Action Programme for Construction Quality and Energy Transition

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Workshop Qualicheck
INTERPROFESSIONAL NON-PROFIT ORGANIZATION

- SINCE 1982
- MOST IMPORTANT PROFESSIONAL BODIES INVOLVED

2 OBJECTIVES:
- REDUCTION OF NUMBER AND SCALE OF BUILDING DEFECTS
- IMPROVEMENT OF CONSTRUCTION QUALITY
AGENCE QUALITÉ CONSTRUCTION

CORE « BUSINESS » :
- OBSERVATION OF CONSTRUCTION NON-QUALITY
- PREVENTION
- COMMUNICATION

BUT WE HAVE SPECIFICS MISSIONS
- FROM 2010 TO 2014, TECHNICAL SECRETARY OF PROGRAMME RAGE
- SINCE 2015, TECHNICAL SECRETARY OF PROGRAMME PACTE
3 priority programmes launched in 2015 by the French state

- Develop innovative techniques for detecting and eliminating asbestos, in order to remove existing restrictions
- Prepare the roll-out of digital technology in the entire building industry and particularly in small organisations
- Help to increase expertise of building professionals in energy efficiency
A programme that continues the collective work initiated by the RAGE programme

Ambitious national programme which aims to update (or create) standards for construction practices, regarding energy efficiency
Based on two findings:

- **a lack of good practice guidelines** (particularly for renovation)
- **the fact that current regulations are sometimes inappropriate** (regarding new energy requirements)
Launched in mid-2010 & closed at the end of 2014

RAGE make several documents available to professionals:

- updated technical reference documents
- reliable practical tools and resources
PROGRAMME RAGE

+ 80 Technical reference documents available for free download

+ 200 Professionnals and experts mobilised
Professional recommendations

- contribute to the revision or writing of French NF DTU standards
- **RECOGNIZED BY INSURANCE COMPANIES**

Technical Guides

- for the “less mature” technical solutions
- less feedback available => for instructional purpose
42 reference documents produced concerning utility services installations

Field of application is individual housing, but also apartment buildings /service sector

Documents deal with 5 major types of technology:

• Thermodynamic systems (heat pumps, thermodynamic water heaters)
• Solar heating of sanitary hot water
• Ventilation (single flow, double flow, hybrid, ground source heat pumps)
• Wood-fired heating systems

Building management systems
PROGRAMME RAGE

Design recommandations

Ex: storage silo for wood fired boilers (accessibility for supplies, volume calculation,...)
Recommendations for use (for example, solar collectors)
Integration of “practical tools and resources”: self-check file, commissioning file, etc.

Solar heating of sanitary hot water
Combined solar systems
PROGRAMME PACTE

Continue RAGE work of modernising good practice…

30M€ for 4 years

Public grant or public commission

Steering committee
(1st PART) Develop, capitalise on and highlight knowledge concerning the number of insurance claims involving high-performance buildings.
(PART 1) - knowledge of statistics concerning numbers of insurance claims

EX : « Dispositif REX BATIMENT PERFORMANT = system of feedback on high-performance buildings »
(PART 1) - knowledge of statistics concerning numbers of insurance claims
PROGRAMME PACTE

(1\textsuperscript{st} PART) Develop, capitalise on and highlight knowledge concerning the number of insurance claims involving high-performance buildings.

(2\textsuperscript{nd} PART) Continue the modernisation of good practice. Develop practical and instructional tools and resources.
EX : « Construction site notebooks »

- For site personnel
- These notebooks show the good practices for construction work in an illustrated document accessible to as many people as possible
- Enhanced digital version (in Epub3 format) for an optimised use on smartphones and tablets
In enhanced version (digital format)
(PART 2) Practicle tools and ressources

PACTE

EX : « external thermal insulation composite systems»

In enhanced version (digital format)
PROGRAMME PACTE

(1<sup>st</sup> PART) Develop, capitalise on and highlight knowledge concerning the number of insurance claims involving high-performance buildings. Calculate building real performance.

(2<sup>nd</sup> PART) Continue the modernisation of good practice. Develop practical and instructional tools and resources. Calculate building real performance.
(PART 2) PACTE
Practicle tools and ressources

EX: INTRINSIC PERFORMANCE MEASUREMENT TOOL

Supports the development of protocols for reliable measurement of intrinsic building’s energy performance, on acceptance of the works (both building’s envelope and utility services installations)

MERLIN project (CSTB + CEREMA + COSTIC)
EPILOG project (INES + CYTHELIA + CAH +SAIEM)
PROGRAMME PACTE

(1st PART) Develop, capitalise on and highlight knowledge concerning the number of insurance claims involving high-performance buildings. Calculate building real performance.

(2nd PART) Continue the modernisation of good practice. Develop practical and instructional tools and resources. Calculate building real performance.

(3rd PART) Increase and improve local and/or regional actions for developing the expertise of building professionals with the help of training local players
(PART 3) PACTE LOCAL/REGIONAL ACTIONS

Ex: Support for 40 innovative approaches for increasing the expertise of professionals

- MOOC, SPOC distance training
- Training with digital tools for acquiring expertise (virtual reality, augmented reality)
- Practical training in simulated situations on full-size models.
- \textit{in situ} training on construction site, etc.

+ SPECIFIC actions for overseas territories
(PART 3) PACTE LOCAL/REGIONAL ACTIONS

Ex: energy efficiency building renovation MOOC

+ 4 000 registered users !!!
Prévenir les désordres
améliorer la qualité
de la construction

PROGRAMME D’ACTION POUR LA QUALITÉ DE
LA CONSTRUCTION ET LA TRANSITION ENERGÉTIQUE

Thank You for your attention

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