Historical context

2009: Creation of a group of experts OEET (Observatory of Environment Energy Transports) to take into account the Grenelle 2 laws (French government) for transport infrastructures.

2010: Creation of the sub-group LCA data.

2011: *Production by OEET of the LCA methodology for all types of infrastructures.*

*Survey of the French ministry of ecology/ (DGITM general direction of Infrastructures transports and sea)*
Applying LCA

When? Which tool?

- **t = 0**
- **t + x years**

1. **USE**
2. **CONSTRUCTION**
3. **MAINTENANCE**
4. **PRE-PROJECT**
   - Design,
   - construction,
   - maintenance,
   - demolition,
   - End of life
5. **BIDS**

**Section 2000m – BBSG 0/10**
35/50, 5.6% bitumen
Hol vs half-warm < 130°C

13 000 veh./day
Applying LCA for what?

Some answers from the survey in 2011:

- For owners environment of projects is very close to sustainability
- Owners think standards and regulations application lead to good projects and they apply project management grids (project level)
- Some have tried LCA at the stage of bids and they asked for validated LCA tools, they want an objective assessment of variants and of road works
2012 : benchmarking and review of the French LCA tools
2013 : on line review on LCA tools

www.idrrim.com
2014 : LCA indicators how many are required?

EE

![Energy Efficiency (EE) Bar Chart]

- GB 0/14 50% drum mix plant Toulouse
- BBSG 0/10 10% drum mix plant Toulouse
- BBSG 0/10 batch plant Monthyon

POCP

![Pollution of Other Compounds (POCP) Bar Chart]

- GB 0/14 50% drum mix plant Toulouse
- BBSG 0/10 10% drum mix plant Toulouse
- BBSG 0/10 batch plant Monthyon

GWP

![Global Warming Potential (GWP) Bar Chart]

- GB 0/14 50% drum mix plant Toulouse
- BBSG 0/10 10% drum mix plant Toulouse
- BBSG 0/10 batch plant Monthyon
Partnerships still going on...to collect LCI data

DECISION MAKER
interested in new pavement materials and processes that decrease environmental impacts

PUBLIC RESEARCH INSTITUTE
Multiple dimensions of the environment

ROAD CONSTRUCTORS
Providing materials

Financial support
question?
proposal

Methodology and results report

Results report

Finances road works
proposal