



PromevenTertiaire:

the new French protocol for
the inspection of ventilation systems
in non-residential buildings

AIVC & TightVent Webinar
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Ariane Lesage | Cerema



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INTRODUCTION

Context in France:

To date, **no regulation requiring ventilation systems to be inspected** in non-residential buildings

Yet feedbacks highlight recurring malfunctions impacting energy consumption, indoor air quality...

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PROMEVENTERTIAIRE PROJECT: 2018 - 2022

- 9 French partners:

Lead  ensemble, innover et valider



- Funding received by:



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PROMEVENTERTIAIRE PROJECT: 2018 - 2022

Main objectives:

- Improve reliability and quality of mechanical ventilation systems controls (by harmonizing checking and measurement methods)
- Provide practical tools and guidelines for professionals

Scope:

- Both new and existing non-residential buildings (offices, schools...)
- Most common mechanical ventilation systems:
 - Extract (or supply) mechanical ventilation
 - Balanced mechanical ventilation
 - Mechanical ventilation systems with air treatment



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PROMEVENTERTIAIRE PROJECT: 2018 - 2022

Key tasks:

- On-site measurement campaigns
 - 3 buildings (schools, office) to test protocol application robustness
 - Different measuring teams with various measuring instruments
- Laboratory tests:
 - Calibration and uncertainties evaluation
- Impact of observed dysfunctions

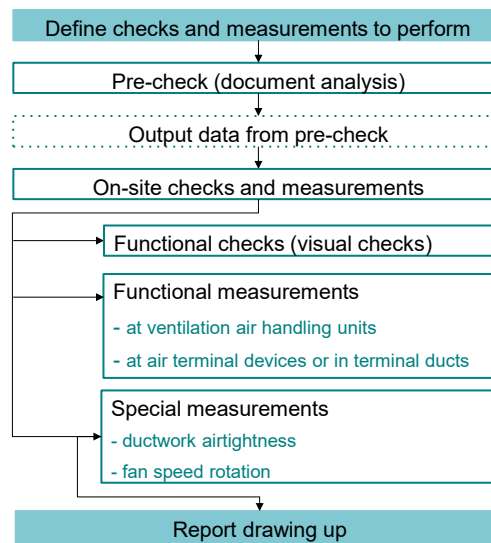
Final result:

- Protocol + technical appendices + reports + guides on common faults and their impacts



PROMEVENTERTIAIRE PROTOCOL

Methodology overview



PROMEVENTERTIAIRE PROTOCOL

An answer to these questions about measurements:

Which parameter?

- Airflow rate
- Pressure
- Air velocity
- Power ...

Where?

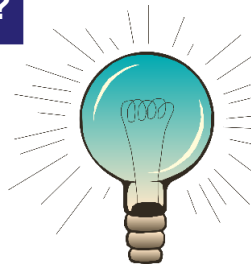
- At the terminal device
- In the duct upstream of the terminal device

Which instrument?

- Appropriate measuring instrument (flowmeter, anemometer...)
→ Recommendations from on-site and laboratory campaigns

How?

- Operating conditions of the installation
- Methods (standards...)



APPLICATIONS OF THE PROTOCOL

Some examples of the current applications of PromevenTertiaire:

- Certification programs or labels such as Effinergie labels
- Legal expertise
- Voluntary initiative from project owners and managers
- Self-checking for installers in replacement of previous checking procedures



COMPLEMENTARY PROJECTS

To go further in reliability of methods:

A study on the measurement method described in EN 16211 standard at air intake or air exhaust grille using anemometer

(PromevenTertiaire team, 2023-2024)

An updated guide to air flow measurement

(Cetiat, 2023)

Available [here](#)



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PROSPECTS

Further steps needed before consideration in future French regulations

Define **how to analyze results of an inspection** with respect to the requirements set

- Functional Checks:
 - Regulatory enforcement verification point
 - Check point for the application of good practices
 - Acceptable tolerance
- Functional measurements:
 - Reference values
 - Acceptable tolerance, uncertainty for airflow

Demand **qualification/skills of operators**

Work in progress

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Thank you for your attention

Any questions?

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ariane.lesage@cerema.fr

