

An Open, Cloud-Based Platform For Whole-Building Fault Detection and Diagnostics



U.S. DEPARTMENT OF
ENERGY

Energy Efficiency &
Renewable Energy

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Whole-Building FDD Platform



Whole-Building Energy Modeling

Whole Building



Data-Driven

**Fault Detection
& Diagnostics**

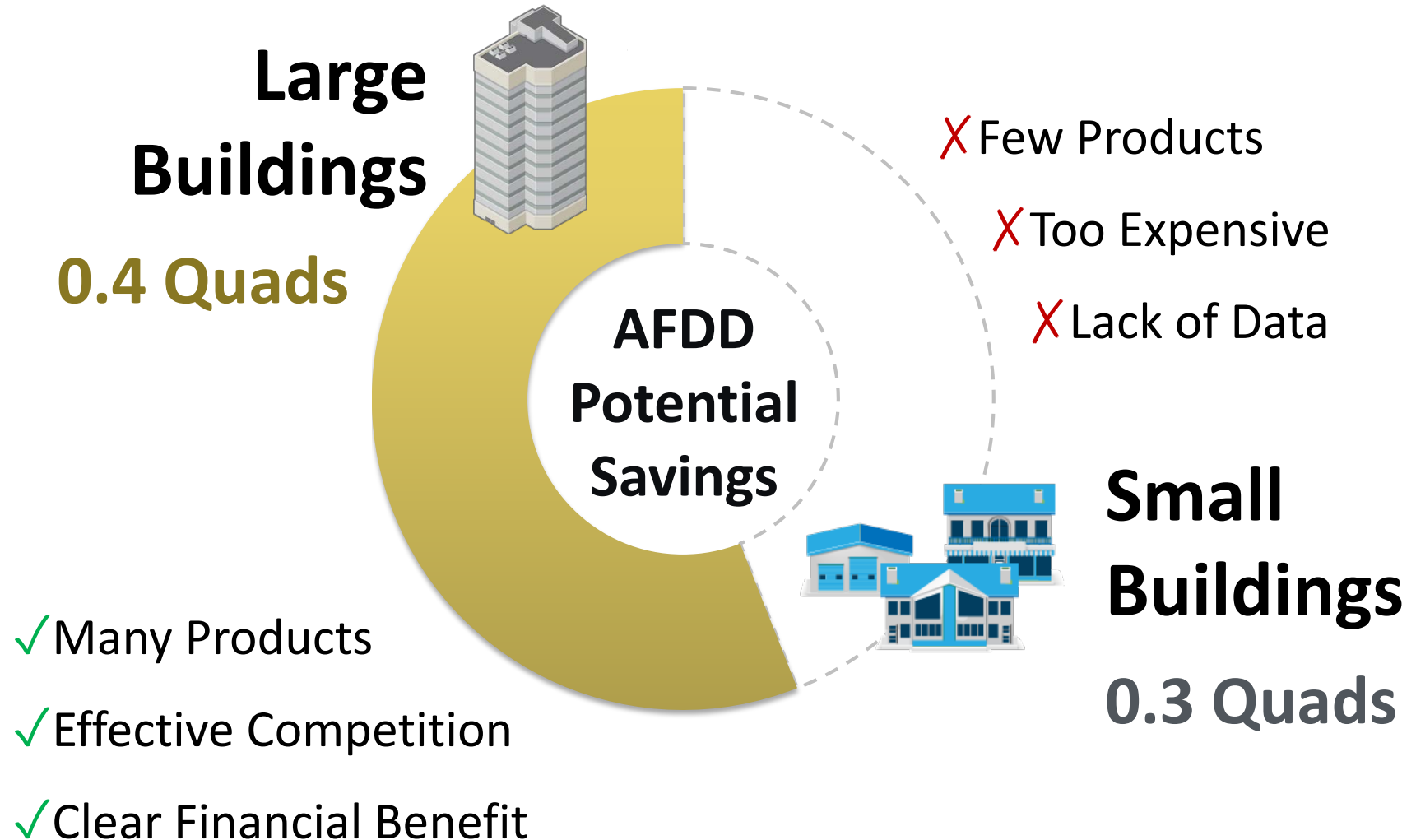
Big Data + Large-Scale Analytics

Model-Based

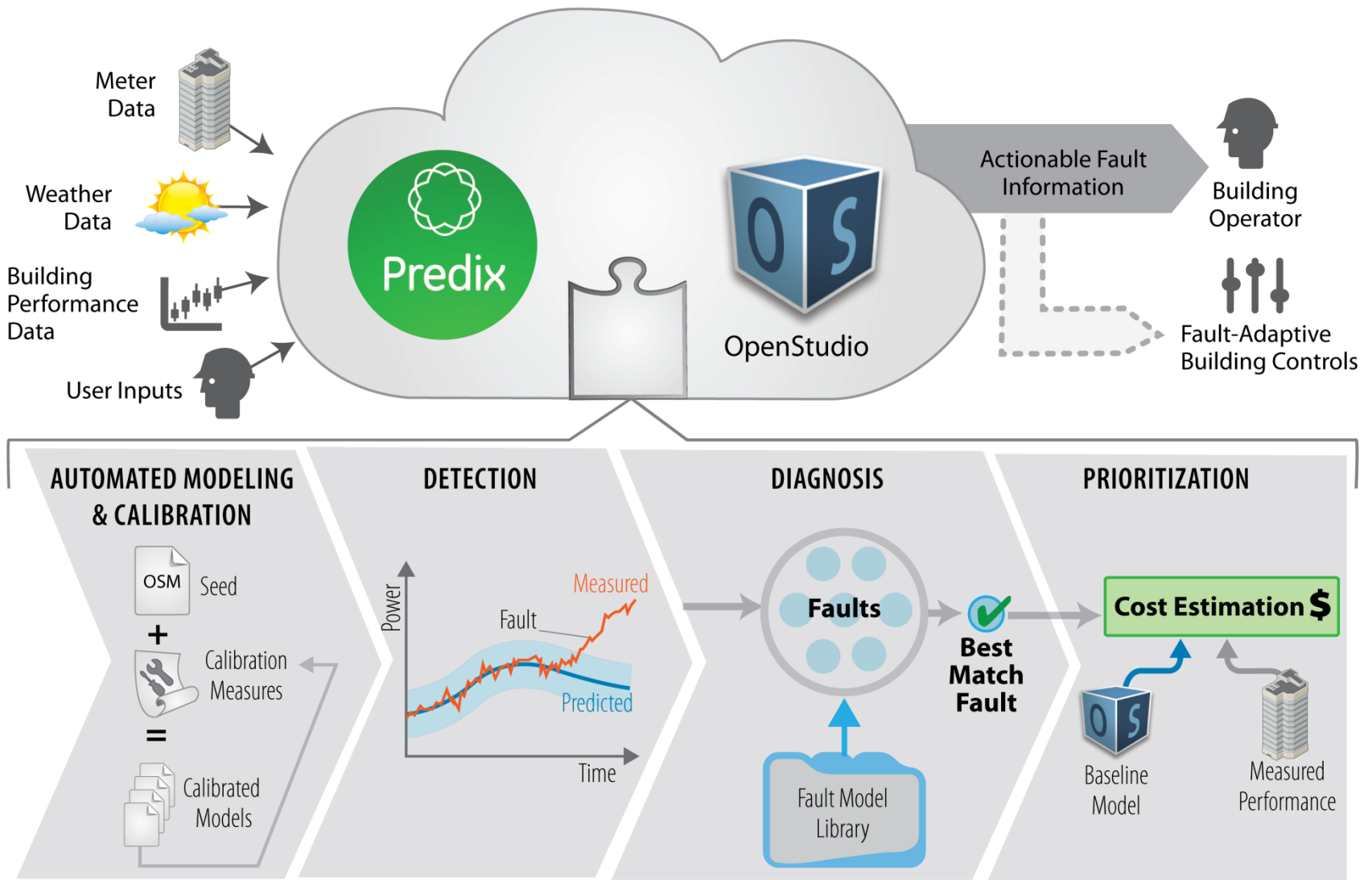


HVAC Domain Expertise
Fault Modeling

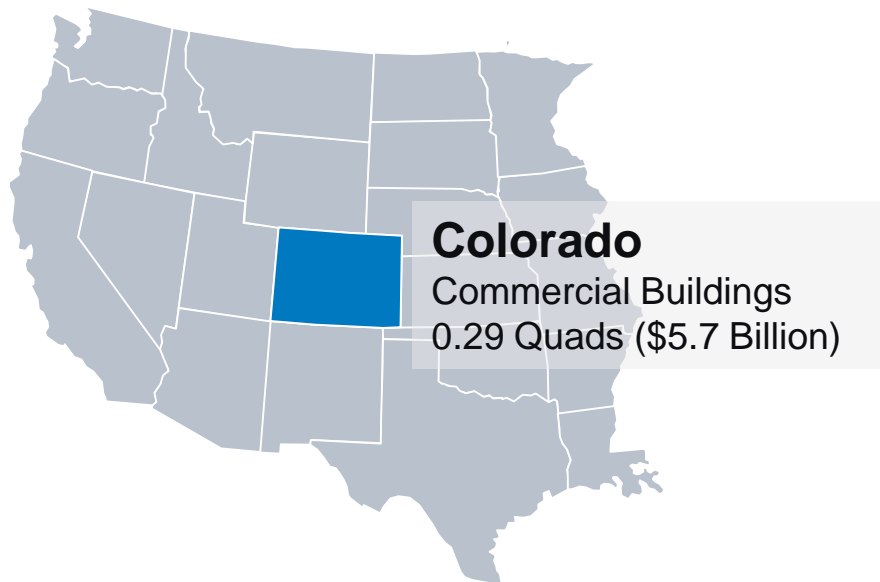
Whole-Building FDD Platform



Whole-Building FDD Platform



Whole-Building FDD Platform



We address the unserved small commercial market and unlock **0.3 Quads** of potential energy savings

Our Approach

- Combines whole-building **energy models** and **predictive analytics**
- Leverages **big data** to improve algorithm results for all users
- Requires **fewer sensors** and **less engineering labor** than rule-based FDD
- **Overcomes cost barriers** for small commercial buildings

Thank You

**National Renewable Energy Laboratory
GE Global Research
Purdue University**

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