

Meeting AAPA & USIRF

5th June 2012 in Paris

Presentation of USIRF

1. FRENCH ROAD NETWORK

2. LENGTHS AND TRAFFICS

	km	% length	% traffic
Highways	> 11.466	1,0	22,0
National roads	> 8.979	0,9	17,0
Departmental roads	> 378.000	38,1	36,0
Local roads	> 630.000	60,0	26,0
Total	> 1.000.000		

Roads : **85 %** traffic [travelers and merchandise]

3. ROAD SECTOR

14,2 billions € [France] + 7.9 billions € [International]

1st in EUROPE
1st in the WORLD

1 421 companies 96 178 employees

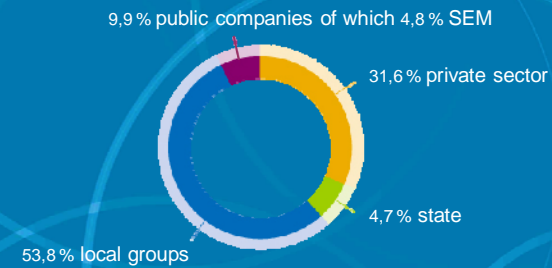
4. THE MARKET

❖ Share of roadworks in public works : 38.82 million € (2010)

13.05 %	Electrical works
36.70 %	Roadworks
0.23 %	Agricultural engineering works
1.00 %	Works in maritime or fluvial sites
1.34 %	Underground works
2.01 %	Railways
3.09 %	Special foundations, drilling, boring
9.41 %	Structures and industrial equipment
15.78 %	General excavations
17.48 %	Water conveyance, purification, other canalizations and installations

4. THE MARKET (2)

❖ Breakdown of markets by type of clientele



5. ASSOCIATION « USIRF - Routes de France »



6. THE INDUSTRY OF ASPHALT

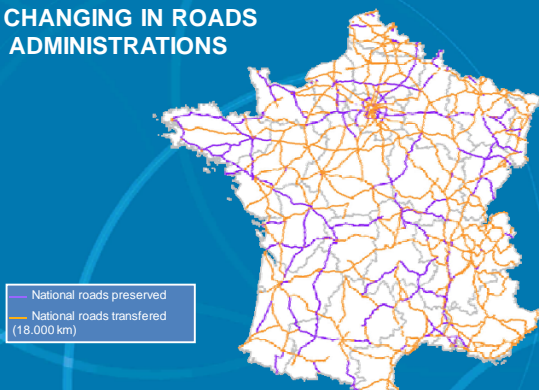
Production	39,2 millions tons
Static plants	436 [54 % owned by one company]
Mobile plants	72
Surface dressing	> 200 millions m ²
Micro surfacing	> 26 millions m ²

No competition with CONCRETE

7. MAIN ISSUES

- Changing in roads administrations
- Financing of infrastructures
- Health and safety of employees
- Safer roads
- Environment, sustainable development
- Technology

8. CHANGING IN ROADS ADMINISTRATIONS



9. FINANCING OF INFRASTRUCTURES

❖ Establishment of AFITF [Agency for financing infrastructures]

- Roads
- Railways
- Ship canals

↓
Privatisation of highways

❖ PPP [Private Public Partnership]

10. EMPLOYEES

❖ Health and safety

- Delivery of bitumen
- Bitumen fumes
- Impact of products [asphalt laying, fluxed bitumen ...]
- Protection on work sites
- Industrial injuries [road accidents : 57 % fatalities]

 USIRF recommendations

❖ Engaging of skilled workers

 15 000 in 5 years

11. SAFER ROADS

Infrastructure concerned in 42 % of accidents



Assuring safety through arrangements and maintenance

✓ Optimizing surfacing

- Porous asphalt
- High friction surfacing
- Photometric pavements
- Anti-skid roads markings

✓ Safer roads

- Street sharing [dedicated lanes]
- Roundabouts
- Making roads narrower
- Road readability

12. ENVIRONMENT [Sustainability]

❖ Limitation of impacts

- Roads
- Plants
- Works
- Products

❖ Wastes management and recycling [7,0 millions tons]

❖ Life Cycle Analysis

- Asphalt
- 1 km of road
- A eco-comparator SEVE



13. TECHNICAL ISSUES

❖ Tradition of partnership with Road Administration

- IDRRIM [French institute for road engineering]
- Innovation [Road innovation charter]
- Technical opinions

❖ Implementation of CE marking

❖ Commun researches

- Mix design for cold mixes
- Asphalt plants' emissions
- Rheology of modified binders
- Fire behaviour of asphalt
- LCI and LCA
- Road noise measurements
- Non-nuclear methods for in-situ measurements of density

14. TRENDS FOR FUTURE

- Lack of money [PPP, ...]
- Difficulty for a national technical « doctrine »
- Evolution of the market [clients, types of works, ...]
- « Intermodality » encouraged [railways ...]
- Lack of young workers [recruiting, training, ...]
- Increasing of social demands [safe roads, noise, ...]
- Saving of materials [thin layers, raw materials, ...]
- Sustainability [less impacts, recycling, ...]

15. VOLUNTARY AGREEMENT 25th March 2009



A heavy commitment of road industry companies and earth moving companies in relationship to sustainable development

The voluntary commitment of the actors of design, realization and maintenance of road network and urban public space

► **9 commitments :**

- 1 - Preserve unrenueable resources
- 2 - Preserve biodiversity and natural environments
- 3 - Reduce greenhouse gas/carbon dioxide emissions and energy consumption
- 4 - Reduce water consumption on earth moving sites
- 5 - Increase environmental performance of contractors and road network and urban public space
- 6 - Increase safety of users, residents workers of construction sites
- 7 - Create conditions of a true environmental competitiveness with all actors:
 - By participating in development of research and innovation
 - By creating the conditions of a new mode of technical partnership
- 8 - Promote the goals of this act of commitment
- 9 - Follow and assess this act of commitment



The voluntary commitment of the actors of design, realization and maintenance of road network and urban public space

► Preserve unrenueable resources



► Reach 100 % recycling roads

⇒ To 2012, road industry companies get involved to reach a percentage of aggregates recycled in mixing plants from 20 % nowadays to 60 %.

Platform of elaboration of aggregates



Recycling in situ



The voluntary commitment of the actors of design, realization and maintenance of road network and urban public space

► Reduce greenhouse gas / carbon dioxide emissions

⇒ To 2020, road industry contractors get involved to reduce greenhouse gas emissions of 33 %;


⇒ To 2012, they wish to reduce carbon dioxide emissions of 10 % thanks to progress on transport, mixing plants and bituminous products : warm mix asphalt or cold mix asphalt.

Warm temperature No fumes No fumes

Assessment of the voluntary agreement 3rd year

Convention d'engagement volontaire des acteurs de conception, réalisation et maintenance des infrastructures routières, voirie et espace public urbain



Enrobés froids ou semi-froids


Year	Tonnage (in tonnes)
2008	500
2009	700
2010	1 000
2011	1 300

Recyclage des agrégats d'enrobés
Tonnage = 3 031 744 t d'AE

Year	% de recyclage des agrégats
2003	12,7
2004	14,4
2005	20,9
2006	23,7
2007	26,9
2008	33,7
2009	38,0
2010	40,0
2011	42,4
Objectif 2012	45,0

REDUCTION DES EMISSIONS DE CO₂
Rapport des émissions 2012
10 % de réduction des émissions de gaz à effet de serre

Year	Émissions (kg)
2008	18,75 kg
2009	17,73 kg
2010	17,21 kg




The voluntary commitment of the actors of design, realization and maintenance of road network and urban public space

► Increase road industry contractors' environmental performance:

► A special software for every contractor to compare environmental techniques and basic techniques

⇒ 4 indicators (consumed energy, carbon dioxide emissions, preservation of the natural unrenueable resources and RAP consumption);

⇒ Based on the Life Cycle Analysis of the technique defined in the contracts;





SEVE
Système d'Evaluation des Variantes Environnementales

Exemple de résultats fournis par le logiciel SEVE

Indicateur	Indicateur	Indicateur	Indicateur	Indicateur	Indicateur
Performance	62	12	64	66	68
Impact	27	64	62	61	59

COMPARAISON DES ÉMISSIONS TOTALES DE GAZ À EFFET DE SERRE (en t eq CO₂)

Solution de base

Solution alternative

Procédure d'inscription

www.seve-tp.com


Institut Des Routes, des Rues et des Infrastructures pour la Mobilité

Reference Institute partnering all the stakeholders of road, streets and mobility infrastructures in their design, building, maintenance and operating.



Their needs are :

- a shared vision of **sustainable** mobility
- a **common** and coherent **knowledge** reference
- set of **mutualised** tools and services



Expected production

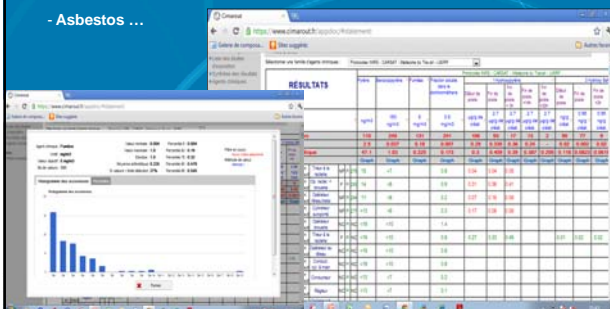
- Technical guidelines, certifications, technical information
- Guidebooks or technical parts
- Handbooks for design of new projects, preparing new tenders
- Guidelines for training, research, protecting of the biodiversity
- Organizing and coordinating technical colloquiums

16. PROMOTION OF WARM MIX ASPHALT




17. A DATABASE FOR OCCUPATIONAL HAZARD ASSESSMENT « CIMAROUT »

- Bitumen fumes
- Silica dust
- Asbestos ...



USIRF's communication tools:

- Journal « Routes de France »
- Website: www.usirf.com
- Annual brochure : « L'Etat de la route »




Thank you for your attention