology Foundation (ASTF) is an independent, nongovernmental, non-profit regional and international organisation. ASTF was formed in April 2000 by a group of Arab scientists and engineers from all over the world with the prime directive of promoting science and technology in the Arab Middle East-North Africa (MENA) region. ASTF serves as mediator between those who produce, develop, and fund scientific research, and those who benefit from it. In all its activities, ASTF supports and facilitates scientific and technological innovation in the Arab world. Its goal is to fulfil its mission as a pan-Arab organisation by establishing branch offices in Arab capitals and liaison nodes in other parts of the world. At present, ASTF has branch offices in Sharjah (UAE), Baghdad, Cairo, Tunis, Amman, Morocco. Libva, and Sudan. In addition, ASTF aims to identify outstanding scientific research activities and become a centre for assessing the performance of scientific programs, as well as a powerful international Arab entity that defends the region's interests in scientific and technological progress.





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# Baden-Württemberg / Germany

IHK Reutlingen // The internationally renowned corporations such as Daimler, Porsche, Bosch, SAP, Zeiss and Würth and many multinational corporations have chosen to make Baden-Württemberg the centre of their business operations. Baden-Württemberg also benefits from a powerful backbone of small and medium-sized enterprises. It's famous for its tourist highlights such as the Black Forest and Lake Constance and its universities in Constance, Freiburg, Heidelberg, Hohenheim, Karlsruhe, Stuttgart, Tübingen and Ulm. The state is also known for its great authors like Friedrich Schiller ("Wilhelm Tell") and the people in Baden-Württemberg are known as "Tüftler", which means a great enthusiasm for technical problems and their solutions. This open minded spirit is the ideal constellation for participating in the competition.



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www.galileo-masters-bw.de



#### Bavaria / Germany

Anwendungszentrum GmbH Oberpfaffenhofen (AZO) // In the German state of Bavaria, over 35,500 people currently work in the aviation and space industry, generating a turnover of EUR 6,9 billion. This leads all states in Germany, and the economic region surrounding the state capital of Munich is one of the country's leading aerospace and satellite navigation hubs. Established in 2001, the AZO-run Application Center for Satellite Navigation has so far seen through the creation of 40 new companies and more than 650 jobs. On 3rd August 2009, AZO also began managing the new ESA Business Incubation Center Oberpfaffenhofen, Europe's fourth ESA BIC. The Free State of Bavaria, the German Aerospace Center (DLR), the European Space Agency (ESA), and local bank Kreissparkasse München Starnberg will contribute EUR 6,3 million toward the ESA BIC's aim of supporting 40 on-site company foundations in the next four years.





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#### Gipuzkoa / Spain

VicomTech // The province of Guipúzcoa, located in the Basque Autonomous Community of Spain, has Spain's highest density of universities and research and technology centres. These include 7 Institutes for Competitiveness and Cooperative Research, 3 industrial clusters. 3 universities, and 6 other renowned research institutes. With turnover in excess of EUR 13 billion in 2008 and over 10,000 highly qualified professionals engaged in industrial research, aerospace, communications, and electronics, this small region has become a hub of technology and innovation. Behind this profile lies an industrial framework that actively promotes research and enjoys the full support of both the local public administration and the Basque autonomous government. The advanced research this foundation enables in the fields of aerospace, communications, and electronics is transferred to partners in the industrial sector, who then bring innovative and competitive products directly to market. In addition to large integrators such as Sener, IKUSI, and Gamesa, Guipúzcoa is home to many other specialised SMEs covering the entire supply chain for aerospace, communications, and electronics products.





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#### Brazil



MundoGEO // Brazil, officially the Federative Republic of Brazil, is the largest country in South America and the only Portuguese-speaking country in the Americas. It is the world's fifth-largest country in terms of both geographical area and population. Brazil is the world's eighth-largest economy in nominal GDP and the ninth-largest in purchasing power parity. Economic reforms have brought the country new international recognition.

MundoGEO Publishing was created in 1998 with the mission of being the convergence point of the geomatics community and location services, trading experiences, professional updating, and business generation. MundoGEO, in partnership with three international institutions, participates in creating and maintaining the Galileo Information Centre for Latin America (GICLA). In 2010. MundoGEO started working on a new project called Enhanced Code Galileo Receiver for Land Management in Brazil (ENCORE).



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# Hesse / Germany

Centre for satellite navigation Hesse (cesah) // cesah is a competence, information and incubation centre for Satellite Navigation supported by its shareholders, the Region of Hesse, the City of Darmstadt, as well as renowned scientific and industrial partners. cesah is partner of the ESA Business Incubation Initiative and is located in close vicinity to the European Space Operations Centre ESOC. The centre supports the development of business ideas and start-up companies in satellite navigation.

**Hessen-IT** // cesah is supported by Hessen-IT, a programme of the Hessian Ministry of Economical Affairs supporting the Hessian information and communication technology (ICT) sector in their market development, as well as SMEs in their efficient and creative use of ICT. Hessen-IT provides information via online databases, news releases, brochures and workshops etc. Hessen-IT furthered and accompanied the satellite navigation activities in Hesse from the beginning.

# **HESSEN**





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#### Israel

MATIMOP // MATIMOP- the Israeli Industry Center for R&D, is a non profit organisation acting on behalf of the Office of the Chief Scientist in the Ministry of Industry, Trade and Labor, which promotes technological and R&D cooperation and technology transfer activities between Israeli and foreign industries. Member of the Galileo Joint Undertaking (GJU), MATIMOP manages the Israeli participation to the GJU and to Galileo projects. Currently 8 projects are running in Israel and a call is open to participation of Israeli and European entities. MATIMOP serves as the Israeli national coordinator in international cooperative frameworks. As such, MATIMOP is the EUREKA National Project Coordinator, represents Israel within Galileo and SERAR activities, and is National Contact Point for the Enterprise Europe Network. MATIMOP recently joined the European ESInet network to enhance Israel's aerospace industry involvement in these activities. In addition to the international activities. MATIMOP administers national programmes including the MAGNET Programme for Generic Research and the National Technology Incubators Programme.



MATIMO'P מתימו"פ

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## Lombardy / Italy

Navigate Consortium // The 2010 ENSC regional challenge in Lombardy is being sponsored by the Italian Space Agency (ASI) and organised by Navigate Consortium. The Lombardy region is one of the 21 regions of Italy with its own constitution, upon which the Lombardy Consiglio Regionale (Regional Council) and Executive Government are based. Its capital city is Milan. The region's gross domestic product is EUR 245,8 billion, corresponding to 22.2% of Italy's total GDP. Lombardy is also Italy's leading region in terms of innovation, boasting a strong research and innovation infrastructure (with 12 universities and private R&D centres), abundant human capital, and a duly significant presence in terms of knowledge and industry. In addition, the region is home to the facilities of several leading national aerospace industries.

The Italian Space Agency (ASI) was set up in 1988 to coordinate and manage all of Italy's national space activities.





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#### Lithuania



National Space Association // Situated on the eastern coast of the Baltic Sea, Lithuania has a rich history and unique traditions, the oldest university in eastern Europe, a highly educated workforce (40 per cent with higher education), the highest mobile-phone penetration, and some of the densest broadband internet coverage in Europe. The country promotes R&D in biotechnologies, mechatronics, lasers, information and telecommunication technologies, nanotechnologies, and electronics.

The National Space Association of Lithuania was established to promote and support education, R&D, innovation, and other public activities in space-related fields. The organisation also seeks to achieve favourable conditions for actors in these fields, thus enabling them to serve business and governmental institutions as experts on space-related (and many other) issues. Though it is young, the Association is supremely dedicated its goal of enhancing Lithuania's science and business competitiveness in Europe and the rest of the world.





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# Madrid / Spain

IMADE // IMADE, the Madrid Development Agency, is an organisation under the aegis of the Region of Madrid Board of Economic Affairs. Its main objective is to promote development in the region through initiatives that encourage economic growth and job creation. Imade also promoted the development of a network of scientific and technological parks in the region of Madrid. The principal objective of these parks is to promote the generation of technological knowledge in different areas, based on the integration of scientific, technological, and industrial interests. They also seek to improve company competitiveness through innovation and technological development, and in particular through the creation and growth of new technology-based firms. In this sense, the Madrid Aerospace Cluster and the greater Madridnetwork have become key factors in the regional innovation and competitiveness involved in space-related policy.





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## Nice - Sophia Antipolis / France

Team Côte d'Azur // The Côte d'Azur is often designated as the "French Wireless Region" thanks to one of the mobile industry's largest professional community in Europe located in and around the Sophia Antipolis technology park. Sophia Antipolis is home to 1,300 multinational companies, SMEs, labs and international institutes representing 30,000 employees from 68 different nationalities. In Cannes, an important space sector has emerged thanks to one of the most important satellite manufacturing sites of Satcom world leader Thales Alenia Space. Furthermore, with is maritime, mountain and urban settings, our region provides an ideal location to set standards and norms, develop pilot applications, carry out test phases and pursue a range of activities linked to positioning navigation and timing.







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# North Rhine-Westphalia / Germany

NAVISAT e. V. // North Rhine-Westphalia is home to over 2,000 companies involved in satellite navigation, spatial data, or related fields. Germany's most populous federal state is also home to the German Aerospace Center, which has some of the most important basic research facilities in these areas.

The industry association NAVISAT combines and concentrates North Rhine-Westphalia's competencies in navigation, spatial data solutions, GMES, ICT, remote sensing, and telematics. The aim is to achieve transfer knowledge among all partners along the value chain and support the industry in expanding its activities in these areas. NAVISAT seeks to support commercial applications based on existing and future satellite navigation systems.





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# Niedersachsen / Germany

ITS Niedersachsen (former Gesamtzentrum für Verkehr Braunschweig) // Located at the Braunschweig Research Airport, the Galileo Centre for Safety-critical Applications, Certification and Services (GAUSS) combines and concentrates its members' competencies concerning safety-critical applications on a national and internationally scale. It is open to partners who have special expertise in standardising und certifying GNSS applications. The significance of certification for safety-critical applications - as well as the excellent reputation of GAUSS and its partners - is reflected in the fact that the European GNSS Supervisory Authority (GSA) assigned the task of drafting a Green Paper on the certification of Galileo applications to the GAUSS-team following their very first tender. In addition, the GAUSS member-organisation NavCert GmbH was commissioned to certify the German test-bed GATE.





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## Øresund / Denmark & Sweden

Øresund IT // Linking the south of Sweden and the Copenhagen area of Denmark, the Øresund region delivers unique value by combining the best of the Swedish and Danish systems. The region has one of the largest ICT concentrations in Europe, with over 100,000 workers, 12,000 companies, 8,000 students at 12 universities, and about 6,000 researchers. All this is managed by the non-profit cluster and network organisation Øresund IT, which is part of a larger Øresund collaboration (www.oresund.org) involving various potent cluster platforms in areas such as logistics and entrepreneurship. The region has a long tradition of advanced ICT solutions, including satellite navigation applications and research. Øresund IT's network also includes close cooperation with, for instance, Denmark's space research centres, satellite navigation clusters, and various universities and research institutes in these fields.



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# Prague / Czech Republic

The Ministry of Transport of the Czech Republic // The Ministry of Transport of the Czech Republic has a governmental mandate concerning its country's participation in the European satellite navigation programme Galileo and serves as national coordinator in the field of satellite navigation development. Its interest in transport development extends to space technologies closely associated with transportation, as well as to the potential transfer of space technologies initially developed for other activities into the transport field.

**The Czech Space Office** // The Czech Space Office is a non-profit association that was founded in November 2003. The Czech Ministry of Transport has entrusted it with organising the Czech Republic's regional ESNC competition. CSO serves as the national information centre for space activities in the Czech Republic, as well as the contact point for its country's cooperation with ESA. Based on an agreement with the Czech Ministry of Transport, CSO also plays the role of contact point for the Galileo programme.





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# South Holland / The Netherlands

Kennisalliantie // Zuid-Holland (South Holland) is a bustling, multifaceted province with around 130,200 registered businesses. The province also boasts various centres of knowledge and expertise, including three universities in Leiden, Delft, and Rotterdam; the TNO research laboratories; numerous innovation centres; and of course, the European Space Research and Technology Centre (ESTEC). The municipality of Noordwijk is also creating a space business park in the vicinity of ESTEC. Supported by the sponsorship of the Netherlands Space Office, Logica and the law firm De Clercq, the Kennisalliantie (Knowledge Alliance) organises regional participation in the European Satellite Navigation Competition for Zuid-Holland and other nearby provinces. The purpose of the Kennisalliantie is to promote new, innovative industries by establishing new alliances and product-market combinations in Zuid-Holland.





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# Taipei / Taiwan

Industrial Technology Research Institute (ITRI) // ITRI is Taiwan's leading institute for technological advance. ITRI is a non-profit R&D organisation equally financed by Taiwan's Ministry of Economic Affairs and the industry. Since its inception in 1973, ITRI has functioned as a cradle for Taiwan's microelectronic and ICT industries. ITRI has hosted over 300 start-ups since it started its incubating programme and open labs in 1996. In recent years, ITRI has evolved from a pure technology developer towards a value creator. With over 30 companies delivering GNSS products worldwide, Taiwan belongs to one of the most important contributors to the industry. ITRI's rich incubating experiences coupled with Taiwan's unique strength in commercialising R&D results has made the region Taiwan a highly attractive place for those who endeavor to turn their entrepreneurial dreams into business realities.





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#### **Switzerland**

clusteraviatik.ch // The non-profit organisation clusteraviatik.ch is part of the "entwicklungschweiz" association which has the aim to develop and to maintain sector-specific networks. Part of clusteraviatik.ch are academic and research organisations as well as companies in the field of aerospace technologies and applications like satellite navigation. clusteraviatik.ch supports actively the access to attractive markets of the future and strengthens the competitiveness of the Swiss research and industry. At the moment the initiative is supported by the Cantons Zurich, Nidwalden and Luzern, the Swiss Space Association and, on a case by case basis, by sponsors. clusteraviatik.ch is not primarily for the "big players" but supports especially SMEs and applied research. Special focus is set to the support of pupils to support them in their decision to become engineer or natural scientist.





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### **United Kingdom & Ireland**

GRACE – GNSS Research and Applications Centre of Excellence (UK) // GRACE is an internationally recognised centre of excellence that focuses on the applications of downstream satellite navigation technologies. It provides a state-of-the art environment in which to locate your business, interact with the GNSS community and develop world-class products and services with access to state of the art testing facilities including; a mobile laboratory, roof based test-track, hardware simulator and RTK test-bed. GRACE capitalises on existing world-leading research and training at the University of Nottingham. It combines the global-renown of cutting edge research and high calibre teaching in the Institute of Engineering Surveying and Space Geodesy (IESSG) and the Centre for Geospatial Science (CGS) to provide research, training and other support for industry, with a focus on Small and Medium-sized Enterprises (SMEs) and start-ups.



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Inside GNSS // Inside GNSS magazine covers the engineering solutions, policies, programmes, and most challenging applications of GPS, Galileo, GLONASS, Compass, and related technologies, with an estimated 2010 U.S. market size of more than USD 20 billion and 200 million units. The print edition of the magazine reaches a carefully targeted international audience of 35,000 product designers, system integrators, technical managers, manufacturers, and service providers as well as GNSS policy makers. Inside GNSS also offers a full digital version of the magazine, the monthly GNSS SIGNALS e-newsletter, and a website that receives more than 30,000 visits per month. The magazine is published eight times a year by Gibbons Media & Research LLC, a company based in Eugene, Oregon, USA, with more than 20 years' experience covering the development of the world's GNSS systems.



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# Valencia / Spain

IMPIVA - Generalitat Valenciana // Valencia is an Autonomous Community located in central and south-eastern Spain. It is divided into three provinces, from south to north; Alicante, Valencia and Castellón. It has 518 km of Mediterranean coastline and covers 23.259 sq. km of land with 5.02 million inhabitants (2008). The Valencian Community Aerospace Cluster was formed in 2007 with the objective of bringing together the activities involved in the production of goods and services for the aeronautical and aerospace business. The regional management partner for ESNC is the Valencian Institute of Small and Medium-Sized Industry (IMPIVA), a public entity responsible for the implementation of its industrial promotion policy in the sphere of small and medium-sized enterprises. It was created in 1984 as an initiative of the regional Ministry of Industry. Commerce and Innovation to reinforce its commitment to innovation and to the development of new technologies and resources in order to improve enterprise competitiveness.



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