

What is Investment Grade ESG?

July 27, 2018
8am PT / 4pm CET



G R E S B



Speakers



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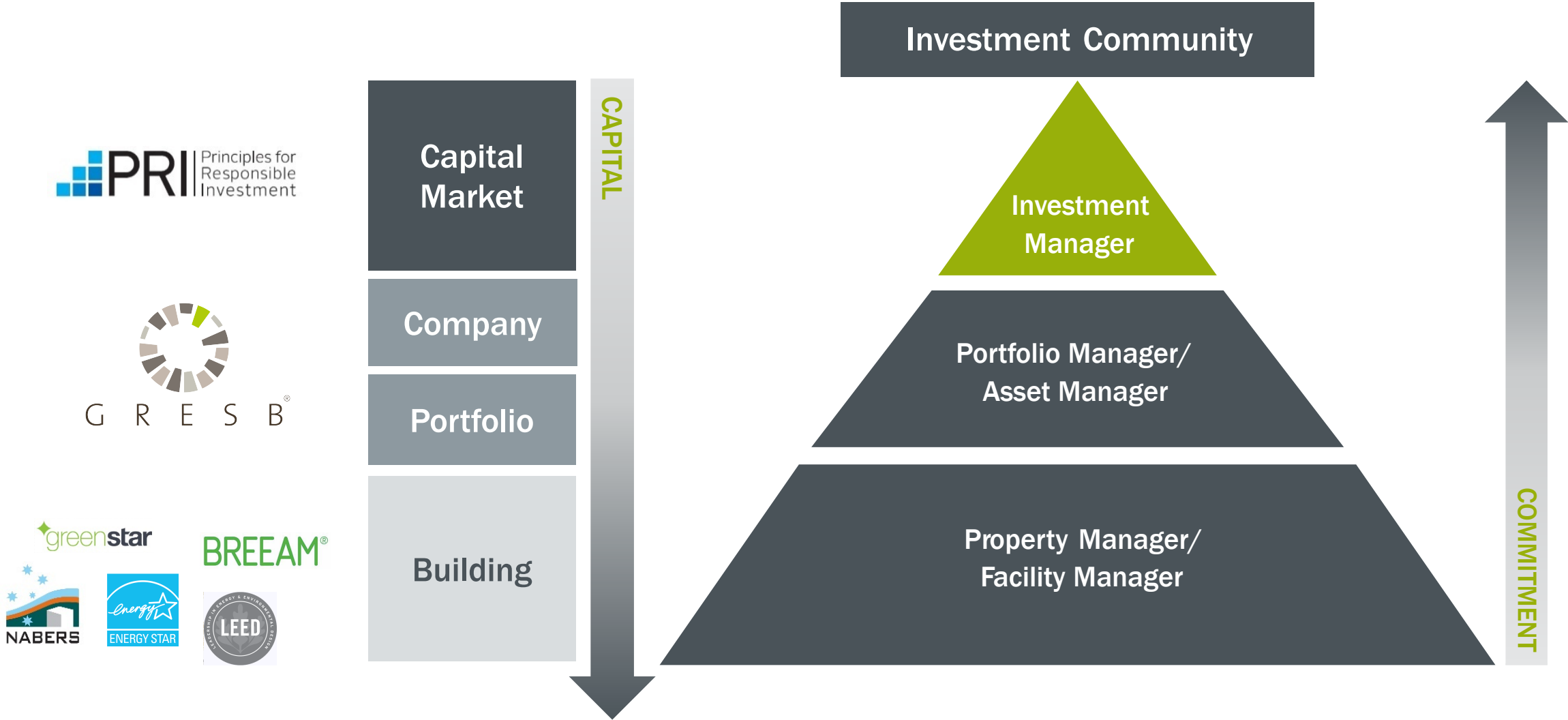


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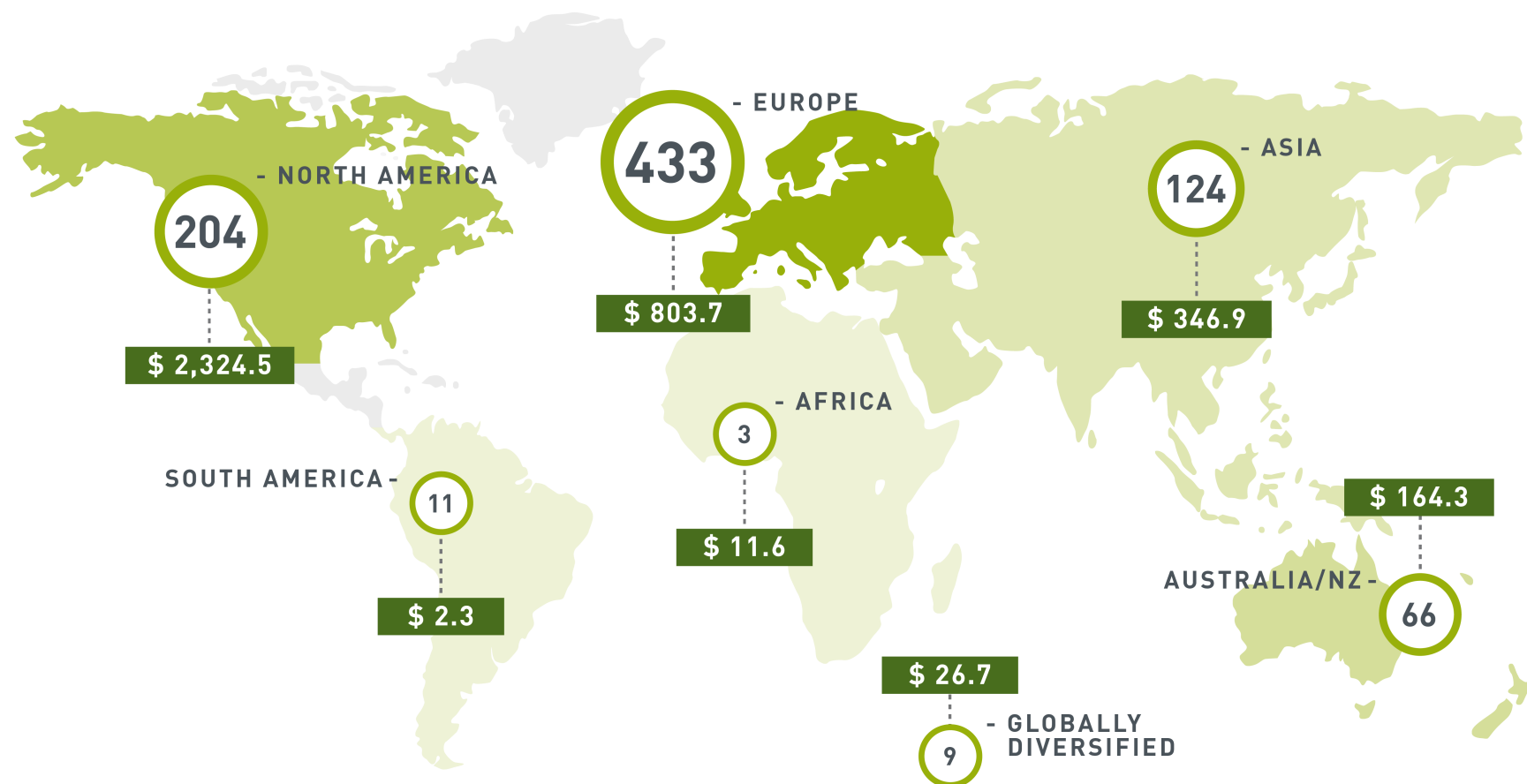
Market transformation

Top down, bottom up



GRESB RESPONSE RATE AND COVERAGE BY REGION

► Total number of participants (listed & private)/Total value (USD billion)



LISTED REAL ESTATE MARKET COVERAGE BY REGION

In % of market cap

NORTH AMERICA



GRESB PUBLIC DISCLOSURE
100%

GRESB REAL ESTATE
ASSESSMENT
54.3%

EUROPE



GRESB PUBLIC DISCLOSURE
100%

GRESB REAL ESTATE
ASSESSMENT
70.4%

ASIA - PACIFIC



GRESB PUBLIC DISCLOSURE
100%

GRESB REAL ESTATE
ASSESSMENT
50.4%

Scale





**Environmental
Performance**



Geo Spatial



**Other building
information**

Data

Data



High quality



Automatic



**Reduced
administrative burden**



Spatial Data



**70-80
Certification/Rating
Databases**

**External Data
Partners**





**Fund Manager
System Accounts**

Building Accounts

Building

```
graph TD; Building((Building)) --- Meter[Meter information]; Building --- Calculated[Calculated values]; Building --- Other[Other building information];
```



Meter information



Calculated values



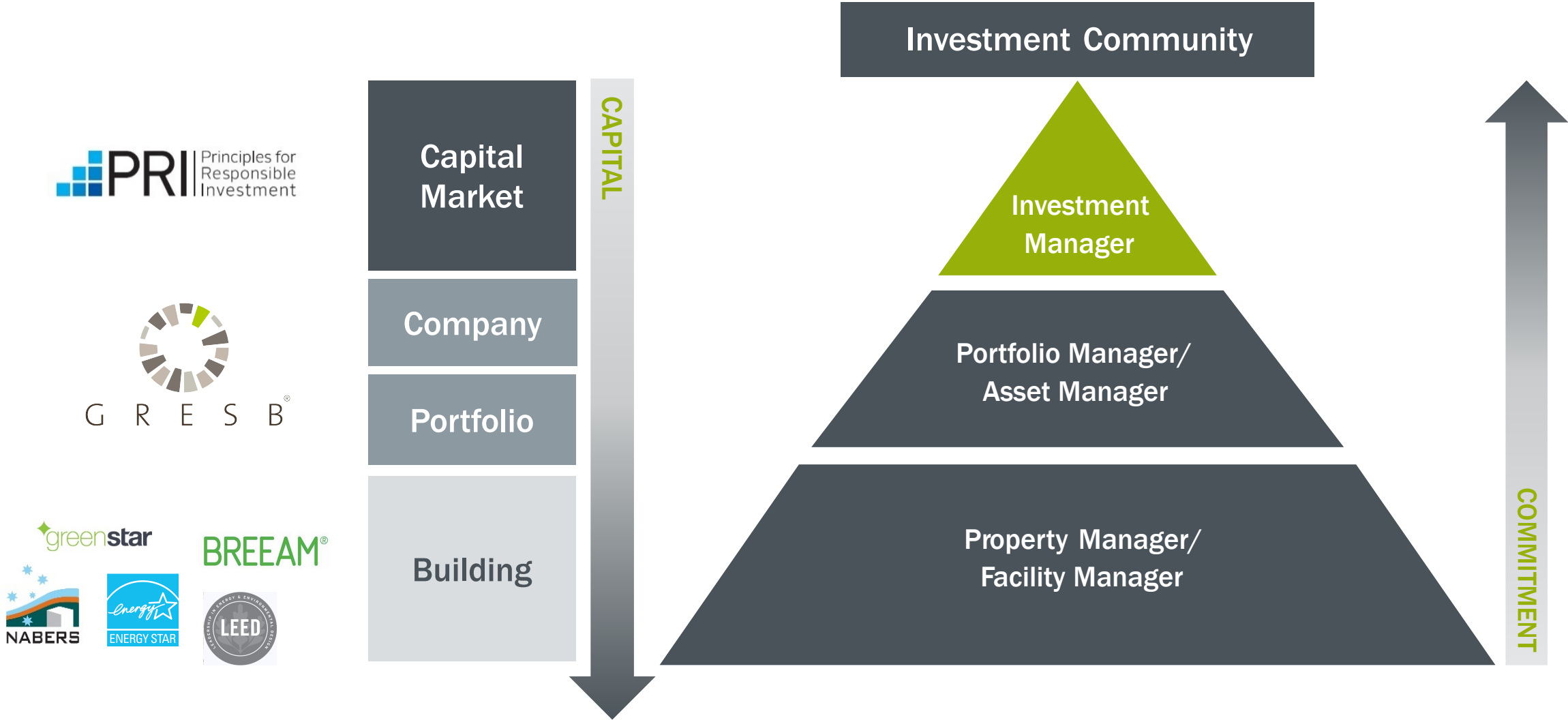
**Other building
information**

GRESB Data Partners

| | | | | | | |
|--|--|---|--|--|---|---|
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Market transformation

Top down, bottom up



Defining Data Quality

“Data” is...

All non-financial aka “ESG” info... Broadly:

- Environmental (e.g. energy, water)
- Social (e.g. occupant engagement)
- Governance (management compensation)

“Quality” is...

- Completeness, timeliness, accuracy
- Steps taken to ensure quality
- Necessary at every level from “meter to asset to portfolio to market...”



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Framework for Data Quality



Timeliness



Accuracy



Completeness



Relevance

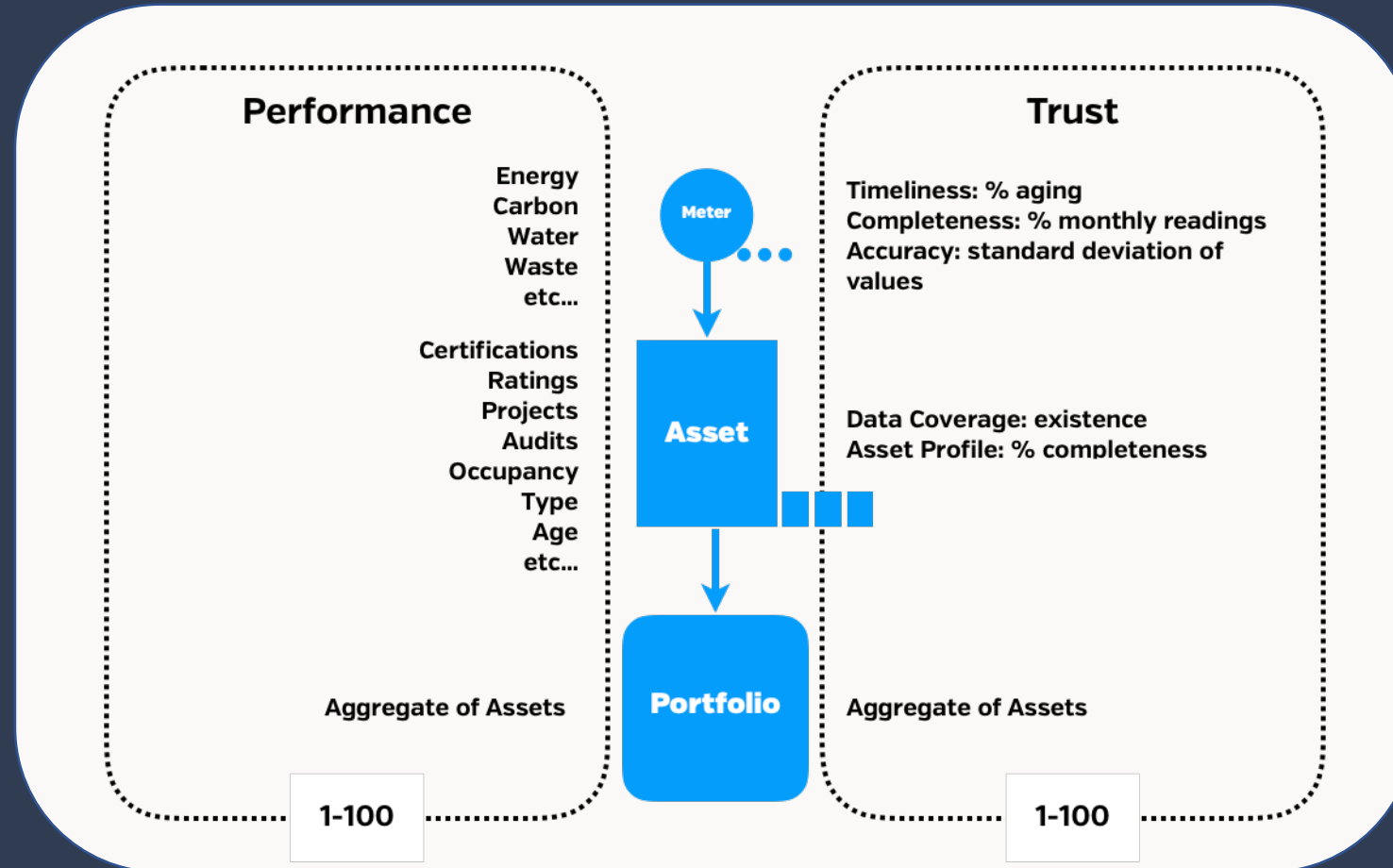


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Framework for Data Quality

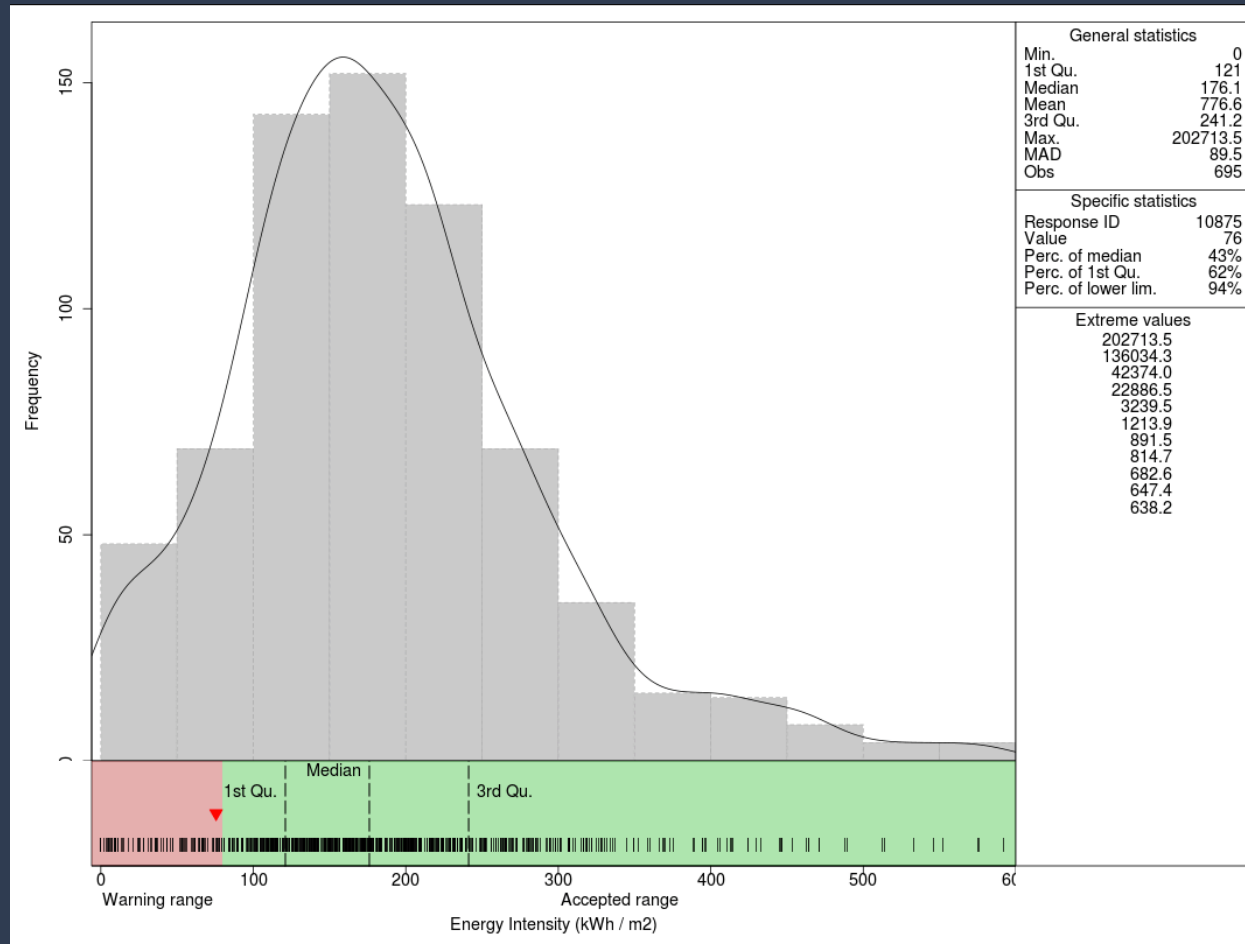


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Example: GRESB Outlier

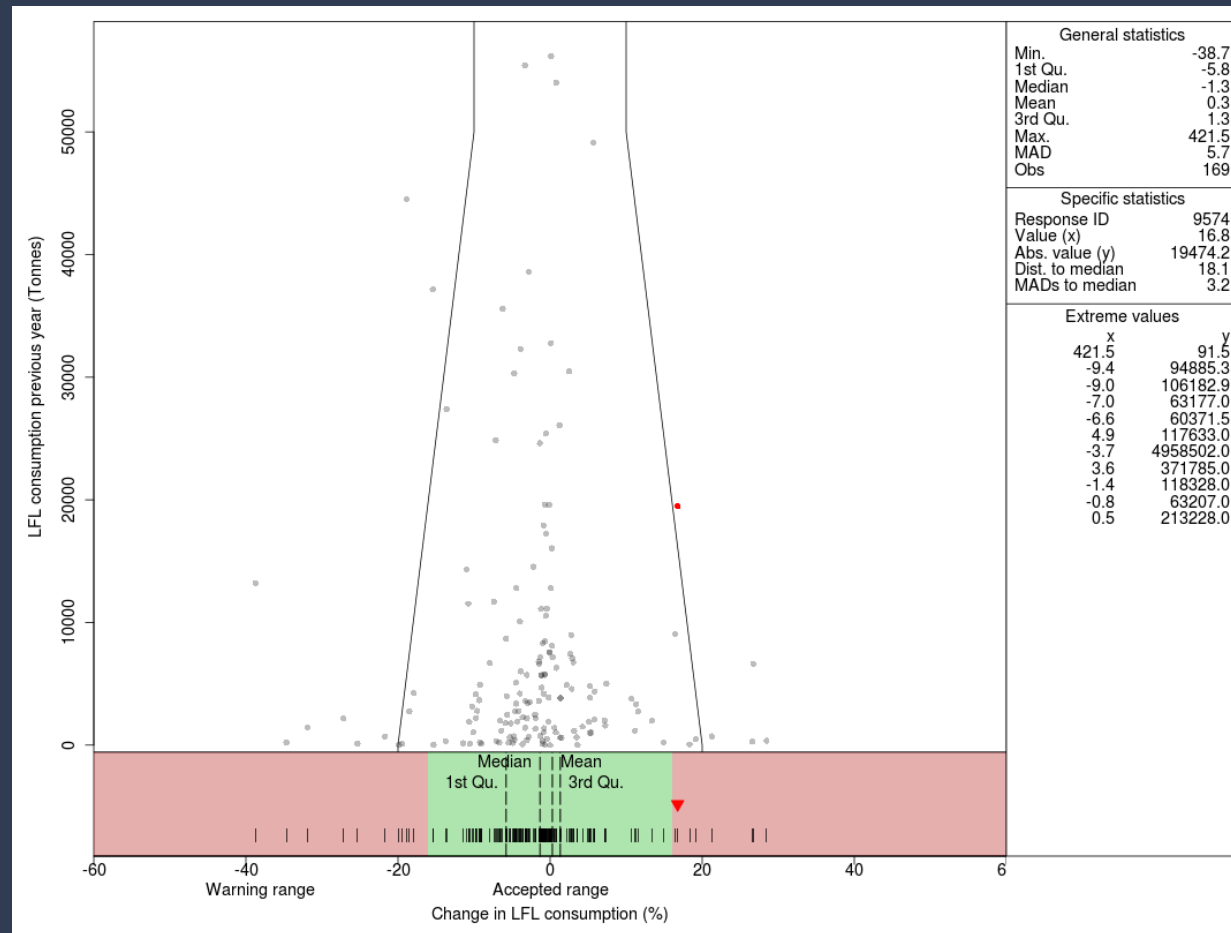


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Example: GRESB Outlier

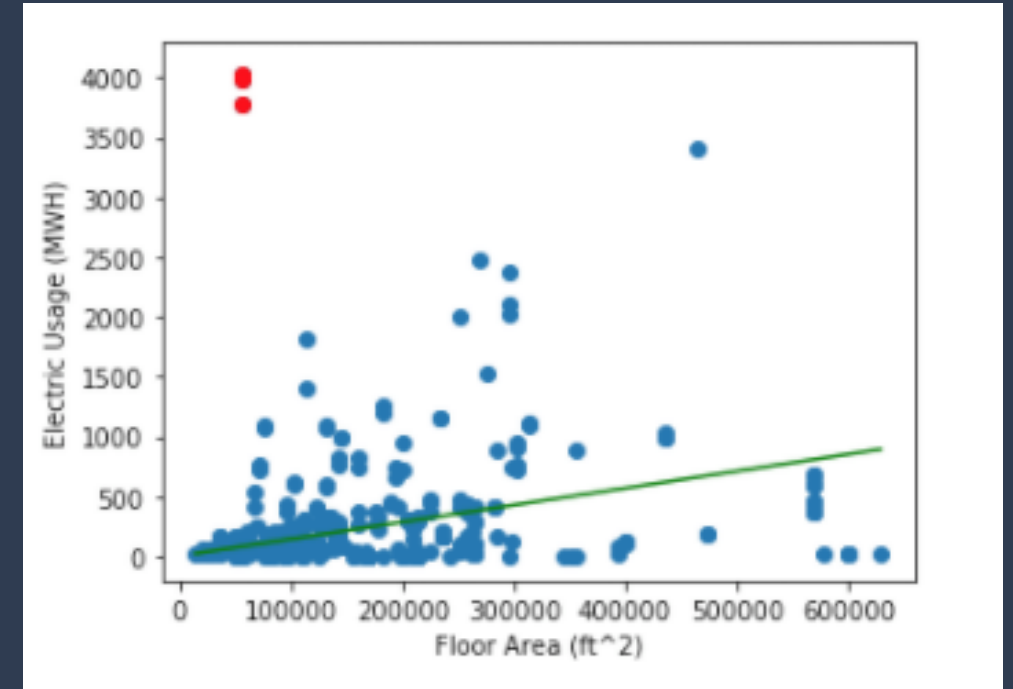
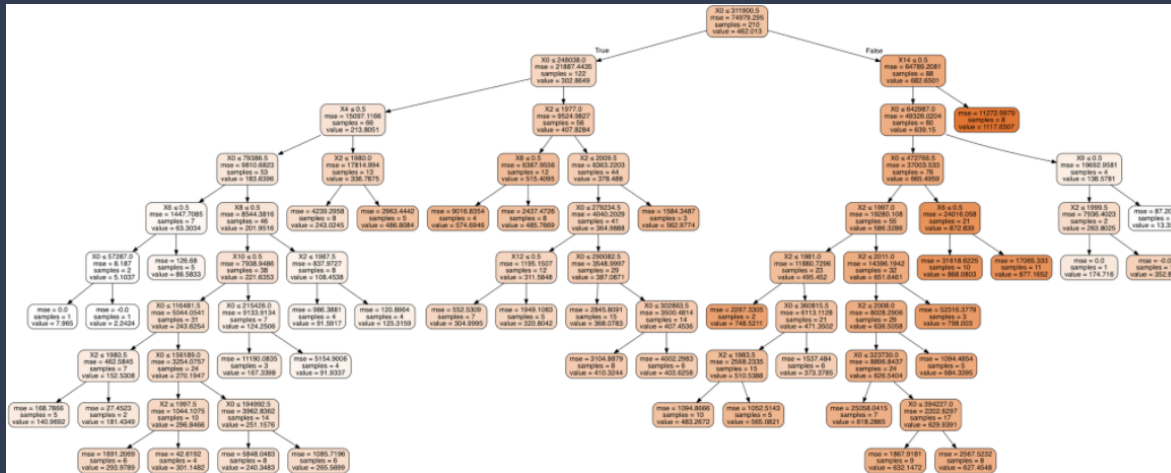


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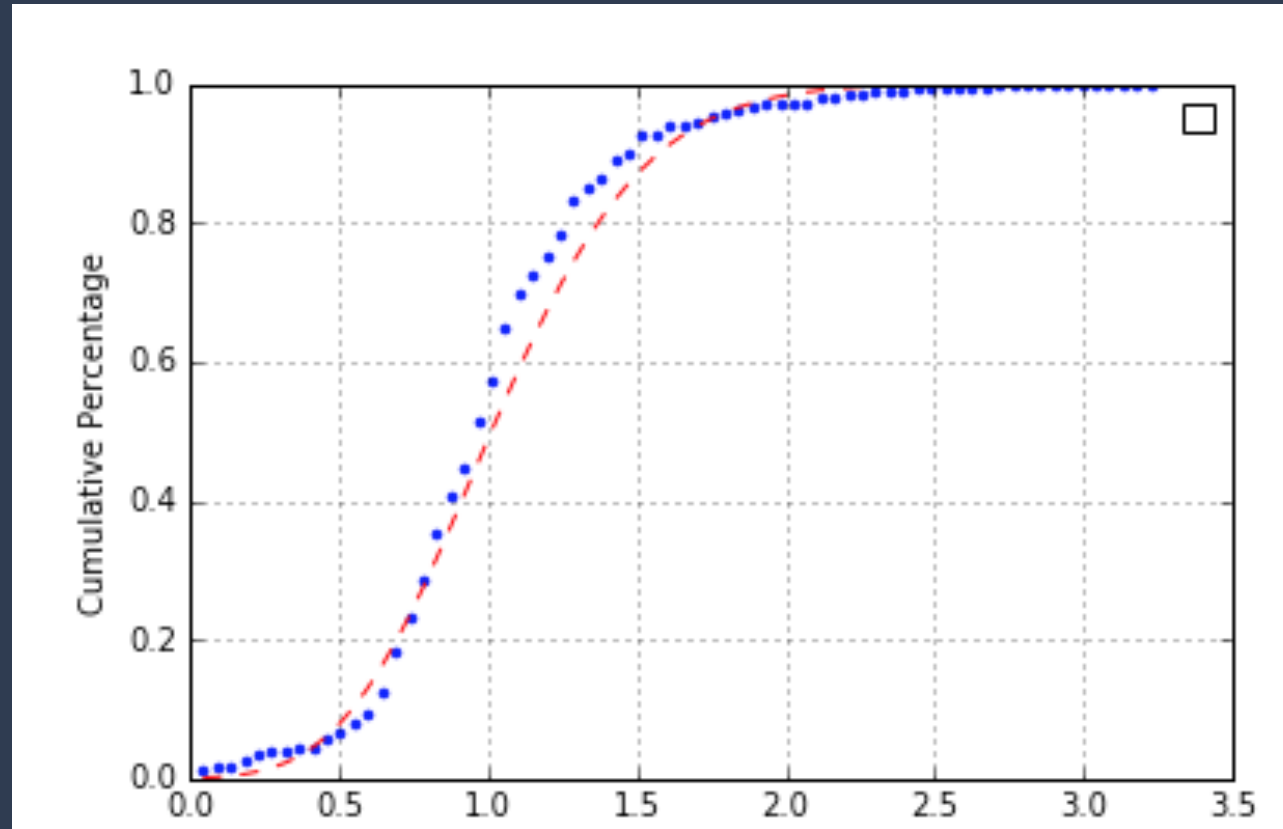
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Example: Data Quality Assurance



Data science, machine learning, and anomaly detectors ensure sustainability performance is measured at the meter level accurately.

Example: Data Quality Assurance



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Questions?



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Thank You!



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