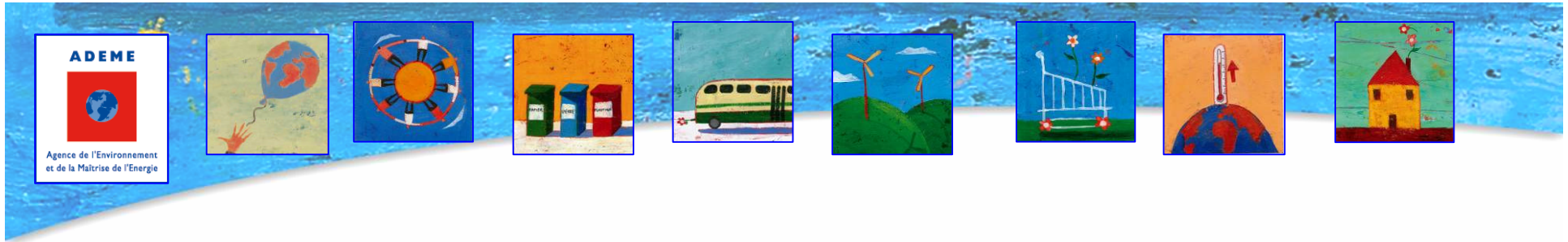


Asia ESCO conference 2010

Energy Performance Contracting (EPC)

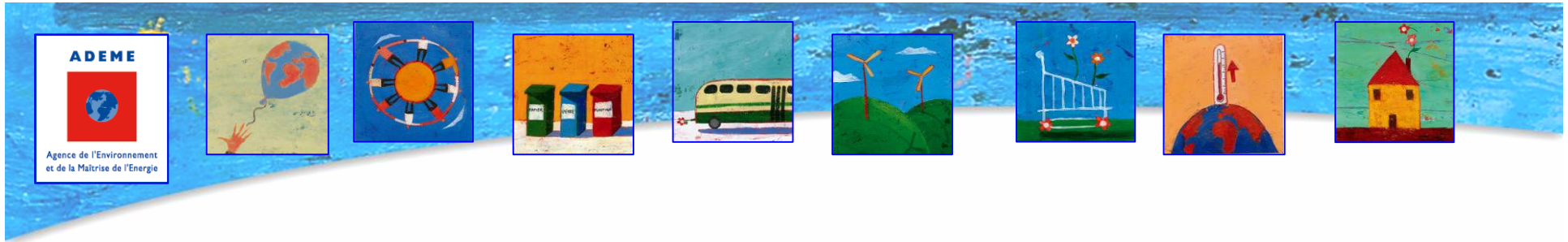
Sharing the French ESCOs Experience

Robert ANGIOLETTI
ADEME / BEE / MAEE
New-Delhi, 14-15 January 2010



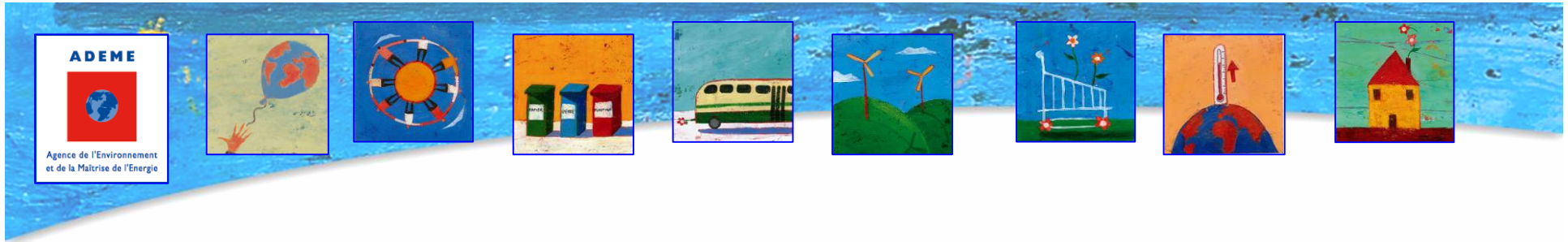
Content

- **EPC in France: definition & market segmentation**
- Promoting EPC, Public Procurement & PPP
- Club SEE: the French ESCOs platform
- Key issues: M & V, baseline, independence of audits, guarantee of saving...



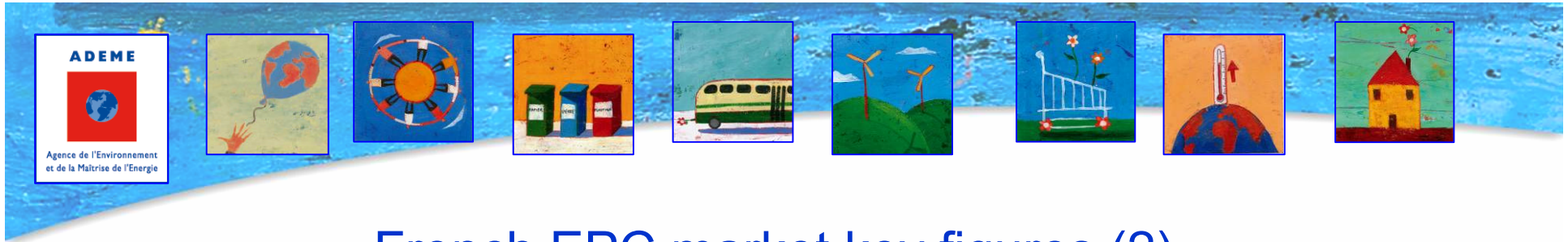
“French” definition of EPC

- Package deal which included whole or part services of design, work, exploitation-maintenance and financing,
- Economic model based on a refunding the investment by energy savings,
- Assumption of responsibility of certain risks related to these services by the services company,
- Contractual guarantee on the energy saving.



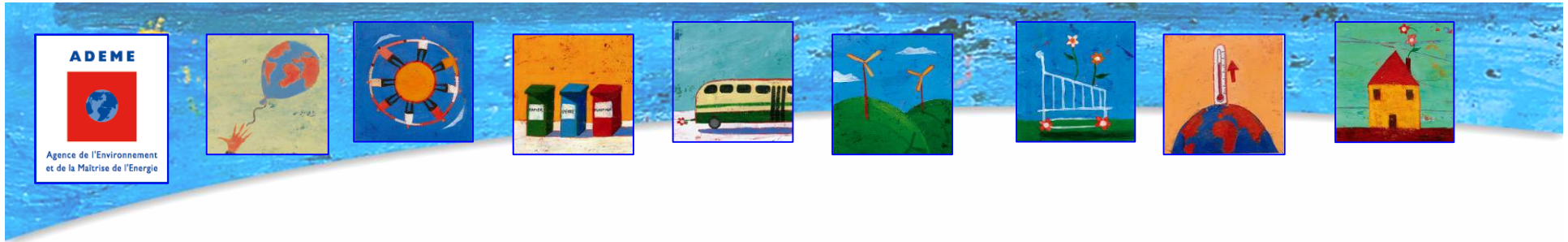
French EPC market key figures (1)

- Strong concentration of actors.
- ✓ Two ESCOs are dominant on the market : Dalkia and Cofely (merge of Elyo & Cofathec),
 - ✓ They are subsidiary of the main energy utilities: EDF, GDF-Suez,
 - ✓ These companies are European leaders in “Multi” technical & “Multi” energy services,



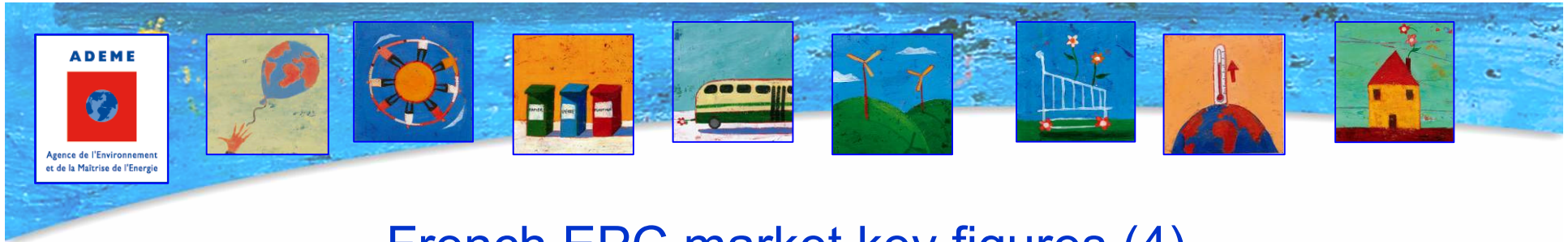
French EPC market key figures (2)

- New energy efficiency policy and energy market liberalization lead to new actors and new offers for EPC
- ✓ Energy suppliers want to become “multi-energy” & “multi-services” providers to improve customer’s satisfaction,
- ✓ Energy efficiency policies and the rise of energy prices accelerate the development of the market for EPC,
- ✓ Public Private Partnership model (PPP) opens new opportunities for ESCOs business.



French EPC market key figures (3)

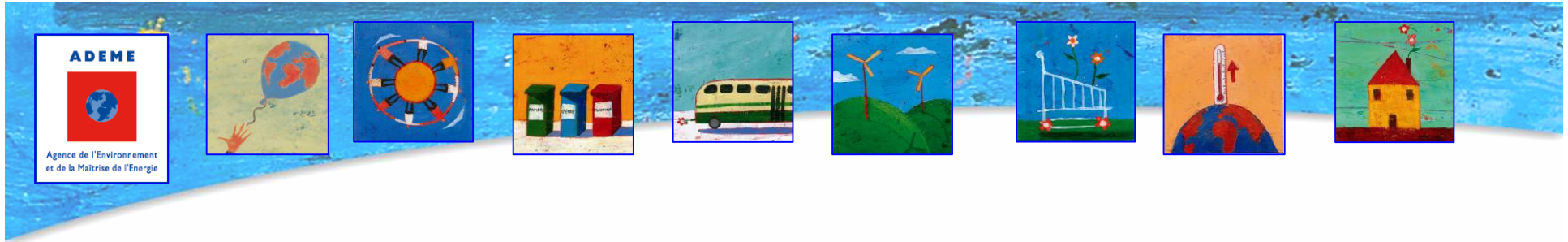
- A fast evolving market segmentation with new actors
- ✓ Major utilities provide performance contract to the “very big multi-sites” and/or “international customers”
e.g. (“global” customers”): Renault Europe, Airbus, Mc Donald's...
- ✓ Installers provide services in competition with the historical HVAC operators
e.g. Cegelec (ex Alstom), Amec Spie, Vinci Energies....,
- ✓ Equipment suppliers are also new actors on the French ESCOs market
e.g. Siemens, Schneider Electric, Johnson Controls.



French EPC market key figures (4)

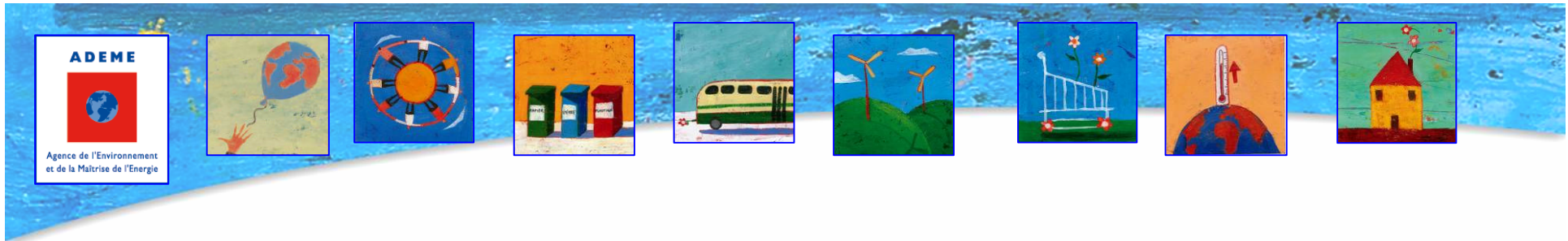
→ Current “basic” energy efficiency services

- ✓ Energy audits & advices,
- ✓ Load curve management,
- ✓ Operation & maintenance,
- ✓ Measure & Verification.
- ✓ Monitoring,
- ✓ Energy management,
- ✓ Energy Performance Contracting,
- ✓ Third party financing,
- ✓ And customer’s tailored sets of services.



Content

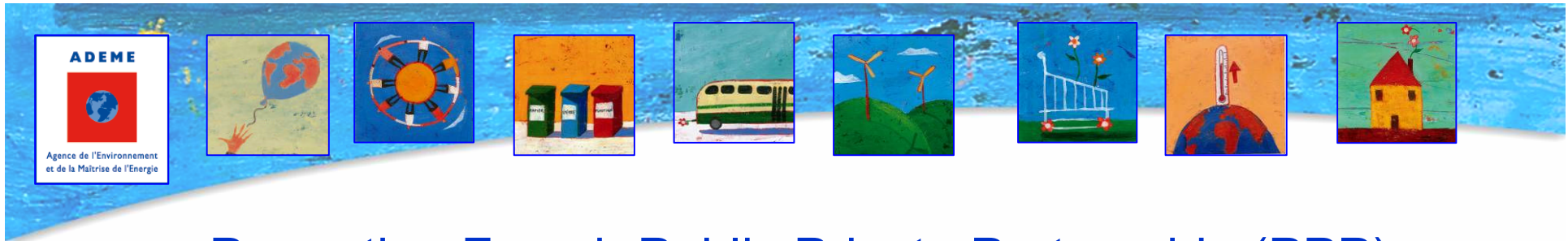
- EPC in France: definition & market segmentation
- **Promoting EPC, Public Procurement & PPP**
- Club SEE: the French ESCOs platform
- Key issues: M & V, baseline, independence of audits, guarantee of saving...



Exemplarity in French Public Procurement & PPP Statements by Laws & Political Commitments

Government plays an exemplary role in sustainable development:

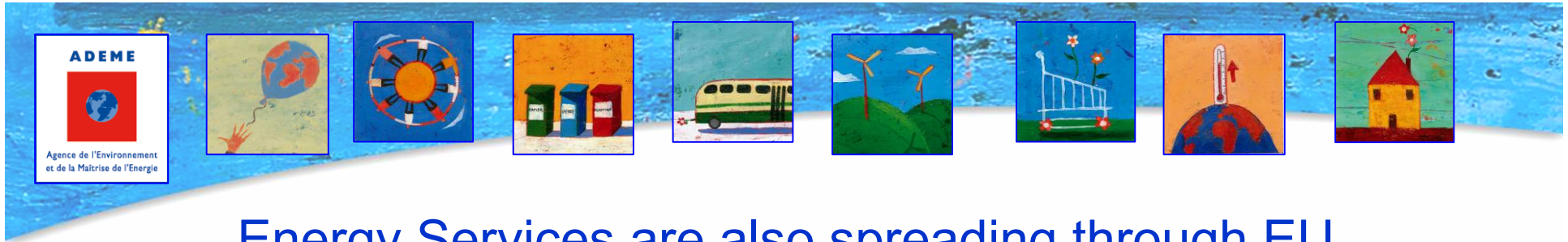
- ✓ Energy audits & Carbone footprint in all State owned buildings,
- ✓ Energy Efficiency Index (rating) mandatory, display in Public building,
- ✓ Integrating Environmental criteria in a “Purchasing code”, including mandatory Energy Efficiency Services purchasing



Promoting French Public Private Partnership (PPP) PPP Law 17/04/2004 amended 28/07/2008

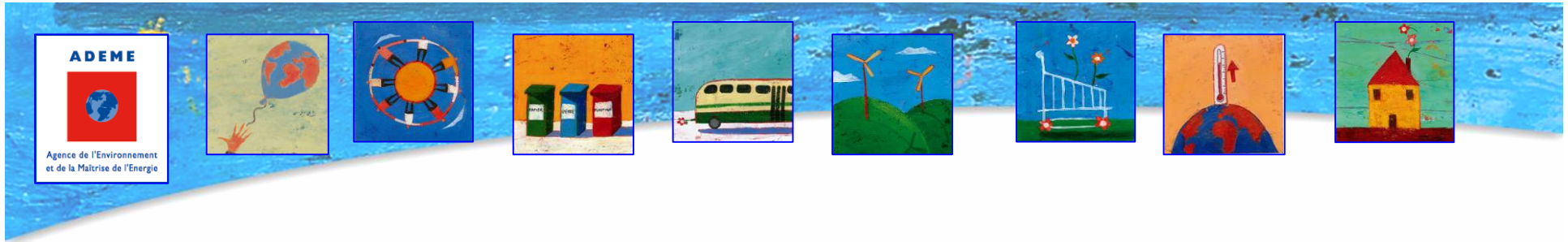
- Design, Build, Finance & Operate (“DBFO’ system),
- Environmental & energy performance targets, life cycle cost analysis & balance,
- Sharing benefits & under performance penalty system,
- Enhance competitive dialogue

PPP is supposed to be the most appropriate legal frame
to promote energy efficiency & energy conservation in Public Buildings



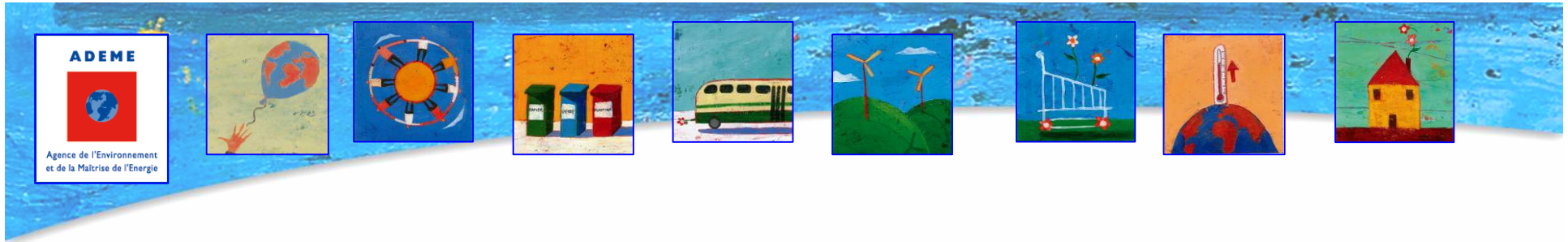
Energy Services are also spreading through EU Thanks to the Energy Services Directive

- 9 % energy saving within 9 years for Member States (MS),
- MS shall ensure that the Public sector fulfils an exemplary role,
- MS shall communicate on their exemplary role and provide templates & standardized contracts for EPC,
- MS shall remove barriers to EPC market,
- MS shall ensure appropriate qualification, accreditation and certification schemes for providers of energy services.



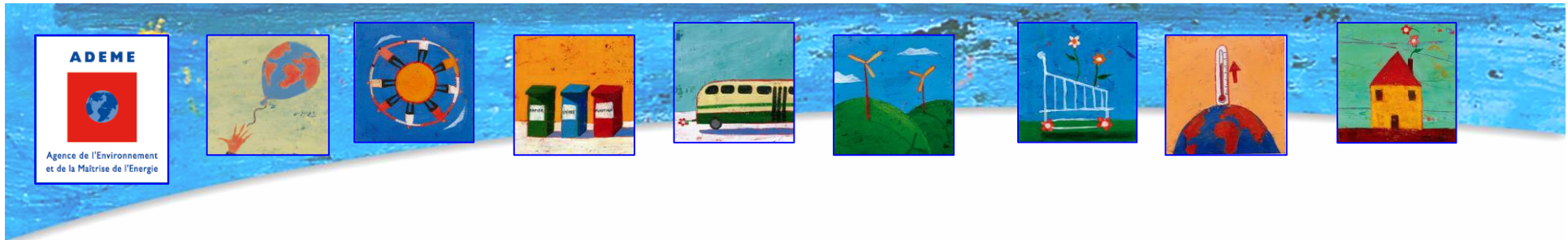
Standardization is a major issue

- Standardization is under preparation
CEN – CENELEC: SFEM, TF 189 & 190...
- ✓ ESCOs: definitions, requirements and qualification procedures,
- ✓ Energy saving calculation methodology: baseline, M&V, guarantee of savings
- ✓ EN 16001: Energy Management Systems–Requirements with guidance for use.



Summary

- EPC in France : energy key figures, definition & market segmentation
- Promoting EPC, Public Procurement & PPP
- **Club SEE: the French ESCOs platform**
- Key issues: M & V, baseline, independence of audits, guarantee of saving...

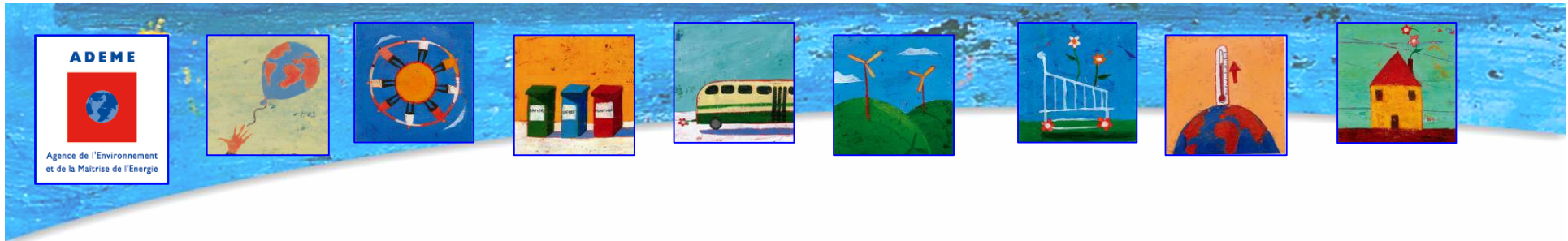


Club SEE: a business platform to promote EPC in France (1)



- FG3E** Federation of companies providing services to facilities, energy and the environment
- GIMELEC** Association of electricity & automatism systems companies, working on energy in industry, building & infrastructure
- SERCE** Association of electrical, IT & HVAC engineering companies
- UCF** HVAC engineering and installer companies association
- UFE** French Energy suppliers association

Vision: Suppliers to promote the development of Energy Efficiency Services and EPC



Club SEE: a business platform to promote EPC (2)

Club SEE member's whole economic activity represents (2008):

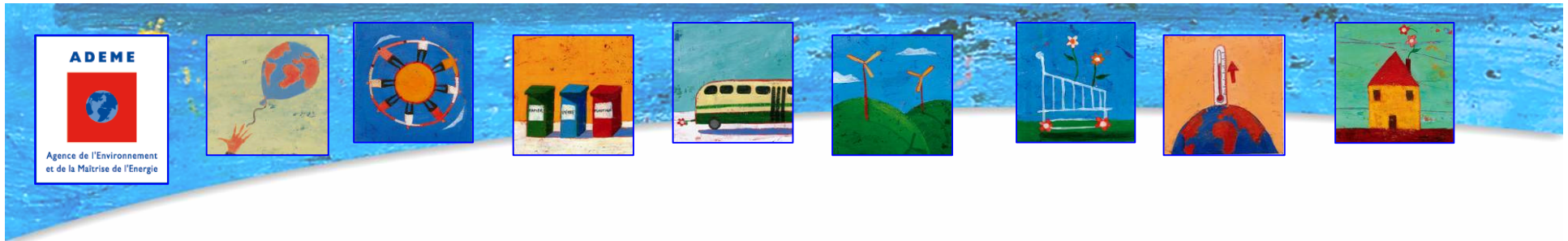
- 7 000 companies
- 100 000 staff
- 60 billion € yearly turn over

Of which 20 % is related to Energy Efficiency Services and EPC

ADEME is a « premier » partner of Club SEE

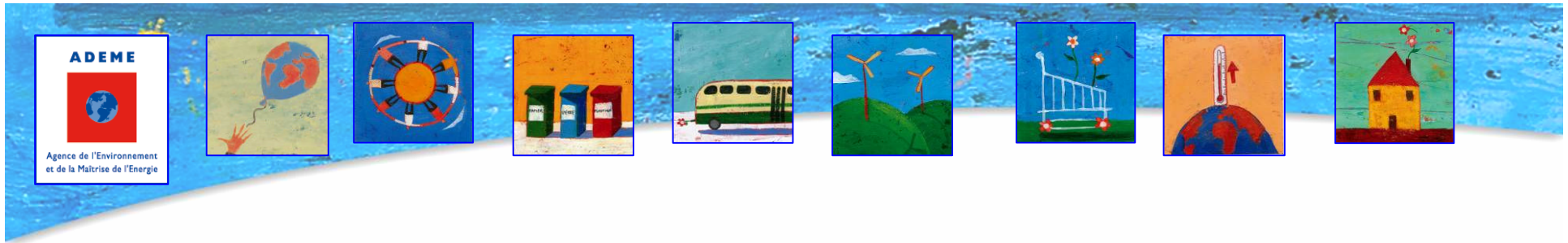


**ECONOMIES D'ÉNERGIE
PAISONS VITE
ÇA CHAUFFE**



Summary

- EPC in France : energy key figures, definition & market segmentation
- Promoting EPC, Public Procurement & PPP
- Club SEE: the French ESCOs platform
- **Key issues: M & V, baseline, independence of audits, guarantee of saving...**



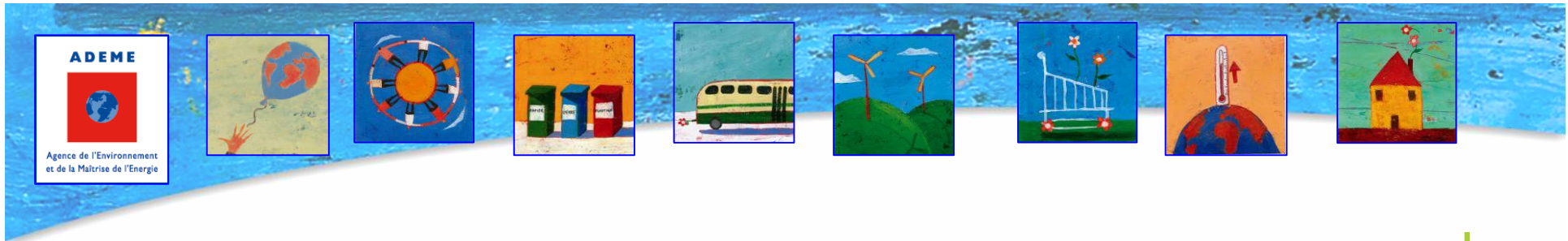
Share robust EPC definition & rules with stakeholders

- EPC are:
 - Energy efficiency measures implementation,
 - With verification of results in energy savings,
 - And a contractual guarantee of savings.
- ESCOs shall:
 - Give a clear assessment of the baseline,
 - Improve energy management quality and reach the energy saving targets in time and during the whole contract duration,
 - Accept independent measure and verification of results.



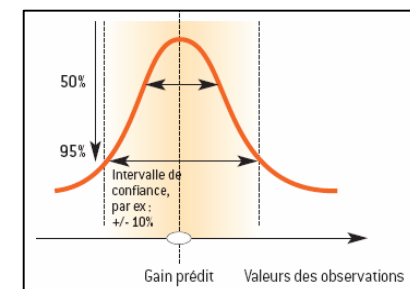
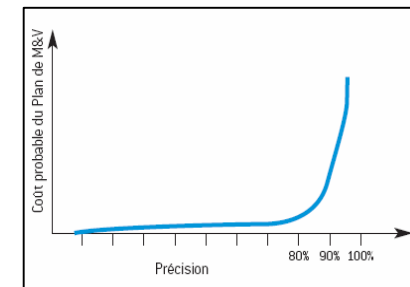
Develop a standard model for EPC

- Increase liability and trust
- Decrease transaction costs
- Help appropriation by Government and local authorities
- Set condition for a fair competition among ESCOs



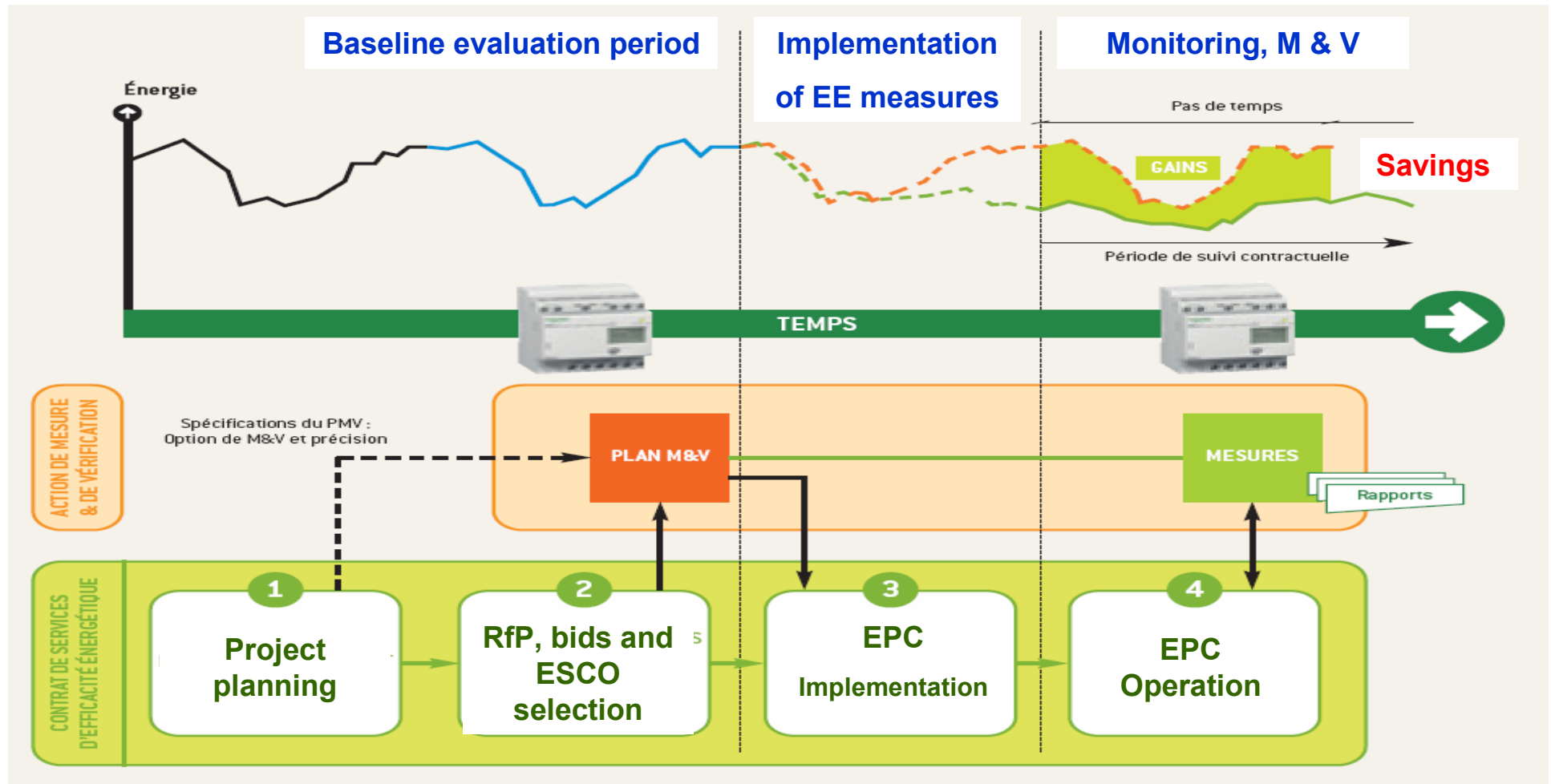
Use a strong Measure & Verification process

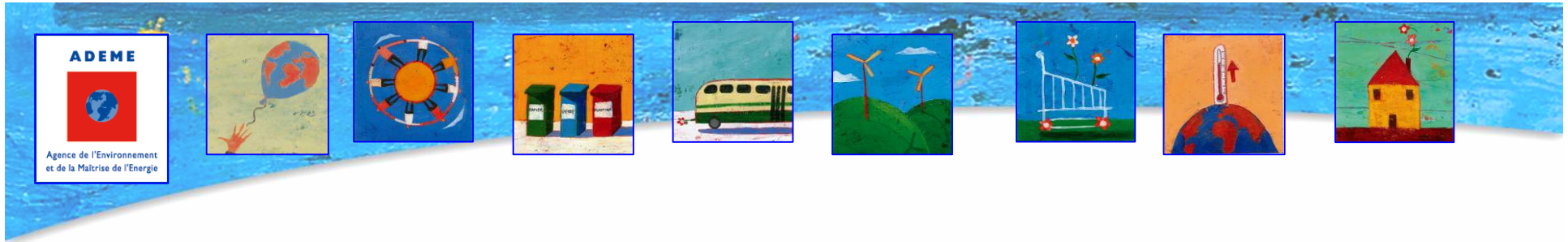
- Measure & Verification by an independent third party
- Using IPMVP standard adapted to the French situation
 - International reference,
 - Easy and reasonable implementation cost (< 10 % Energy Savings),
 - 4 options (A, B, C, D) flexible and adaptable,
 - Agreement by stakeholders: ESCOs, building owners...
- Of course, preliminary audit should also be made in an independent manner





EPC and M&V processes



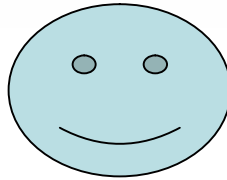


Adapt an EPC typology according to efficiency target Examples in the building sector

	Guaranteed energy savings	Duration	Part of financing by savings	French examples
Operation & maintenance	5 to 15%	1 to 5 years	Total	EPC with profit sharing (likely 1000)
Space heating, A/C, controls retrofit, renewable energy	15 to 25%	3 to 15 years	Total	Accor, Carrefour, City of Tours (less than 100 projects)
Wall, roof, windows insulation	> 25%	> 15 years	Partly	High Schools in Alsace and Centre, University of Versailles



Assets and restrictions to EPC



- **Simultaneous implementation of complex energy efficiency measures,**
- **No effect on borrowing capacity,**
- **Well staffed and availability of experts from ESCO,**
- **Transfer of technical and financial risks toward the ESCO,**
- **Guaranty of energy saving.**



- **Higher cost.**
- **Risk to reduce measures to the most profitable and less risky for the ESCO,**
- **Risk of losing skills and control,**
- **Long term payback time might be penalized (e.g. building envelop insulation...),**
- **Complex contract,**
- **Additional cost due to M&V.**

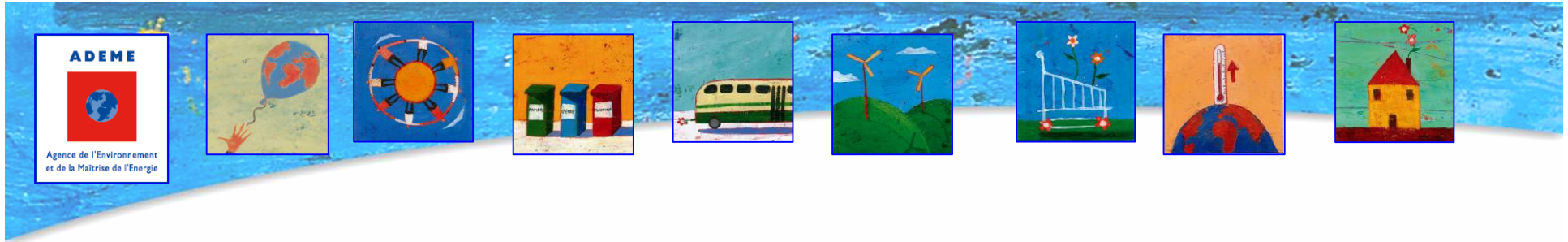


As a general conclusions for France

- ESCO mode is interesting to promote and disseminate energy efficiency,
- But ESCOs business model has still to improve trust and confidence,
- Standardized methodologies and tools are needed,
- A clear market competition will help,

But the main responsibility relies on energy managers & equipment owners

They should be aware about energy efficiency and keen to save energy,



Thank you for attention