



# tr bol

year XV / 2010

Does the European Union have anything to do with you?  
(Gregorio Robles).

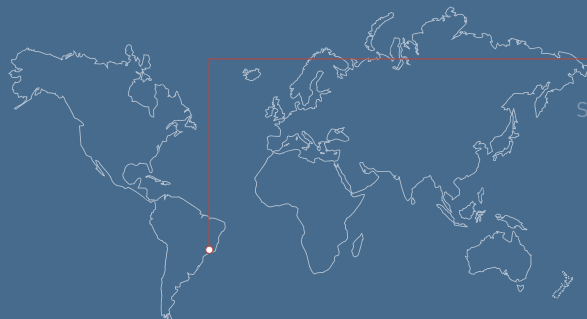
Pipeline Risk Management (Ricardo Rodrigues).

Luis Pe a: YCAR, Pay per use.

Tony Gasking: A velvet revolution in the London market.

# 52





Munich (Germany)  
 Buenos Aires (Argentina)  
 Brussels (Belgium)  
**S o Paulo (Brazil)**  
 Toronto (Canada)  
 Santiago de Chile (Chile)  
 Bogot  (Colombia)  
 Madrid (Spain)  
 New Jersey (USA)  
 Manila (Philippines)  
 Athens (Greece)  
 Milan (Italy)  
 M xico D.F. (Mexico)  
 Lisbon (Portugal)  
 London (United Kingdom)  
 Caracas (Venezuela)



**MAPFRE RE DO BRASIL**  
 Rua Olimp adas, 242, 5  Andar  
 Vila Olimp ia S o Paulo - SP - Brazil

## tr bol

This is a MAPFRE RE publication.

### Chairman:

Juan Antonio Pardo

### Editor:

Mar a Teresa Piserra

### Coordinator:

Marta Pita

### Editors Board:

Ram n Aymerich  
 Julio Castelblanque  
 Esther Cerde o  
 Javier Fern ndez-Cid  
 Eduardo Garc a  
 Mario Garc a  
 M  Teresa Gonz lez  
 Roc o Herrero  
 Pedro de Macedo  
 Luis de Mingo  
 Jose Carlos N jera  
 Enrique Orsolich  
 Javier del R o  
 Juan Luis Rom n  
 Eduardo S nchez  
 Mercedes Sanz  
 Juan Satr stegui

### Technical Coordination:

ITSEMAP Servicios Tecnol gicos  
 MAPFRE, S.A.

### Grafic design and layout:

www.quiank.com

### Printer:

Imagen Gr fica

### ISSN:

1137-246X

### Legal Deposit:

M. 33.551/1996

All rights reserved. The partial or total reproduction, distribution, transformation, manipulation, public dissemination or any other act of exploitation, whether remunerated or not, of the text, images or any other contents appearing in this publication without the written authorisation of the copyright holders is strictly prohibited.

Written authorisation can be applied for at the address [trebol@mapfre.com](mailto:trebol@mapfre.com), stating the title of the text (article or interview) to be reproduced, author/s, the TR BOL edition in which it was published and the media in which it will be disseminated.

TR BOL accepts no liability for the contents of any article or work signed by the authors nor does the fact of publishing them imply agreement or identification with the works expressed in this publication.

### Reader's mailbox:

All TR BOL readers are informed that the email address is available for them to channel suggestions, letters and requests to the Editors Board. All recipients of TR BOL are also invited to make any comments on the technical content of the articles and interviews, that will be forwarded to the authors should it be considered.

The online version of TR BOL is available in [www.mapfre.com/mapfrere](http://www.mapfre.com/mapfrere)



## summary

03

editorial

04

**Does the European Union have anything to do with you?**

Gregorio Robles  
Professor in Philosophy of Law in the University of the Balearic Islands  
Member of the Royal Academy of Moral and Political Sciences

10

**Pipeline Risk Management.**

Ricardo Rodrigues  
Chemist, Executive Director do ITSEMAP Brazil

18

interview:

**Luis Peña**

Head of Analysis and Research Department forming part of the MAPFRE FAMILIAR Strategic Planning and Innovation Division

24

interview:

**Tony Gasking**

General Manager of MAPFRE RE in London

31

agenda



## editorial

Coinciding with the Spanish presidency of the European Union it seems a good time to reflect on what this means in people's daily lives. TRÉBOL asked for the opinion of an outstanding expert in community matters, who tries to understand the reasons for the prevailing indifference in European countries towards Europe as a community, which he condenses in two words: distance and bureaucracy. The citizens are faced with a European labyrinth without sufficient institutional or political support to facilitate simple access to the Union's institutions, which are seen as something foreign and almost incomprehensible.

Brazil holds a privileged position in the world's most important economic and social forums, be it the G-20 meeting in 2008 to design the new financial architecture or the recent summit meeting on the climate in Copenhagen, the country plays a very significant role. It is also well known for its oil based energy resources but the country's economic development also takes account of both the technical and the environmental aspects. Therefore it is interesting to know the risk analysis methodology applied to lifelines and pipes that carry dangerous substances, which have been regulated in Brazil since 1981, as well as the general lines of a computer tool for risk analysis developed by ITSEMAP do Brasil.

If a Nobel Prize winner in Economics criticises the inefficiency of motor insurance rating tariffs that take no account of the vehicle's use and intensity circumstances the sector ought to consider itself in the firing line. This is the origin of the MAPFRE Familiar "pay per use" product that was marketed after many months of studying the driving habits of thousands of young drivers in Spain. The interview contained in this edition explains YCAR's history, advantages and future developments. This is all impregnated with the concept of innovation that ought to characterise Spain's leading motor insurer.

Farewells are not always sad. When somebody retires, happy with the work he has done, with confidence in his successor and the conviction that the team he has created will continue its professional activity with the highest level of quality, sad is not the right word. This is the case of the manager of the MAPFRE RE London office, Tony Gasking. In a short interview he reveals unknown aspects of the London office's implantation and the way the business has evolved. If he continues with the same enthusiasm as he put into his professional career all we foresee and wish for him is a long and interesting life in retirement. *Amen*

Front cover photograph:  
European Parliament Building, Strasbourg





# Does the European Union have anything to do with you?

Gregorio Robles  
Professor in Philosophy of Law in the University of the Balearic Islands  
Member of the Royal Academy of Moral and Political Sciences





Surely you have wondered, as I had as well, does the European Union really have anything to do with me?

The 7 June 2009 elections to the European Parliament have shown, once again, the indifference that society overall has towards Europe. This apathy when it comes to choosing European Parliamentary Members is not new or exclusive to the Spaniards. This is fairly obvious because in previous elections high percentages of abstention were also recorded and the fact that it is not exclusively ours is revealed by the unarguable fact of the low voting turnout in all the member states.

What are the causes of this lack of interest? How can this indifference be justified? I think that the first cause has to be sought in the image that our society overall has of the European Community. An image that we can define with two words: distant and bureaucratic, but above all with the first.

Distance has two very different aspects but they are combined in the psychological perception of all of us. In the first instance I refer to geographic distance; and in the second instance to the poor knowledge that we have of the European institutions and how they function. One has to admit that Europe's institutional reality is anything but simple. People cannot properly locate on the map the headquarters of the various bodies. Take this test yourself and with your closest friends, just question everybody where the headquarters of the Community Tribunal are located, those of the Commission, those of the European Parliament and those of the Central European Bank. You will probably obtain confused replies, something like "over there, near the centre of the continent", and there will be an uncertain array of the names of fairly notable cities in which



with little conviction and many doubts the following will appear: The Hague, Brussels, Paris, Amsterdam, Maastricht, Luxembourg, Strasbourg, Nice, Saarbrücken, Cologne and other possible candidates. If this happens to you, wandering confusedly in this regard, do not worry, you form part of most of humanity that also has a hazy outlook.

But the little knowledge of the institutions and their functioning is much worse than these mistakes in community geography; and the knowledge of the effect of community legislation within the member states and consequently also within Spain is even less. The average citizen cannot be blamed for this ignorance and it would be vain to require him or her to master the European labyrinth. To achieve this objective one needs something like a *masters degree*. In the first place the political

**Ask the Europeans where the headquarters of the Community Tribunal, The Commission, and The European Central Bank are located**





class that we have is to blame, politicians who are almost exclusively concerned with gathering votes and do absolutely nothing where the necessary education is concerned. We deserve politicians who teach the people what they need to know. Current political discourse is excessively rhetorical (aimed at convincing) as well as excessively demagogical, in other words exaggerated criticism of the adversary and over sizing of self-satisfaction. Let us remember the European election campaigns that we have lived through. They have all been characterised by having been done in national key, totally forgetting typically European issues. In this way how is it possible to interest large masses of the population in issues that are not even named in the campaigns?

However the causes that produce this image of distance do not stop there. To mention one more and it is not a small one, I will refer to

something that I have just mentioned: the European labyrinth. I normally say to my law students at the University on the first day of lectures: "what you are going to study is like an enormous labyrinth, which apart from being very extensive and very innately intricate is constantly changing over time, becoming even more of a labyrinth". I do not say this to discourage the students so much as to warn them. From its beginnings the putting into practice of the European project has been complex in its composition, surprising in many of its functional aspects and above all strangely confusing from the terminological viewpoint.

Did you know, for example, that there were three European Communities and now there are two because the first of all (the CECA - European Coal and Steel Community) ceased to exist in 2002 because one article of its



**The political class that we have concerns itself almost exclusively with gathering votes and does not provide the necessary education**

founding treaty provided for 50 years of existence? Did you know that despite the three European Communities existing during these 50 years the whole world referred to the combination of them with the name of European Community? Does it not seem strange to you that the old denomination of the European Economic Community has disappeared and has been replaced by that of "European Community" which is precisely the name that as I said served previously and still does today to denominate the three in conjunction or the two that remain after the first one's extinction. Did anybody tell you that the Maastricht Treaty, which is the one that created the European Union has the peculiarity of the articles not being accompanied by their corresponding Arabic number, as is normal in any body of norms, but by the letters of the alphabet (article A, article B and so on successively until article S)? But then the Amsterdam Treaty

changed it putting numbers when all of us involved in European law had patiently learnt the Treaty with its respective letters?

And if we talk of the frustrated European Constitution I would ask you: do you know anybody who at any time has read the entire text? My reply, if we exclude the people who were obliged to read it because of their profession, I do not know anybody who has read it, although over a certain period I continuously ask many of my friends and acquaintances. Most of all I obtained replies like this one, "well I have skimmed through it and stopped on the bit that interested me".

On the basis of the circumstances I have described and others that have not been mentioned it has been said in conclusion that the European Union has a "democratic deficit", that the European Parliament does not serve for much





and that the Union's government (this combination of the Council and the Commission) is subject to national interests. And however...

However the people must know that a significantly high percentage of national legislation (in our case Spanish legislation) is directly or indirectly determined by the Community norms. This means that the Treaties and the law produced by the Community institutions overall make up an inherited body of legislation of considerable size whose efficacy extends to the interior of the member states. Although you may not be aware of it your real life is governed in an astounding proportion by the EU rules. This happens through the simple reason that community law is integrated into the Spanish judicial order (the same way as it is integrated into the judicial orders of the rest of the member states).

Integration consists of community norms, which in addition to being EU law become part of Spain's internal law; they are Spanish law. Therefore they are norms that are applied by the national authorities, meaning by the public administrations and likewise by our courts and judges. This means that said norms can also be invoked by the indi-

viduals and companies in dealings with said administrative and judicial authorities.

What happens is that the mechanisms that make this integration of the community norms in the internal law of the member states are subtle and diverse and therefore the average citizen does not easily perceive them. The citizen is almost never aware that a law that the Spanish Parliament promulgated last week and that affected them is a consequence for example of a community directive that obliged the State to change its legislation. People perceive that it is the national parliament that continues to legislate as it has always done; and they do not see behind parliament's actions an EU mandate, when in reality the mandate very frequently exists. The production of Spanish law has become more complex because it requires prior studies and scenarios before the national parliament can act. But there is scarcely any social perception of this complexity. The same discrediting of the European Parliament (and consequently of elections to the parliament) has a similar cause, because its role in the production of Community norms is unknown. It is true that it does not have the same function as the national parliaments but it has been collaborating for many







years now with the Commission and Council in an effective way in the common task of producing law that afterwards will be integrated in the State judicial orders. When have you heard our politicians explain to the people that this collaboration consists of and what the procedures are that sustain it?

I have allowed myself to underline only certain basic aspects of the EU's influence in our own lives but I have left unsaid many other aspects, for example the rights that attach to us as "European citizens". This concept was introduced by the Treaty of Maastricht that creates, together with national citizenship another citizen status from which rights are derived, as important as that of being able to obtain assistance from the embassy of any member state in a third country when Spain does not have diplomatic representation in it and do it in the same conditions as the citizens of the member state in question.

Therefore if anybody asks you "does the EU have anything to do with me?" you ought to know that the reply really should be this one "yes, it has a lot to do with me although I find very hard to believe it".

**Do you know anybody who at any time has read the entire text of the frustrated European Constitution?**



Headquarters of the Central European Bank, Frankfurt



European Parliament Building, Strasbourg



# Pipeline Risk Management

Ricardo Rodrigues  
Chemist, Executive Director do ITSEMAP Brazil





Major advances in Brazil's energy sector, particularly oil and gas, have required a series of investments not only in production and exploration, but also in the infrastructure for transporting the products extracted from the exploitation fields to the refineries.

In this context, one would emphasise the investments made in recovering the country's rail network as well as in building pipelines to transport oil, derivatives, gas and alcohol – an infrastructure that has been extended in recent years.

PETROBRAS TRANSPORTE (TRANSPETRO) alone currently has a network of 7,000 km of oil pipeline and 4,000 km of gas pipeline, in addition to 26 river terminals and 20 land terminals.

In the area of natural gas distribution, Brazil currently has 26 distribution companies present in almost all of the country's states. One would highlight the presence of multinationals such as Gas Natural and the Eni Group, among others.

In addition to the oil and gas area, significant investments have been made in biodiesel and ethanol, the latter given that Brazil is a major alcohol producer and exporter.

There are many pipeline projects and works underway, generating intense demand for technical improvement in all stages of development of these installations, as well as in aspects related to environmental risk analysis.





**The analysis of risks associated to projects operating with hazardous substances has been regulated in Brazil since 1981**



Hence, a large number of studies and technical progress have been made not only by project developers but also by those responsible for the risk engineering chain. As a result advanced technical tools have been designed for identifying, evaluating and controlling the risks associated with pipelines used to transport hazardous products.

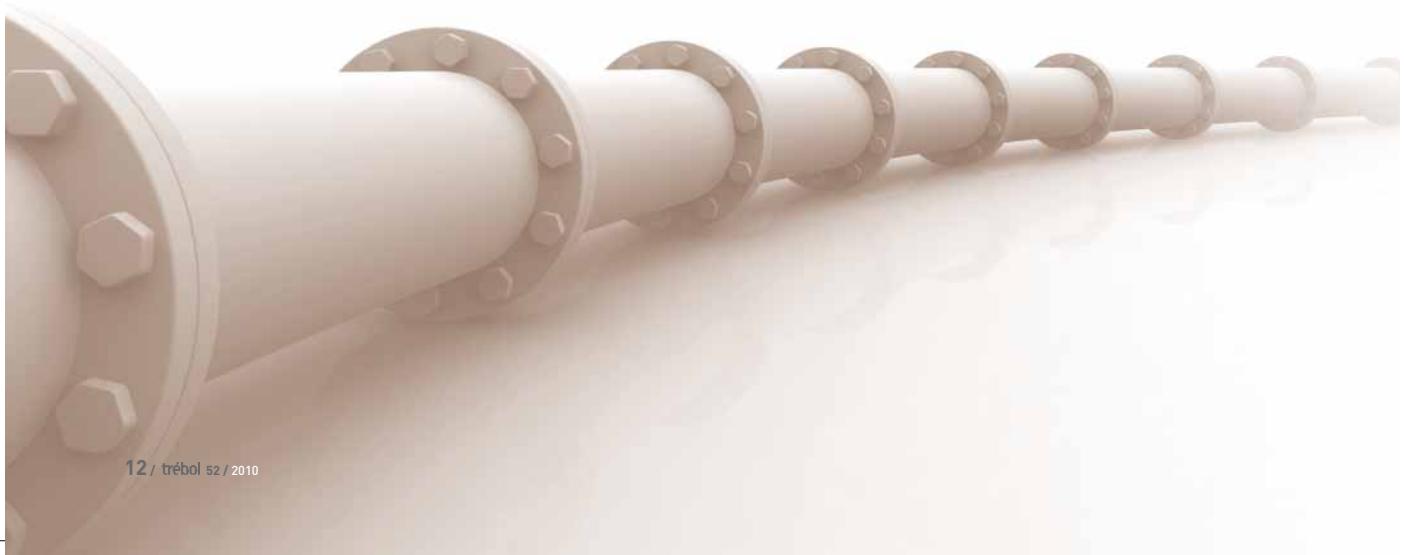
In Brazil, the analysis of risks associated with projects operating with hazardous substances has been regulated since 1981, both in terms of occupational health and environmental safety. In that year, Federal Law no. **6938** came into force, establishing the National Environment Policy. Subsequently, in 1986, with the publication of the Resolution 01/86 of the National Council for the Environment (CONAMA), risk analysis reports were included in the process for obtaining environmental licences.

Therefore, for more than 20 years, all new projects that affect the environment or that represent a threat to neighbouring communities, must submit a Quantitative Risk Analysis (QRA) to the competent environmental bodies in order to verify that the levels of transferred risk are tolerable in comparison to internationally accepted standards.

### **QRAs (Quantitative Risk Analyses)**

In general, QRAs cover the following aspects:

► **Regional and project description:** the pur-





pose of this first stage is to present the project/process under analysis in outline, as well as the main environmental characteristics of its location, populated areas, environmentally sensitive areas and climate and meteorological conditions. In the case of pipelines, since they are linear projects, it is important for the entire route to be mapped and for all vulnerable elements to be identified that could be affected by an accident, whether by a spill into bodies of water, fires or explosions or toxic gas emissions into the atmosphere. Figure 1 is an example of a pipeline map for the purposes of a QRA, prepared by ITSEMAP Brazil.

**Figure 1. Example of a Pipeline Route Map (ITSEMAP Brazil)**



► **Characteristics and properties of the substances:** all of the hazardous substances involved in the process under evaluation must be described. From a general point of view, the main information to submit is:

- Physical and chemical composition and properties;
- Hazardous nature;
- Fire hazards, fire protection and fire fighting methods;
- Toxicological parameters;
- First aid;
- Actions to be taken in an emergency.

► **Accident History Analysis (AHA):** the main purpose of this is to report the frequencies of defined accidents, the types of scenarios and likely damage, as well as its causes. To do this, accident data banks and international references are consulted such as:

- UKOPA (*United Kingdom Onshore Pipeline Operator's Association, UK*);
- DOT/OPS (*Department of Transportation, Office of Pipeline Safety, USA*);
- CONCAWE (*Conservation Of Clean Air, Water and the Environment, BE*);
- PARLOC (*Pipelines and Risers, Loss of Containment, UK*);

► MHIDAS (*Major Hazardous Incident Data Service, UKAEA*);

► EGIG (*European Gas Incident Data Group*).

► **Identification of scenarios:** the purpose of this stage is to identify the various typical hypotheses for accidents in the operating phase of the project under study. In the case of pipelines, they are normally associated to lost containment capacity due to major cracks or the appearance of holes in the pipes. In order to typify the causes various methodologies are usually applied, such as: *HazOp, FME or, Checklist's*, among others. At the same time, for pipeline studies the use of a Preliminary Hazard Analysis is fairly common (PHA).

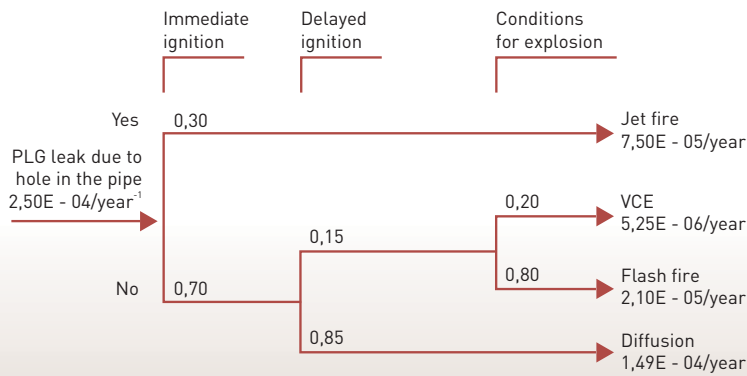
► **Estimation of frequencies:** the annual frequencies with which each of the accident scenarios identified in the previous stage occur must be estimated, taking as reference the historical records analysed in the AHA carried out previously. The preparation of Event Trees, as shown in Figure 2, illustrates the different accident scenarios (evolutions) that can arise from the accident hypotheses, and calculates the frequency with which they are likely to occur.

► **Calculation of consequences and vulnerability analysis:** the different consequences

**All new projects that affect the environment or that represent a threat to neighbouring communities, must submit a Quantitative Risk Analysis (QRA)**



Figure 2. Example of a Gas Pipeline Event Tree



VCE: Vapour Cloud Explosion

Jet fire: fire of a gas leak /pressurised liquid

Flash fire: deflagration without explosive effects



(physical effects) associated to the accident scenarios under study are calculated using suitable simulation models that represent studied phenomena, such as fires, explosions and the emission of toxic substances. These effects are appraised in terms of the vulnerability of the affected areas by means of *PROBIT* - type equations (*Probabilistic Unit Method*). In general, the considered ranges of physical effects, for both risk evaluation and support in developing future emergency response plans, are:

- **Heat radiation:** *Probits* corresponding to 1%, 50% and 99% probability of occurring and corresponding effects at  $3.0 \text{ kW/m}^2$ .
- **Vapour Cloud Fire (Flashfire):** Lower Flammability Limit (LFL).
- **Overpressure:** *Probits* corresponding to 1%, 50% and 99% probability of occurring and corresponding effects at 0.05 bar.

In the case of pipelines used to transport liquids it is necessary to calculate spilled volumes prior to carrying out the physical effect simulations. Depending on the course and extension of the pipeline under study, this

calculation can be very complex, also taking into account operational aspects (pump stop times and intermediate and final valve closing).

## LeakMAP

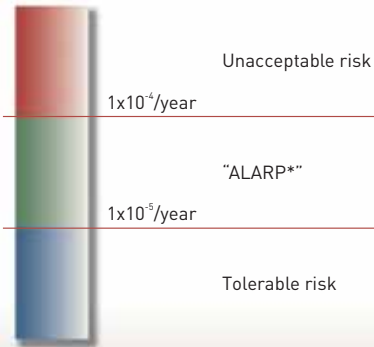
In order to cover this need, ITSEMAP has developed a specific computer application to carry out these calculations, known as *LeakMAP*.

In general terms, the *LeakMAP Programme* determines the total spilled volume from a pipeline taking into consideration the sum of the volume spilled until detection of the leak and that occurring during the emptying of the hydraulic column. Thus, these calculations take the following parameters, among others, into account:





**Figure 3. Tolerance Criteria of Individual Risk for Pipelines (CETESB, 2003)**



\* ALARP: As Low As Reasonably Practicable

- ▶ Fuel discharge coefficient.
- ▶ Pipe burial depth.
- ▶ Nominal diameter and thickness of the pipe wall.
- ▶ Pressure gauge heights at product inlet and outlet.
- ▶ Density and pressure of the vapour of the transported product.
- ▶ Hydraulic profile of the pipe.
- ▶ Diameter of the leak hole.
- ▶ Maximum time estimated for containing the spill.
- ▶ Estimated time for detecting the spill.

- ▶ Time to cease pumping.
- ▶ Time needed to block the valves in order to isolate the leak point.

As a result, the programme supplies the initial discharge rate, initial discharge speed, spill duration and total spill volume.

- ▶ **Risk estimation and evaluation:** the combination of frequencies of occurrence with the studied physical effects provides a quantification of the risks, which must be expressed as Individual Risk (IR) and Social Risk (SR), the latter represented in the form of a curve F-N (accumulated frequency x number of potential fatalities).

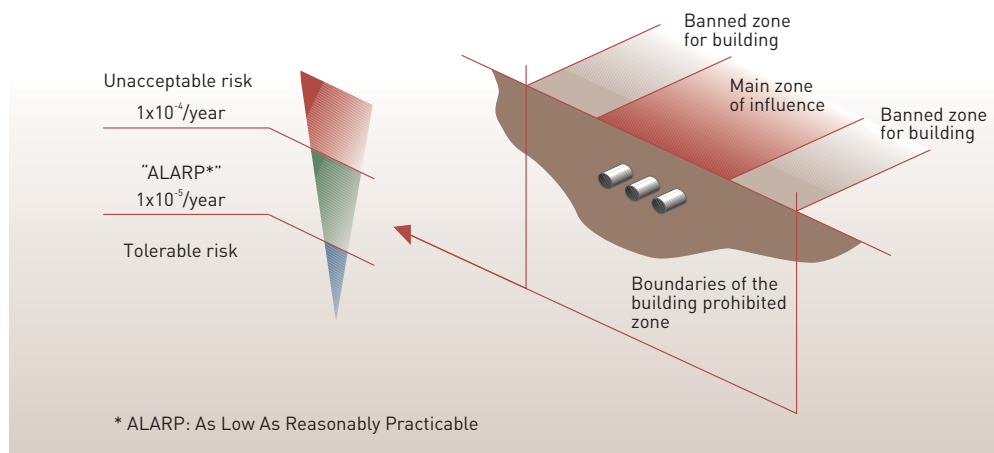
In order to carry out these complex calculations, ITSEMAP has developed the QuantoX tools with a specific complement to analyse linear risks, such as pipeline routes.

The estimated risk levels must be compared with the tolerance criteria established by the Environmental Bodies that authorise and tax the projects, whose IR criteria (individual risk of fatality per year) are presented in Figure 3.

**The LeakMAP Programme determines the total volume leaked from a pipeline taking into consideration the sum of the volume spilled in the time until the leak was detected and that occurring during emptying of the hydraulic column**



**Figure 4. Individual Risk Criteria for the Non-Buildable Plot (IBAMA, 2005)**



**Before a new pipeline starts functioning, the operator must have established a Risk Management Programme (RMP)**





Another important aspect is that for the installation of additional pipelines on existing routes where other pipes used to transport hazardous substances already operate, the total risk of the affected stretch of land must be estimated. If the level of accumulated risk is higher than admissible, an additional stretch of land will be determined for production where construction of any type will be prohibited, so as to guarantee the safety of the people in the vicinity of the pipeline as shown in Figure 4.

► **Mitigating measures and risk management:** need to be defined and established in the event of the risks of the pipeline under study exceeding the tolerance level according to the criteria established in the corresponding legal norms. Their objective is to reduce the risks and guarantee the necessary level of safety.



Finally, it is worth noting that before a new pipeline starts functioning, the operator must have established a Risk Management Programme (RMP) as a means to guarantee the safe start-up of the project with all risks fully under control. In general, the scope of a RMP extends to:

- Safety information.
- Risk analysis and review policy.
- Management of modifications.
- Maintenance and guarantee of critical systems' integrity.
- Operating norms and procedures.
- HR training policy for personnel involved in the pipeline's operation.
- Procedures for investigating incidents.
- Audit programme.
- Emergency plan.

## Conclusion

Pipeline transport of hazardous substances, though noticeably reducing the risk in relation to other ways of transport presents residual risks with a high potential impact on human activity and the environment.

With a view to controlling that risk, the competent authorities for approving and supervising the operation as well as the operators themselves have policies and criteria for determining acceptable risk levels as well as the necessary technical and management procedures.

The complexity of risk evaluation methodologies make the use of specific tools necessary, many of which ITSEMAP has developed in order to satisfy its customers' needs.

[www.itsemap.com](http://www.itsemap.com)





## interview to **Luis Peña**

Head of Analysis and Research Department  
forming part of the MAPFRE FAMILIAR  
Strategic Planning and Innovation Division



Luis Peña was born in Madrid on 20 June 1971. He is married and has three children.

He is a law graduate and an ICADE graduate in business sciences. He holds the INESE master in motor insurance degree and an MBA executive degree from the University of Alcalá de Henares.

He has spent his entire professional career in MAPFRE FAMILIAR, where he started to work in 1995.

He is currently Head of the Analysis and Research Department within the MAPFRE FAMILIAR Strategic Planning and Innovation Division.



*“Until now we Insurers had paid more attention to the claims history in our tariffs than to what are called psycho-physical factors”*

The objective of the YCAR product of MAPFRE FAMILIAR, a modality known as pay per use is to incorporate the driver's habits behind the wheel in the price of the insurance, according to the results of a never-ending study. This is the first time that an innovation like payment per use in motor insurance has been introduced in Spain, which could revolutionize the entire system of current rating. For the time being, as the pioneers, MAPFRE FAMILIAR have reached some conclusions although three more years will be required for greater reliability. This interview brings us closer to knowing the objectives, strategies and steps that are being taken.

**In a continuous process of innovation such as the one you are developing what is the prevailing philosophy?**

There are many tools and a large amount of intuition. In addition we are looking for innovations that have a strategic projection, in other words, best for today but with a vision of the future. The starting philosophical point is always the strategic plan. The client has been placed in the centre of the entire MAPFRE company structure and therefore in the middle of all those areas that make up MAPFRE FAMILIAR. We are now all rowing in the same direction, we know the priorities. All our activity is focused on client satisfaction. The client gains advantages from our ceasing to be a single branch entity and becoming a multi-branch company. For example we are implementing discounts for integrating various policies, something that was not possible before, because each unit, each company, had its own results account to protect.

**Does this involve massive innovation?**

Yes, but it is not specific to the insurance sector. For some years now the banking sector has been refining its product matrices and knows which are the ones that better bind the clients and on the basis of this knowledge it establishes the offers. This is that we are applying now. A client value matrix exists, not all clients are the same, because some are profitable and others unprofitable, and in this case who are we going to treat better? Undoubtedly the most profitable ones. What is true is that it is ever harder to grow in personal lines business and therein lays the importance of policies aimed at reducing the rates of non-renewal. We have more than seven million clients in Spain and are well aware that we can grow from inside, enhancing the offer of products for our existing clients without prejudicing the incorporation of new clients.

**One of the creations of the MAPFRE FAMILIAR Innovation Division is the product aimed at**

**The philosophy's starting point is always the strategic plan and the client has been placed in the centre of the entire MAPFRE business structure**



**young drivers known as “Generation Y”, which has evolved and become a star product – YCAR. What objectives were being sought and how was it born?**

After a market study and a very rigorous analysis phase the conclusion was reached: that it was worthwhile experimenting with the possibility of incorporating new risk factors related to road safety in the premium calculations, such as the type of roads used and the driving time bands. Until now insurance companies had taken little account of these factors because in the current rating system the claim history carries more weight than the psycho-physical factors; in other words, we know in the context of other variables on what day of the week the client drives, the routes that are followed, whether the client drinks and drives. This is important because for example in the field of road safety we know that

70% of the fatal accidents at weekends occur on secondary roads.

**To transfer this experience that is already in progress in Spain we suppose that the way others functioned was examined. In addition we have the problem of privacy, ensuring that the user’s behaviour does not transcend beyond this objective of adjusting the premium according to the vehicle’s use.**

Indeed, before the experience of Great Britain where this system is fairly extended we have the Progressive system in Texas in 1998. The American experience revealed two defects: privacy problems that obliged the Americans to abandon the GPS and the cost / benefit ratio. If we go back to the roots this is an idea of the Canadian Economics Nobel Prize winner William Vickrey, who criticised the inefficiency of rating





## Pay per use - a pioneering experiment in Spain

### What is the objective of the study of your insurance habits behind the wheel?

We are looking for experience on these new risk factors that we do not know and that road safety tells us have an influence on the causes of accidents. We are handling data that is not contained in the General Directorate of Traffic statistics and we aim to compare the data. This involves a pioneering experiment and one of the premises is that the study is never-ending; it has no expiry date even though we will have to wait at least three years to reach valid conclusions.

### Are new Insureds being incorporated in the sampling?

Yes. Our YCAR product is aimed at drivers aged up to 30 but the purpose is that it is maintained throughout the policy's life. To encourage it we offer substantial discounts on contracting the insurance and in addition we give away fuel cards, exchangeable at petrol stations that can reach more than Euros 600 in the event of the profiles defined as good driving being met.

### Since the study and the derived conclusions constitute a long and complex process what is your initial assigned budget? Will other companies in the market follow your footsteps?

The official figure is Euros 10 million and in answer to your second question the truth is that we want the market to copy us because in this way the concept will be generalised even though we are the first. The competitive advantage lies in tariff refinement and the company that will have the advantage is the one that has the best statistical base, the one that can personalise more.

systems because they did not take into account the intensity of use. If one turns the lights off one pays a lower electricity bill but if you leave the car at home you do not pay less for the insurance. Two approximations were made; one was paying at the petrol pumps, in other words insurance as an added price on petrol to take into account the use intensity: more use, more petrol and more premium. The same happened with tyres which became known as "insured tyres". Vickrey was quite a visionary but he did not get it right because at that time there were no applied technologies. His considerations can be taken up again when satellite technology devices are incorporated in the vehicle, be it GPS, Glonass or Galileo, which allow measurement of the use intensity variables in an objective way: kilometres driven, speed, night time or daytime driving, for example.

### When MAPFRE FAMILIAR implements the pay per use system in Spain in an experimental way as the basis for a wide study, what steps are taken and how many drivers are involved?

In principle the product is aimed at young drivers. Between 5 November 2007 and the first week of September 2008, 10,000 young drivers of between 18 and 27 years old subscribed to the experiment. Today there are more than 16,000. The segment of the population was deliberately limited to make the conclusions more valid. This group covers all types of vehicles and all geographic locations. The greater the diversity the better it is for the study phase. This is why we substantially subsidise these new young Insureds, even with discounts of 20% on the standard young drivers' premium in MAPFRE. We will need three years to reach solid conclusions.

### Does the installation of a satellite based moni-

**The competitive advantage lies in tariff refinement and the company that will have the advantage is the one that has the best statistical base, the one that can personalise more**



**There are only two times when information on the exact position of the vehicle is collected with GPS: in the event of theft and in the case of an accident**

**toring device, in exchange for cheaper insurance entail a loss of confidentiality where the person's habits are concerned?**

We use the GPS system but the data that we receive are always aggregated and we cannot access detailed information. Knowing exactly where the vehicle is located would add nothing where the payment for use tariff is concerned. There are only two times when the information on the exact position of the vehicle is collected: in the event of theft (to be able to recover the vehicle) and in the case of an accident (to be able to send emergency medical services).

**Exactly what types of controls are exercised?**

The terminal transmits data that go to the server of an external computer system provider and the provider has the data associated to a PIN, an identification code that contains no data of a personal nature. When the computer system provider sends the data to MAPFRE FAMILIAR within an automated process, it is done without the details of the vehicle's exact position defined by the GPS longitude and latitude coordinates. This is what we call the privacy firewall and this is what AENOR (Spanish Standards Institute) certifies.

I would stress again that in the YCAR insurance MAPFRE FAMILIAR do not know the exact position of the vehicle except in the case of impact or theft. At these times the advantage of having the GPS terminal installed in the vehicle is most appreciated. In the case of impact, to say a very sudden reduction of speed, it is the car that transmits the signal to the system provider, which in turn alerts us.

**Have lives been saved thanks to the installation of this system?**

The first thing we do on receiving an impact alarm signal is a phone call to the Insured's mobile number. If we do not manage to speak to the Insured a basic protocol is initiated. From a certain detected impact intensity and in the absence of telephone communication we call 112 and this is an added value that we provide. The 112 emergency services have validated the credibility of our system and above certain thresholds we know that a serious accident has occurred with injuries and therefore the 112 emergency medical treatment service is automatically notified. We have concrete experience in this sense.

**And in the case of theft?**

We can know the exact position of the vehicle but as a guarantee for initiating monitoring we require that the owner has reported the disappearance to the police. We have recovered practically all stolen vehicles with few exceptions.

**What are the characteristics of the GPS device installed in the vehicles?**

It is small, about the size of two packets of cigarettes and it is equipped with three peripherals: a GPS aerial to recognise the position; a GSM GRPS aerial to transmit the data by mobile telephony and the sudden speed reduction meter that reports a possible collision. This is all hidden in the vehicle.

**Could the installation of this device distort behaviour behind the wheel when the driver thinks he is being watched? Does the monitoring extend to other countries in the European Union?**

It is perfectly fine when somebody modifies their habits to improve them. This effect is diluted over time. Regarding monitoring in other countries it continues to function in principle and in fact we also provide the vehicle recovery service in the case of theft in France and Portugal.





## What are the first conclusions reached through the implementation of the YCAR product?

First of all not all young drivers are the same. There is a predominance of single drivers of the most powerful cars and this effect is multiplied when we speak of weekends. From Monday to Thursday women drive more than men; at weekends the man predominates with powerful vehicles, above all in the evening or night. Men start to use their car in the mornings before women, between 6.30 am and 7 am. Women use their cars in the mornings between 8 am and 9 am. We have analysed three driving groups by use of vehicles; the constant, the active, in other words the working days and leisure days and those that only use the vehicle at weekends. There are large differences in the maximum speeds and in the distances travelled. We have noted that the leisure drivers travel larger distances because they drive on Saturdays and Sundays, as compared to the constant drivers even though they use the vehicle on more days. This takes the myth out of certain aspects of road safety. There is no relation with age; the relation is with the journey. The day of most vehicle use is Friday.



<http://www.mapfre.com/portal/generacion-young/generacion-young.shtml>

## What feelings does this product generate when it is the price that varies most?

The price is not the only variable. You can compete on price but added value services exist. A father values the importance of having a system that guarantees medical treatment when an impact of a certain intensity occurs. When a company like MAPFRE FAMILIAR puts all its efforts in promoting a project like this one something positive must be behind it - advantages for all the parties. We are sure that the future of motor insurance will follow this path and that times of crisis are the most propitious for innovation. We hope to have as much success as possible although I would not dare to give an estimate of the number of policies that we are going to achieve with this product.

## Are you going to incorporate the satellite based device in motorcycles?

Yes. In fact in July 2009 MAPFRE FAMILIAR started marketing "eBike10", an insurance for motorcycles of 125 or more cc, linked to the installation of the satellite based device to help the motorcyclist at all times: it allows locating the motorcycle in the case of theft, identification of attempted sabotage, falling over when parked or loss of battery. With eBike 10 MAPFRE FAMILIAR have betted heavily on innovation and safety for motorcyclists, because the device will provide help in emergency situations. According to recent data the risk of dying in a road accident when driving a motorcycle is 17 times higher than that

of when driving a saloon car and that 41% of motorcyclists' deaths are due to leaving the road. Given these figures reducing the time of treating the injured motorcyclist thanks to eBike10 in many cases will prove vital.



**We will need three years to reach solid conclusions**





## interview to **Tony Gasking**

General Manager of MAPFRE RE  
in London



MAPFRE RE London Headquarters

## A velvet revolution

MAPFRE RE is today a major reinsurance company in the London market with the careful and measured direction of retiring general manager of the London Branch, Tony Gasking. He discussed his career in interview.

Tony is not a big gambler. He loves to play bridge and is chairman of his local bridge club so he understands the basic risk-reward equation as any underwriter or bridge player.

When he joined MAPFRE RE back in 1991, MAPFRE RE was a medium sized player in International markets and little known in the London market. Between 1991 and 2008 gross written premiums have grown to EUR 1,800 million for the Company and from EUR 6 million to EUR 55 million for the London operation.

"And in London we did that without writing LMX (London market excess of loss) treaties and taking risky business," he said.

Tony Gasking says that now is not a good time for the reinsurance market as the market grapples with economic uncertainty, growth opportunities are currently limited and the landscape and understanding of insurance are unclear in many of the emerging markets that offer the best underlying potential.

But Tony believes that the job is far from impossible for his successor in the London office of MAPFRE RE. This is because they will be able to build on a firm foundation that is based on the traditional principles of capital strength, quality underwriters and solid long term relationships built over time that have served him and the group so well over the last 40 years or so, personally, more than 25 years for MAPFRE RE so well for more than 25 years.



*“The biggest achievement has been to place MAPFRE RE on the map outside of its traditional markets of Spain and Latin America”*

But his outlook is fundamentally cautious and having spent so long in the heart of the world’s oldest insurance and reinsurance market where so many so-called stars have crashed on the rock of over-ambition that is not surprising.

He now of course presents the picture of the typical experienced and easy-going London market man. But his early life certainly did not mean that he was destined for the financial market, let alone the archane world of the London insurance market. Like so many of his contemporaries he simply fell into the role and was smitten, never to leave.

Tony was brought up in North London but left for the beautiful cathedral city of Canterbury aged 14 as his father took a promotion to run the Inland Revenue Collection office there. He said it was a lovely experience for a family to escape from London in the era of post-war austerity and he thoroughly enjoyed his new school in the countryside.

“I was a generalist not a specialist but had always enjoyed languages and was particularly interested in Spanish, French and latterly economics,” he said.

He started to learn Spanish soon after French when still at Grammar school in London at the



Canary Wharf skyline, London



**When he joined MAPFRE RE back in 1991, MAPFRE RE was a medium sized player in International markets and little known in the London market**

age of 13. Like many native English speakers he only managed to master the skill because of his personal interest rather than the structured method of teaching with forced reading still so common in the UK.

"I enjoyed it, especially translating. The problem for English people learning foreign languages is the education system that puts you off, particularly foreign literature, for years," he said.

Tony left school for Bristol University and did a Combined Honours Degree in French, Spanish and Economics.

Like many bright English youngsters of his generation Tony left university with no fixed plans for how he wanted to use his languages, other than work overseas and further his interest in economics and business.

He therefore applied for any job that offered an overseas appointment and ended up accepting a graduate trainee position with the Phoenix Assurance Company because it had a wide network of international offices.

Unfortunately at that time the opportunities for graduates like Tony to work overseas were limited because national governments wanted to ensure that such opportunities were made available for locals. When a vacancy was advertised in the group's reinsurance office - Tariff Re (later re-named London Guarantee & Re) in 1971 he decided to apply, despite the fact that he knew nothing about reinsurance.

Tony got on very well with the general manager, Arthur Lowndes, who interviewed him for the role and has stayed in the market ever since. "I have never met anyone who originally intended to pursue a career in reinsurance," he said.

He learned his basic management technique from this man. "He showed me how I like an office to be run, by setting a good example yourself not by subjugating your staff but by motivating them to want to develop the company the way you want it to be developed. I have never been one to complain about a long lunch, a late start or an early finish as long



as it is for the right reasons and the job is done. This is particularly effective when people need to work extra hours such as during the renewal seasons," he said. Tony met his wife, Carol, while at Tariff Re.

The Phoenix was bought by Sun Alliance in 1985 but the Sun Alliance had experienced difficulties with its own reinsurance operation at the time and had decided to exit the line. Unfortunately L.G. & Re had no future in the new group.

Tony left the company with three colleagues and set up an operation for Japanese insurance group Yasuda as assistant general manager. This went well until the hurricane Hugo





Bridge over the River Thames, London

in 1989 and the European windstorms of 1990 devastated the market.

Tony always kept clear of the London market excess of loss business that created the famous London market spiral and destroyed so many careers.

Unfortunately Yasuda had not been out of the LMX market as a group and, as he stated, the Japanese company decided to "throw the baby out with the bathwater" and closed down its reinsurance business worldwide.

Tony was put in touch with MAPFRE RE that wanted to open a London office at the time and was looking for an experienced manager

who could understand the MAPFRE way of doing business. Tony was recommended because of his knowledge of Spanish that he admits was rather rusty at the time.

"When I went to Madrid in 1991 I had not spoken Spanish for two to three years and not frequently for ten to fifteen. The interview with the Deputy General Manager began in English but when the general manager came in to say 'good morning' I greeted him in Spanish," explained Tony.

"From that moment on we spoke Spanish for the whole day through interviews with several of the senior people. Also it was 43°C! We took lunch and then they put me in a taxi to

**Tony always kept clear of the London market excess of loss business**



**All we need in the London office is a front line active service**

the airport. On the flight home I tried to calm down!. Fortunately it was all worth it and I was offered the job to join in October 1991. It was a great result to find myself working for a Spanish company. My mother said, "who would have thought all that work you did when you were at school would lead to this!" he continued.

His role initially was as a non-proportional treaty underwriter for the brand new operation which was initially a Representative Office.

Because of his market standing Tony was able to bring some 75% of the business he had underwritten at Yasuda to MAPFRE RE. His colleagues in Spain were delighted because previously they had been lucky to see one or two layers. But Tony was able to bring them the whole programme and vastly increased their London portfolio from brokers.

"I knew people in the market and so I was shown the whole programme, rather than the odd layer they had seen before, and was able to transfer it across to Spain as we were only a contact office at the time", he said.

It was important for MAPFRE RE to hire an experienced London market manager because at the time very few people had heard of the company unless they worked in or with the Spanish or Latin American markets.

Tony took a cautious and long term approach from day one only writing short tail lines such as property and catastrophe. His local boss, Leslie McKinnes, left in 1992 and he was offered the job to take charge.

This was an exciting time for Tony and MAPFRE as the group wanted to expand and set up a branch office. The plan was to build the business through close long term relationships with the London brokers who dominate this market.

As he worked with his growing team to set the foundation a further opportunity arose to manage the 350 year-old listed building that MAPFRE RE occupied following the group decision to close its stock broking arm.



The management of the building was not a simple task because of its age and listed status. Tony recalls dramas with English Heritage when maintenance works had to be done.

The Branch license was acquired in 1994 and that really boosted the London business. A marine underwriter was hired and Tony began to look for an alternative base. Although the office is only five minutes walk from Lloyd's of London it was off the beaten track and not ideal to service the notoriously lazy London market broker community, he joked.

MAPFRE RE then secured a spot in the London Underwriting Centre (LUC) in 1996 that, along with the appointment of another un-



Lloyd's Building, London

"There is still very much a value to being in the London market and the face to face contact remains critical, perhaps more so than ever. Our cedants come to London, which gives us an additional opportunity to meet them, and MAPFRE likes to be very close to its customers," he added.

The London office is staffed by six people today and Tony describes it as a highly efficient operation. It is able to personally serve its core relationships but on a lean cost base as support functions such as legal, investment and accounting services are carried out in Madrid through one fibre optic cable.

"All we need here is the sharp end. We have me, a property and a marine underwriter, treaty analyst doing catastrophe modelling and the like, plus a financial and a technical accountant and we are on the verge of hiring a couple of new people. Our profile has grown from writing only 1.5-2% shares of programs to a lead company with double-digit shares. You have to be much surer of the technical position as the game has changed. You can no longer balance thousands of small participations with a broad spread so you have to be certain you have adequate pricing," he said.

Asked why he felt the London operation needed to change and grow Tony explained that it was driven by market forces not ego or some blind desire to grow at all costs. "Risks are bigger and the market could not handle them in the same way. Insurers have merged and therefore the risks they seek to transfer are bigger. They are able to retain more but create bigger exposures," he said.

Tony also said that the shrinking retrocession market has demanded bigger reinsurance capacity because reinsurers are forced to retain more. And, of course, the modern reinsurance company needs greater diversity of risk by line and geographical spread because the exposures are greater and the demands on capital ever greater from the emerging risk-based supervisory systems worldwide.

The future for the MAPFRE RE and the wider reinsurance market is secure he says because traditional reinsurance works, offers continuity and is much better understood by ceding

**The challenge for my successor is to find new ways of doing business beyond what we currently do, such as life, accident and health**

derwriter, increased inwards premium volume by around 30% in one renewal. The LUC office worked well until rent costs rocketed in 1999, companies left and this, coupled with the rise of electronic trading in the London reinsurance market, meant that it was no longer as attractive.

"We were seeing less traffic and also decided in 1999/2000 to close the facultative account because it was not doing too well and the facultative underwriters drew a lot of traffic into the LUC office. The brokers were beginning to say we don't care where you are and walking between the two offices was taking up to an hour a day that was disruptive so we decided to bring everything back to MAPFRE House," explained Tony.





companies than alternative forms of supposed risk transfer and is generally more economic.

Tony sees growth opportunities in areas and fears that the over ambitious or impatient could become impaled again on the tricky and very spiky casualty market, for example. "You can only do more of the same for so long, of course, therefore the challenge for my successor is to find new ways of doing business beyond what we currently do, such as life, accident and health. "Stick to your knitting but find new patterns. Do not start crochet," he advised.

### Best and Worst

Tony Gasking's worst moment in his career came in 2001 after the combined forces of the terrorist attacks on the United States, emerging long tail liabilities for U.S. casualty business written between 1997 and 2001 and

the collapse in both debt and equity markets seemed to threaten the future survival of the market as a whole.

"We had experienced a very good run up till then and the London Branch was making a lot of money but we lost money that year. There was a real concern about the London operation but we survived because we had returned strong profits every year till then, delivered strong cash flow and a good number of senior executives understood the value of the business," he explained.

Tony says his biggest achievement was to place MAPFRE RE on the map outside of its traditional markets of Spain and Latin America.

"We raised the profile to the level where we do not have to chase business. Also on a personal level I created a team of people one of whom has been with us since 1993, one since 1994 and two since 1998.

There has been no staff turnover. If you do the simple things well then this is the result. We have never been diverted by high premium risks and we are a long term player. In life I generally don't see any advantage to be gained from making change for change's sake and perceived opportunities that often turn out to be pitfalls," he said.

### What next?

Tony Gasking has never had a master plan for his life other than the vague idea that he would pursue a career that would help him use his love of languages in a business context.

It should therefore come as no surprise that he has no big structured plan for his retirement other than the understandable goal of 'emigrating' to Shropshire, a beautiful and sparsely populated corner of England on the Welsh border. A perfect place to pursue his love of walking. "Only the weather is against it so we'll probably spend the darkest winter in Continental Europe," he said.

We wish them all the best.

St. Paul's Cathedral and the Millenium Bridge, London



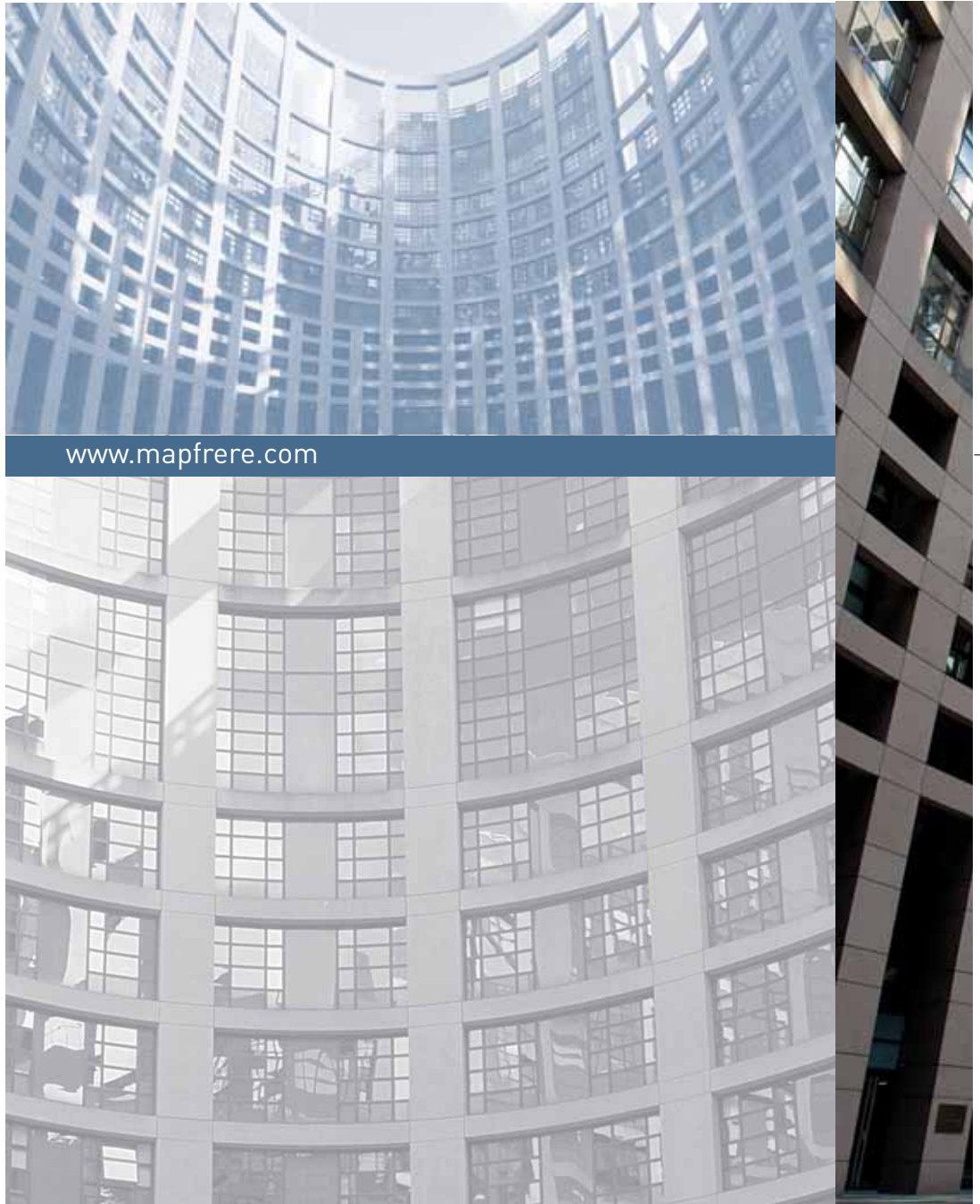


## agenda

### COURSES ORGANISED BY ITSEMAP STM (MAPFRE SERVICIOS TECNOLÓGICOS, S.L.)

Course	Method	Date	Venue
Specialisation Course: Sprinklers	Attend in person	27 <sup>th</sup> - 29 <sup>th</sup> April 2010	Madrid
Risk Management. Norm ISO 31000	Attend in person	11 <sup>th</sup> May 2010	Madrid
Functional Security Course	Attend in person	19 <sup>th</sup> - 20 <sup>th</sup> May 2010	Madrid
Methodology of Process Risks Analysis Course. HAZOP Methodology	Attend in person	8 <sup>th</sup> - 9 <sup>th</sup> June 2010	Madrid
Fire Claims Investigation Course	Attend in person	9 <sup>th</sup> - 10 <sup>th</sup> June 2010	Madrid

Risk Management and Insurance Expert Cycle 2010	Method	Date	Venue
Seminar 1 Risk identification and assessment, estimation of losses and appraisal of assets.	Attend in person	3 <sup>rd</sup> - 4 <sup>th</sup> March 2010	Madrid
Seminar 2 Integral safety, reduction and control.	Attend in person	31 <sup>st</sup> March and 1 <sup>st</sup> April 2010	Madrid
Seminar 3 Financing of risks: insurance programmes (I).	Attend in person	28 <sup>th</sup> - 29 <sup>th</sup> April 2010	Madrid
Seminar 4 Financing of risks: insurance programmes (II) and ART.	Attend in person	19 <sup>th</sup> - 20 <sup>th</sup> May 2010	Madrid
Seminar 5 Design and implementation of a risk management programme.	Attend in person	9 <sup>th</sup> - 10 <sup>th</sup> June 2010	Madrid



 **MAPFRE** | RE  
Paseo de Recoletos, 25  
28004 - Madrid  
Spain