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# **BITUMEN EMULSIONS FOR ROAD MAINTENANCE: USES AND MARKET TRENDS**

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Zagreb Sept. 22nd 2015



## 0. CONTENT

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1. Introduction: latest news from the IBEF
2. European market trends and drivers
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4. R&D for future materials
5. Conclusion

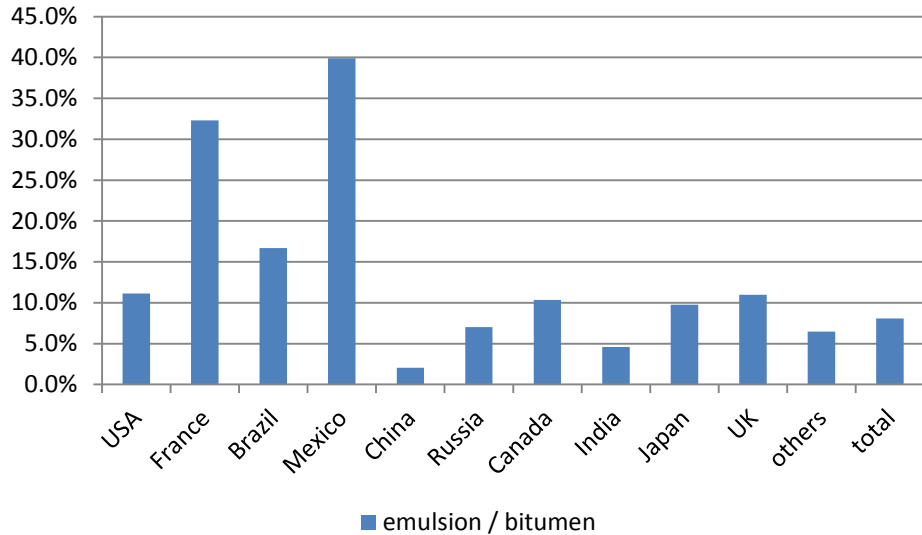
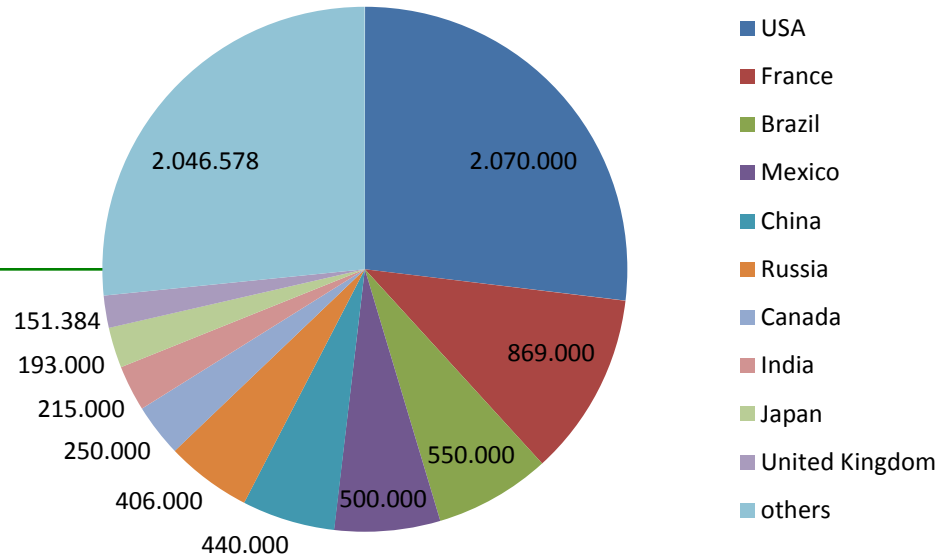


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## 1. LATEST NEWS FROM THE IBEF

- The IBEF gathers national associations and individual members from 19 countries
- This represents more than 70% of the bitumen emulsions produced worldwide



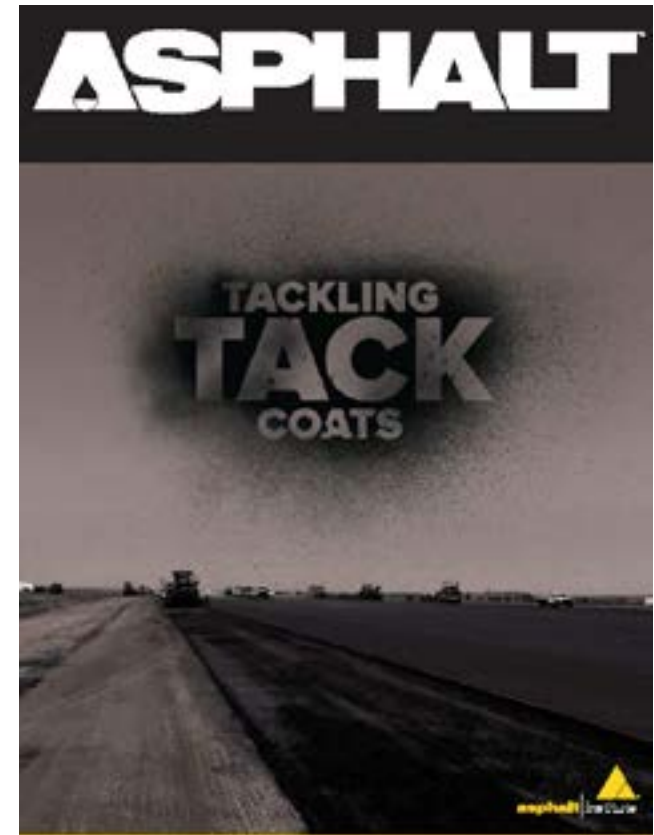
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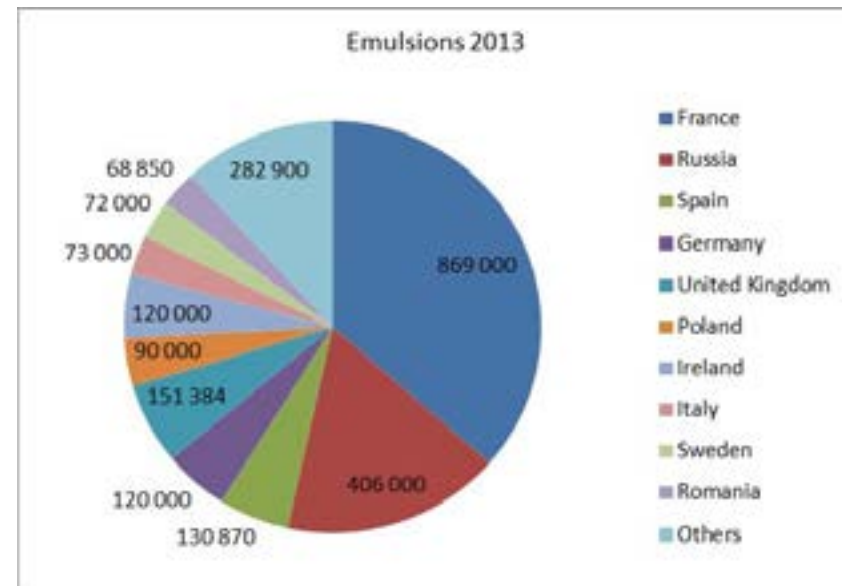
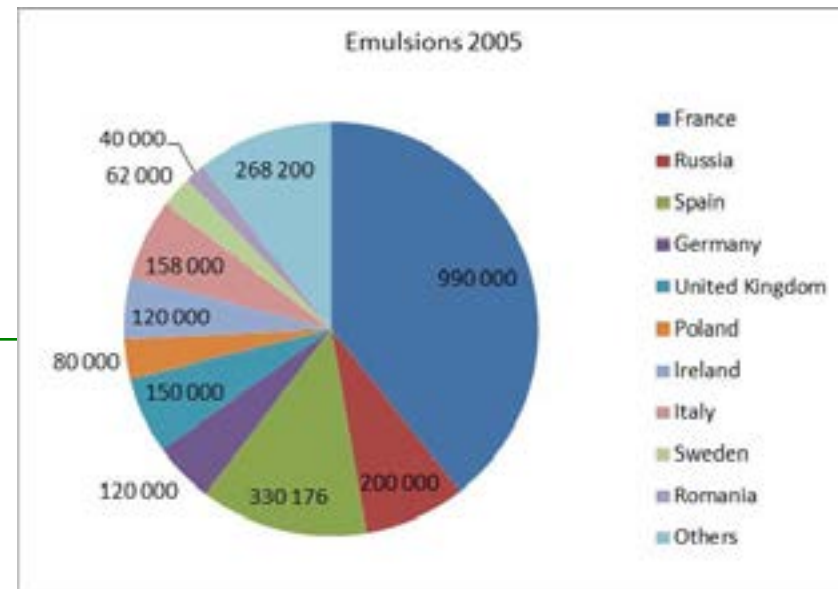
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- The IBEF is a recognized organization, amongst the big players (Asphalt Institute, European Asphalt Pavement Association, Eurobitume ...)
- The IBEF holds 1 (or 2) meetings per year
  - Cancun 29<sup>th</sup>, August 2013
  - Tokyo March 13<sup>th</sup>, 2014
  - Paris February 22<sup>nd</sup>, 2015
- The IBEF is and will be what its members want it to be and to become: a forum for the dissemination of the best practices and the promotion of cost effective techniques



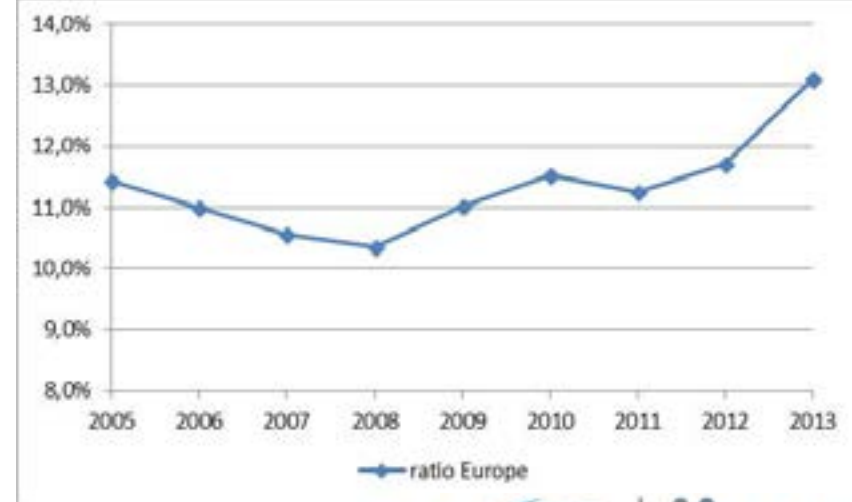
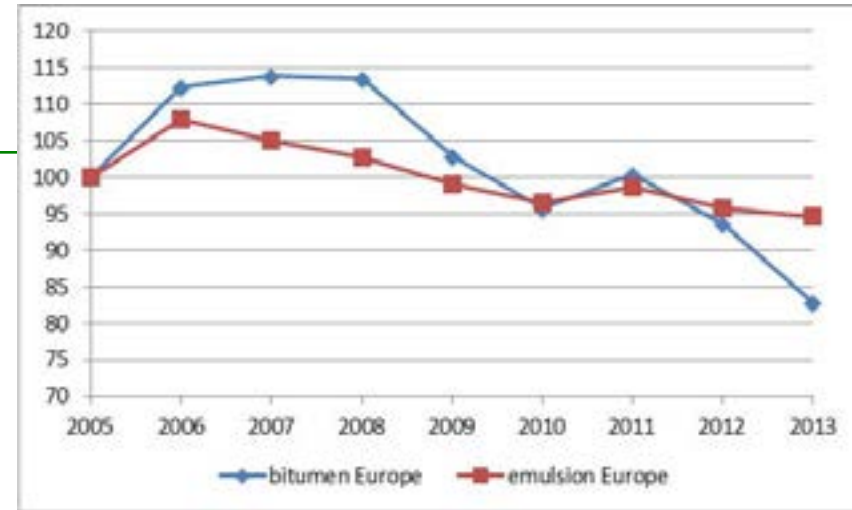
## 2. EUROPEAN MARKET TRENDS AND DRIVERS

- The road industry has been facing heavy challenges, especially since the 2008 financial crisis
- Public funds available for road construction and maintenance are scarcer and scarcer
- Environment and social requirements are heavier and heavier
- Emulsion volumes remain  $\pm$  stable: 2,520,000 in 2005 to 2,380,000 in 2013



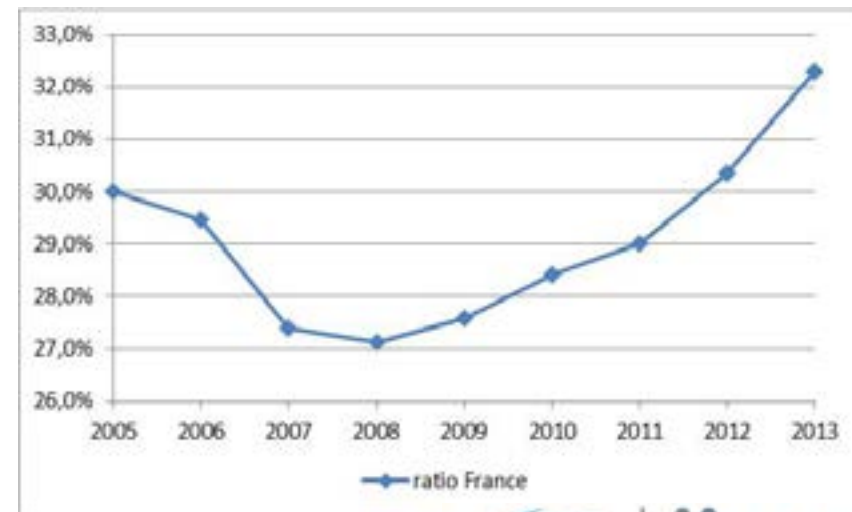
## 2. EUROPEAN MARKET TRENDS AND DRIVERS

- Emulsion volumes remain  $\pm$  stable: 2,520,000 in 2005 to 2,380,000 in 2013 (-5%)
- Bitumen volumes are decreasing: - 17% during the same period
- Bitumen emulsion techniques find their way in an adverse context



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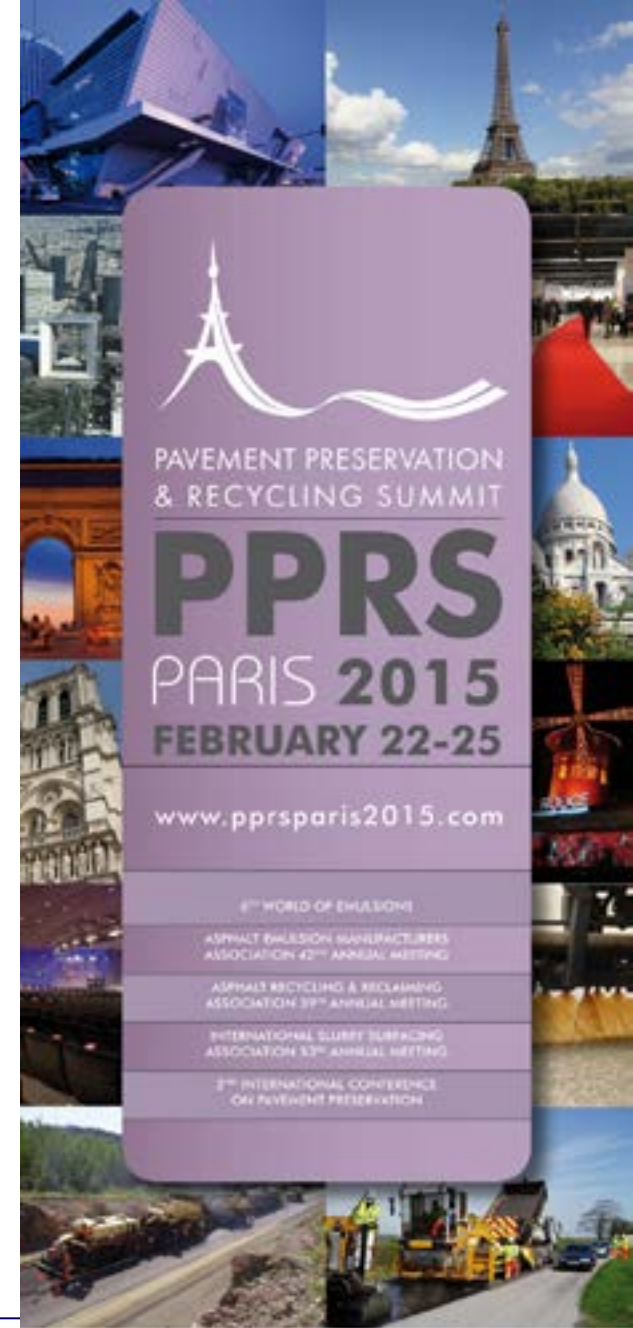
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- Bitumen emulsion techniques find their way in an adverse context
- Promising range of development





### 3. TECHNICAL ANSWERS FROM THE INDUSTRY

- Promising range of development
- Answers to what questions?



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### Dogwalking has opened my eyes to state of roads



### Il faut savoir le stress routier français

Le trafic est en croissance constante depuis 10 ans. Le réseau de routes est vieillissant et nécessite de gros investissements. Les coûts de l'entretien et de la réparation des infrastructures sont élevés et augmentent rapidement. Les collectivités locales sont confrontées à un défi de taille pour maintenir un réseau routier sûr et efficace.

### INFRASTRUCTURES

## Crise sur les budgets

Malgré la préservation de certains enveloppes, le financement des futurs chantiers d'infrastructures se fragilise d'ici 2010-2015 contre un tasse-tille en raison de la suspension de l'État.

« Nous sommes très préoccupés des conditions dans lesquelles pouva être maintenu l'ensemble du réseau routier »

### An end to pothole pain?

Authorities worried by rising costs of potholes are looking for ways to reduce the damage to roads and the cost to taxpayers.



### Maintaining roads efficiently



### Baja un 38% el presupuesto en mantenimiento en nuestras carreteras desde 2009



### £6bn road fund will not cover pothole repair backlog, warn councils



### California governor seeks money for fixing roads as gas tax value plunges



### ODOT to Oregon lawmakers: Need \$5.1 billion for bridges and roads, or watch economy collapse

Oregon's Department of Transportation is asking the state legislature for \$5.1 billion to fund bridge and road repairs. Without this funding, the state's infrastructure would deteriorate significantly, leading to economic losses.



### Wuppertal schließt zentrale Straßen im strengen württembergischen Zertifikat?

The city of Wuppertal is seeking a 'Zertifikat' (certificate) from the state of North Rhine-Westphalia to allow for the closure of central roads for maintenance work. This is necessary to ensure the safety and quality of the road network.



### La strada molto salata di un potholes

Italy is facing a significant challenge in maintaining its road network due to the high cost of pothole repairs. The government is exploring various solutions to reduce the financial burden on local authorities.

## Etat des routes: une facture salée

Selon le dernier rapport, les travaux de maintenance des routes en état des voies dégradées par les intempéries, pour un coût de 1,6 M.

### Routes et voies ferrées semées d'embûches



Un train de voyageurs à Besencon, à l'extrémité d'un tronçon de la ligne de la vallée de la Saône.

### « L'entretien des routes est primordial »



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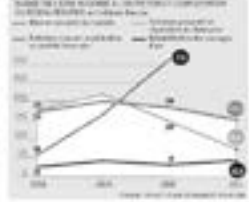


### Doblar el gasto en mantener las carreteras bajaría un 20 por ciento los accidentes



## Le Monde

### 682 millions d'euros en 2010



### Préservation du patrimoine routier: un enjeu prioritaire

### Pain Bay will bring \$182 million road repair backlog

North Bay's Mayor David Brown has set up a road repair fund to address the backlog of potholes and damaged roads in the town. The fund will be used to prioritize the most urgent repairs.



### So schlecht ist der Zustand der deutschen Straßen



### Survey reveals potholes in Finnish road maintenance



### Carreteras llenas de trancones por falta de inversión



### Le réseau, victime de l'austérité budgétaire



### Zimbabwe motorists endure gaping potholes



**Dogwalking has opened my eyes to state of roads**



**Il faut savoir le stress routier français**

Le trafic des autoroutes françaises est en hausse de 10% par rapport à l'année dernière. Cette hausse est due à la croissance de l'économie et à la hausse du tourisme. Cependant, cette augmentation du trafic a entraîné une détérioration de l'état des routes, ce qui a provoqué une augmentation du stress routier chez les Français.

**ODOT to Oregon lawmakers: Plaid \$5.1 billion for bridges and roads, or watch economy collapse**



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**INFRASTRUCTURES**  
**Crise sur les budgets**

Malgré la préservation de certains enveloppes, le financement des futurs chantiers d'infrastructures se fragilise d'ici 2010-2012 contre un tasse-ble en raison de la suspension de l'écouage.

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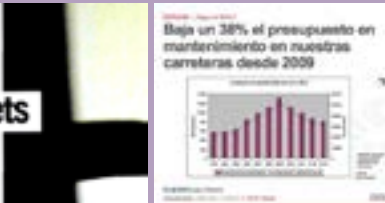
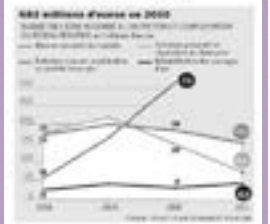
**An end to pothole pain?**



**Maintaining roads efficiently**



**Le Monde**



**£6bn road fund will not cover pothole repair backlog, warn councils**



**ROUTE**  
**Les défis de l'entretien**



**Palm Bay will bring \$182 million road repair backlog**



Le budget des infrastructures est en baisse de 38% depuis 2009. Cette baisse est due à la réduction des dépenses publiques et à la hausse des dépenses des entreprises.



**California governor seeks money for fixing roads as gas tax value plunges**



**Wuppertal schließt zentrale Straßen in einem weiteren Zonen?**



**Etat des routes: une facture salée**

Routes et voies ferrées s'embourbent en état des vires dégradées par les intempéries, pour un coût de 1,6t.



**« L'entretien des routes est primordial »**



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### 3. TECHNICAL ANSWERS FROM THE INDUSTRY

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- **Answers to what questions?**
  - **The economy and mobility needs roads they deserve**
  - **Road transport is a social issue**
  - **Lack of maintenance is a heavy responsibility to bear**
  - **Politicians have a key role to play**
  - **The industry will take its part in the challenge: how to maintain roads with lower resources**



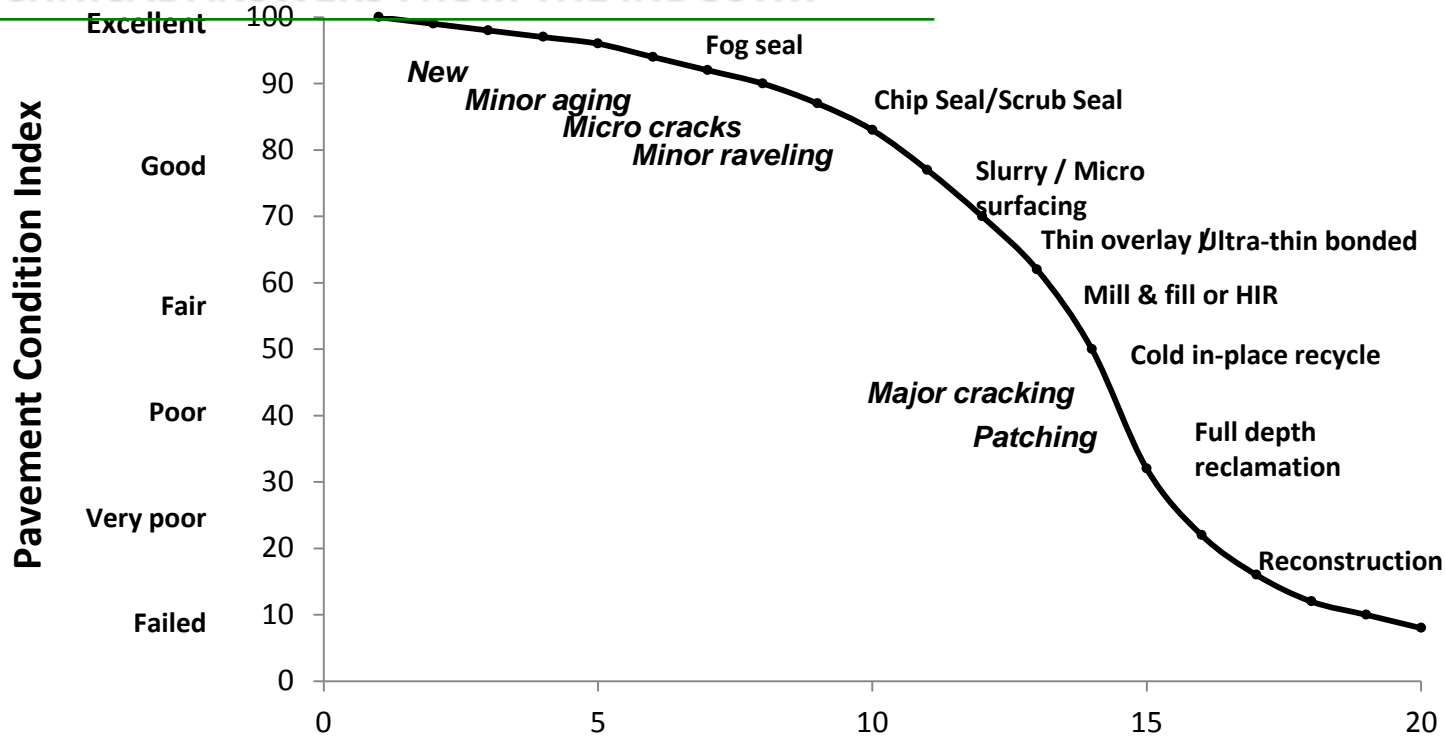
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- The industry will take its part in the challenge: how to maintain roads with lower resources?
- The bitumen emulsion industry takes its part
  - Surface treatments
  - Recycling (in place and in plant)



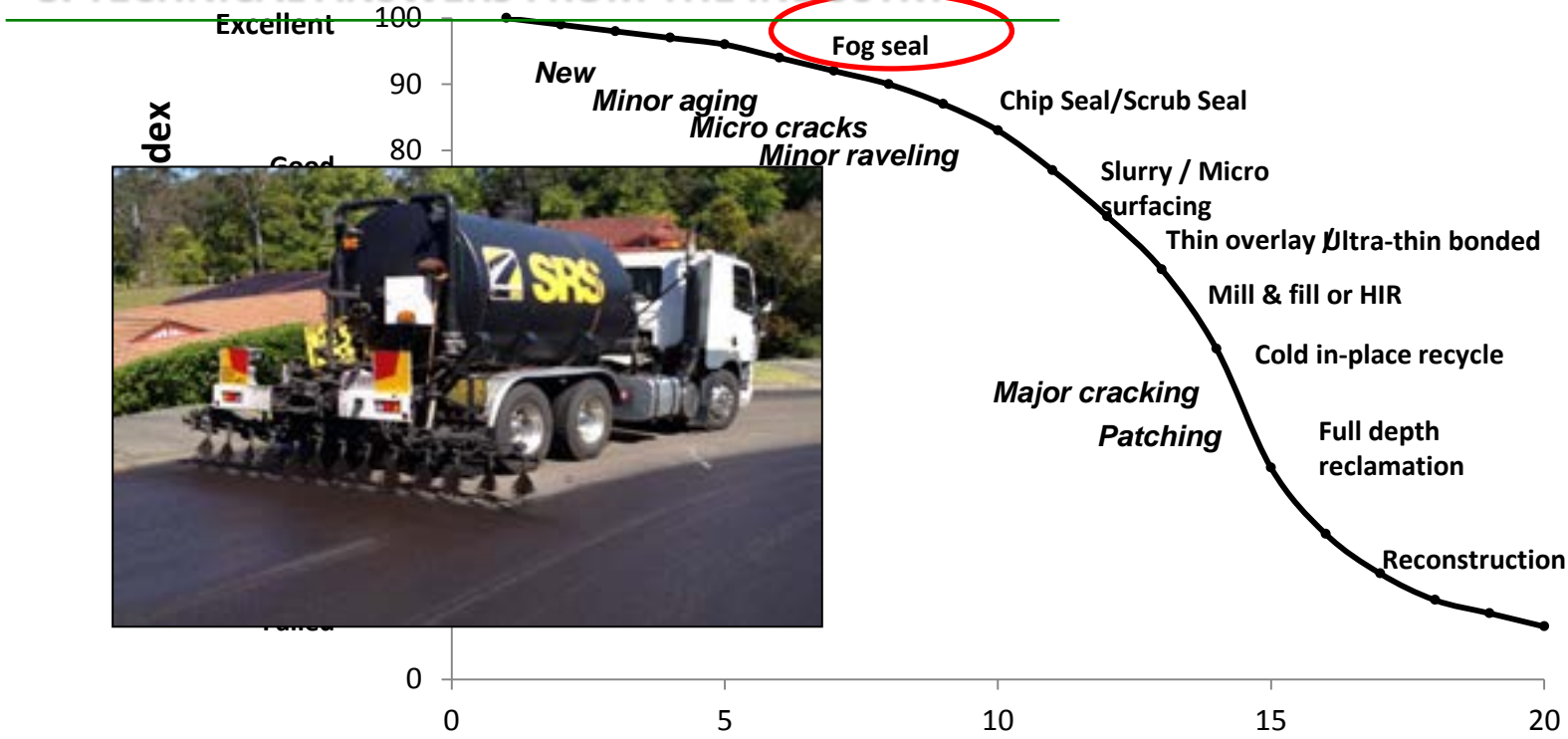
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Time, years (exact values vary depending on traffic, materials, etc.)



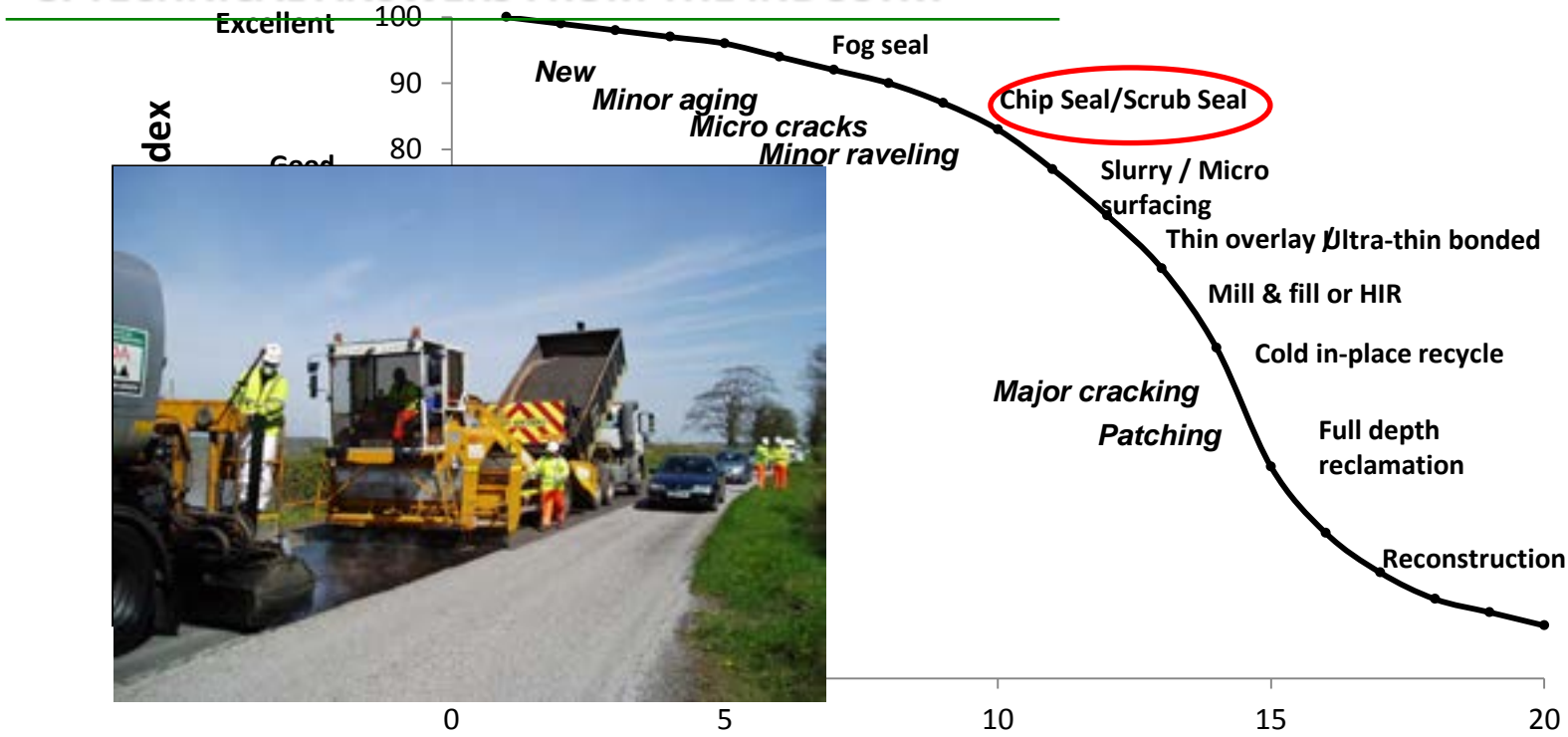
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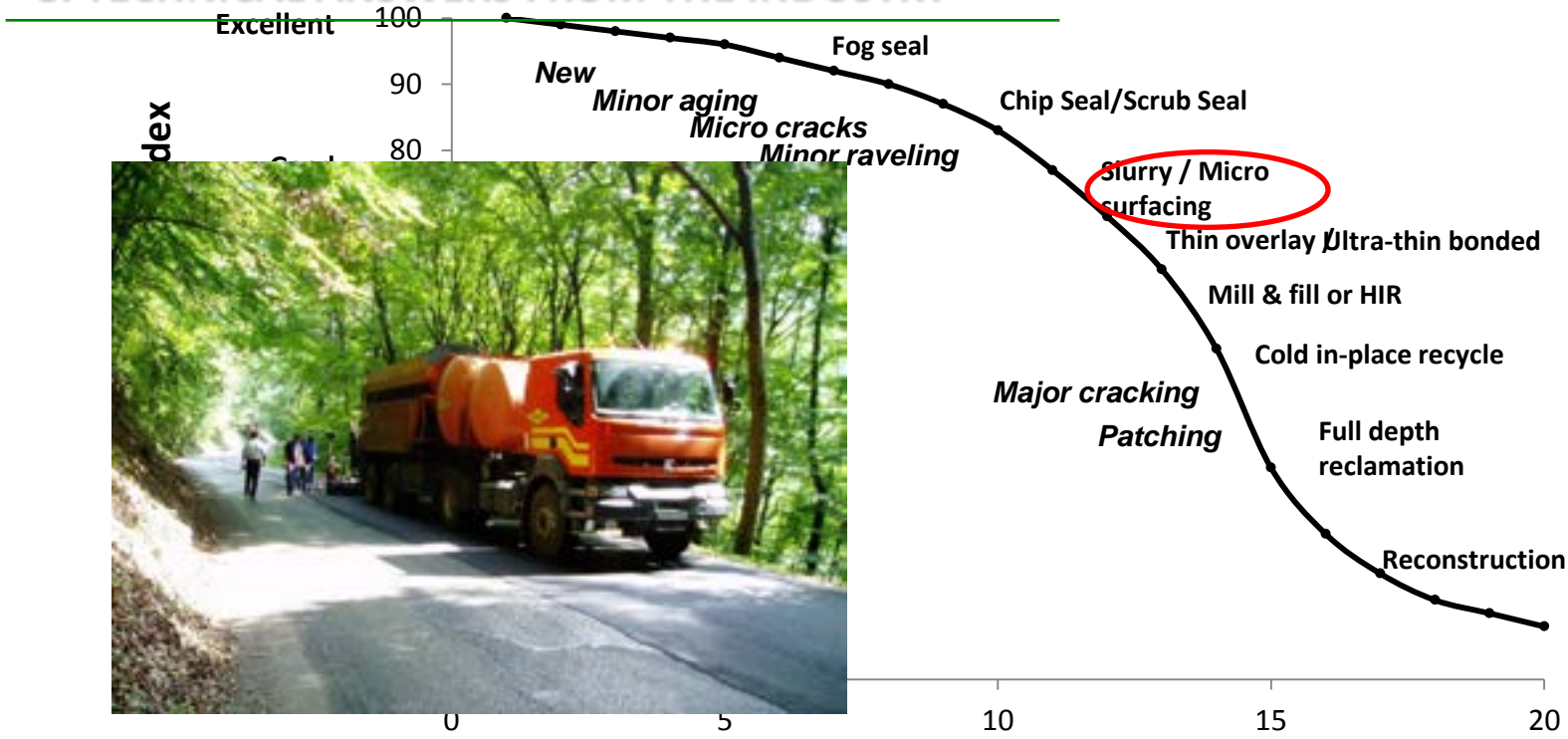


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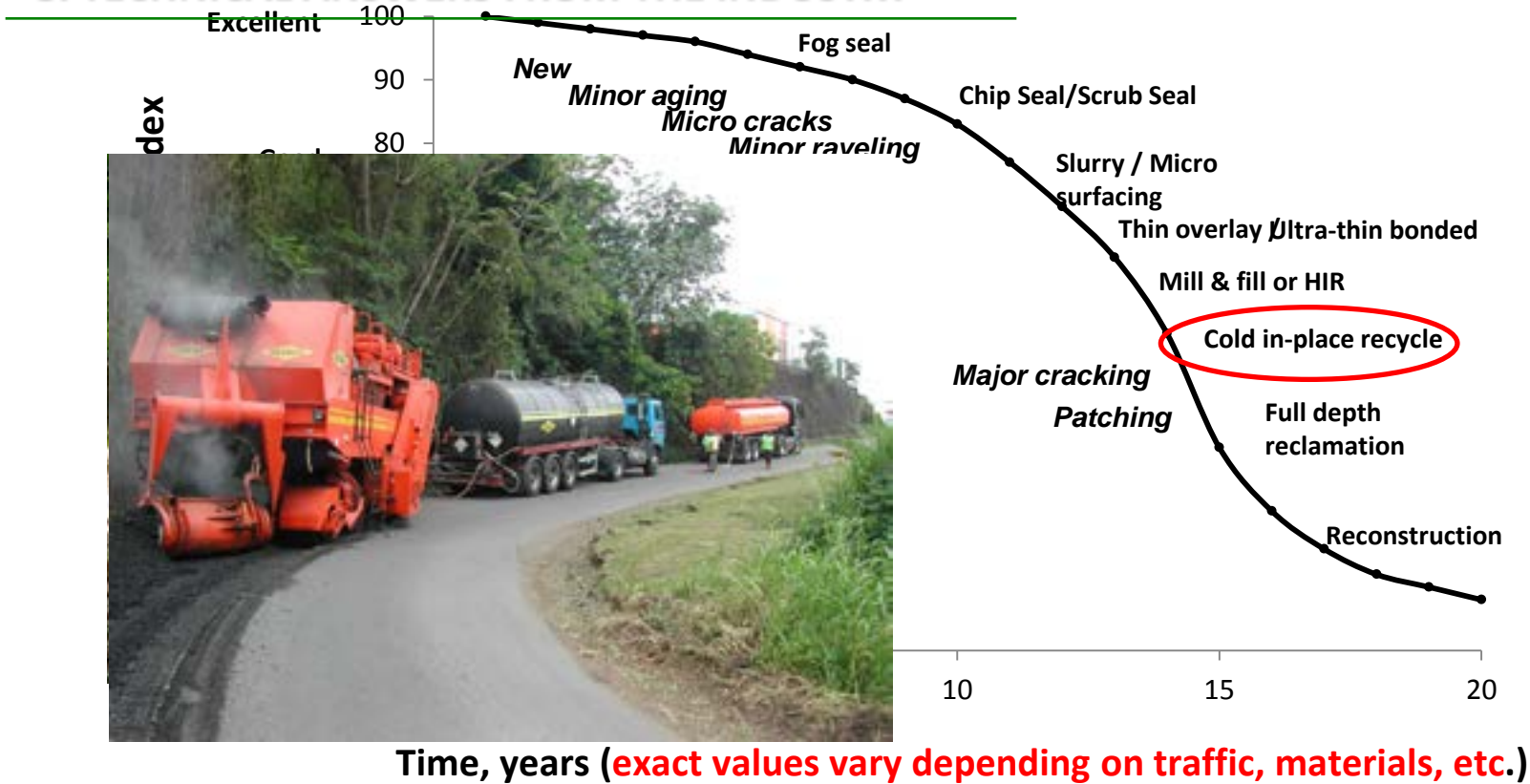
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### 3. TECHNICAL ANSWERS FROM THE INDUSTRY



## 4. R&D FOR FUTURE MATERIALS

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- To make emulsion techniques usable in case of high traffic
- To develop the use of improved binders and processes
- To work on recipes and processes
- To better assess the pavement condition so that to make the best use of scarce money



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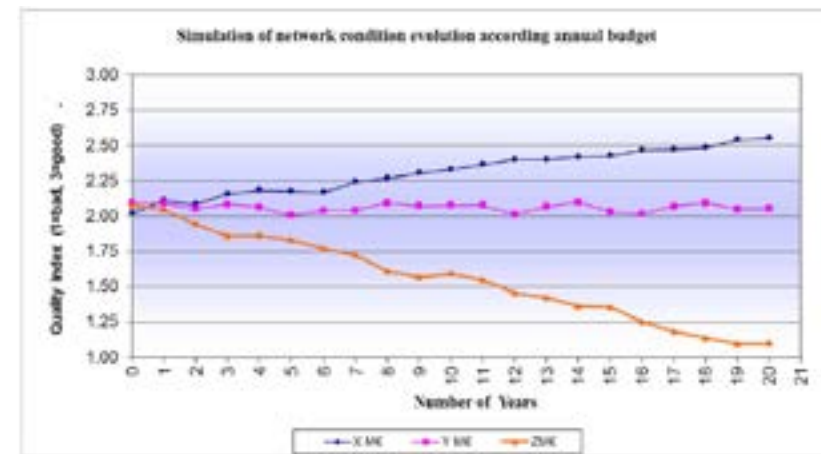
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## 4. R&D FOR FUTURE MATERIALS

- To better assess the pavement condition so that to make the best use of scarce money
- New up to date tools are available for data acquisition
- Data processing
- Maintenance scenarios built on the medium to long term



## 4. R&D FOR FUTURE MATERIALS: PRE CONDITIONS

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- To mobilize the bitumen industry
- To upgrade the European standards
- To involve the whole community, including the decision makers so that to secure suitable budgets on the medium to long term
- To promote “green”, safe and environmentally friendly solutions (the industry is part of the “real” World)
- Such topics are in the forefront of the IBEF strategy



## 5. CONCLUSION

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- Pavement Preservation is a hot topic
- Politicians and road users are the main partners of the game
- The industry as a whole should move ahead
- The emulsion industry, with the support of the IBEF, has its own part



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**THANK YOU**

**Étienne le Bouteiller**



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