An Uptime Network Benchmark

Expected Useful Life (EUL) for data center equipment

Contextual analysis of Uptime Network member responses

Readout Produced by Michael O'Neil, Contributing Analyst – April 29, 2025
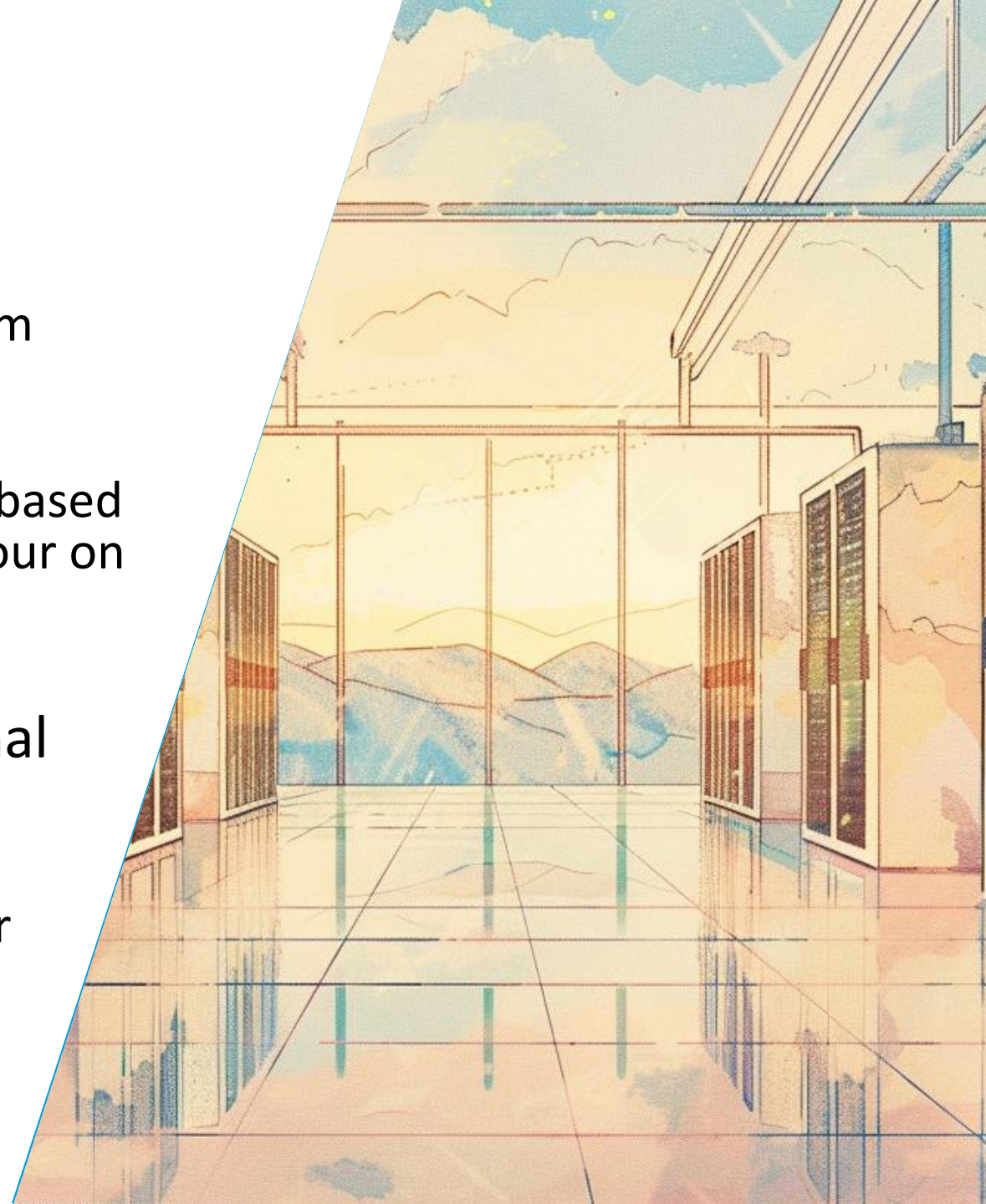
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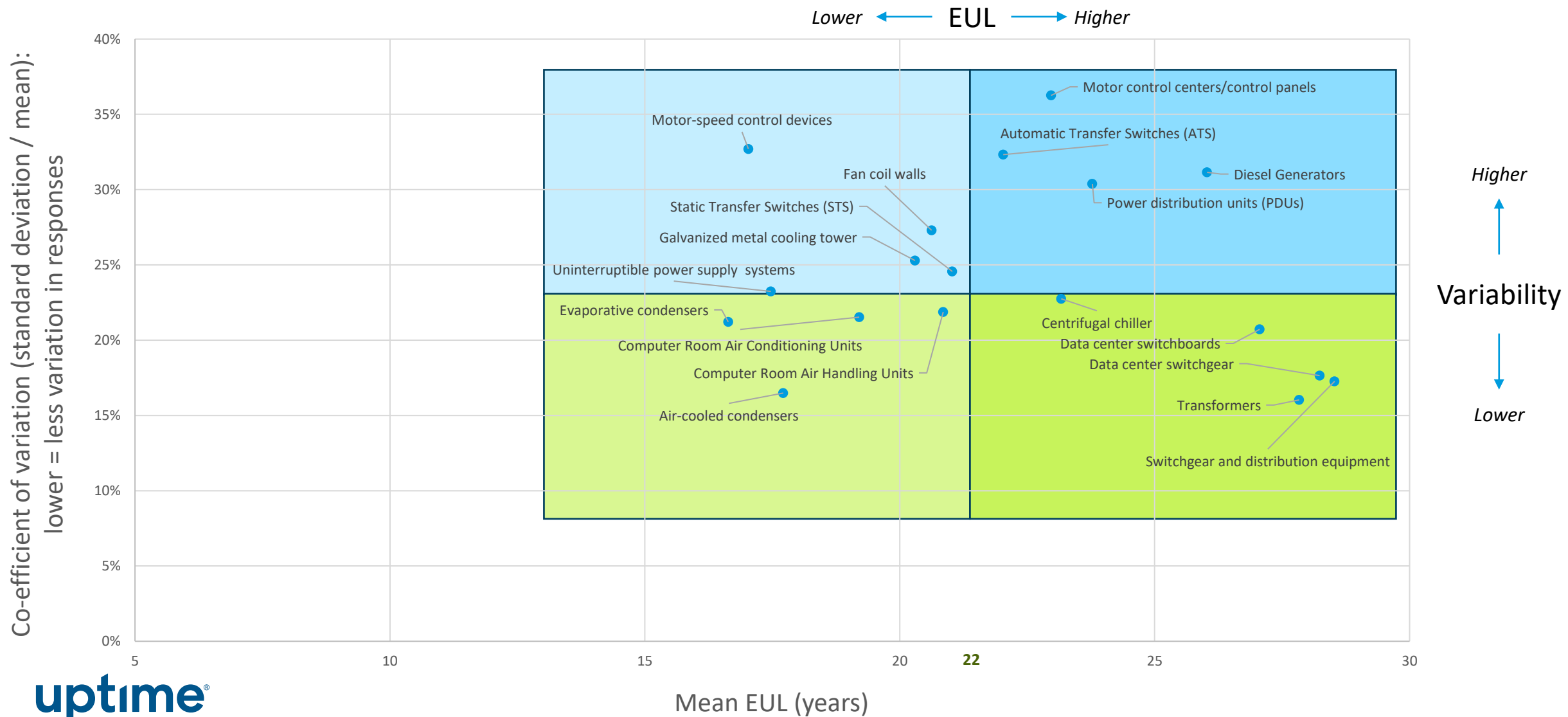
Responses to date

Total of 18 member responses

- 14 from North America, 3 from Europe, 1 from MEA
- 11 Enterprise, 6 Colo/Cloud, 1 Other
- Four contributors specify that responses are based on newer data centers (less than 15 years), four on mid-life facilities (15-20 years), four on older facilities (20-30 years).

New responses will be added as additional members supply data

- Uptime will issue updates as data warrants, and/or in response to contributor inquiries or briefing requests.

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Charting mean EUL vs. variation in responses

Lower ← EUL → Higher

Co-efficient of variation (standard deviation / mean): lower = less variation in responses

Variability — Higher / Lower

- Motor control centers/control panels
- Automatic Transfer Switches (ATS)
- Diesel Generators
- Power distribution units (PDUs)
- Motor-speed control devices
- Fan coil walls
- Static Transfer Switches (STS)
- Galvanized metal cooling tower
- Uninterruptible power supply systems
- Evaporative condensers
- Computer Room Air Conditioning Units
- Computer Room Air Handling Units
- Air-cooled condensers
- Centrifugal chiller
- Data center switchboards
- Data center switchgear
- Transformers
- Switchgear and distribution equipment
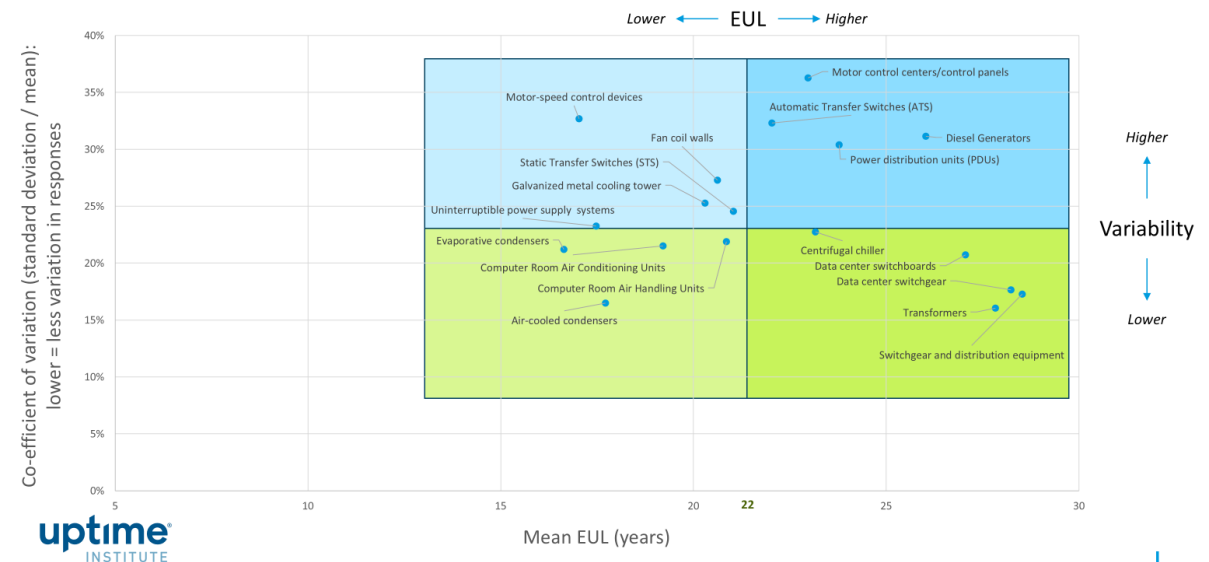
Mean EUL (years)

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About charting means and variation

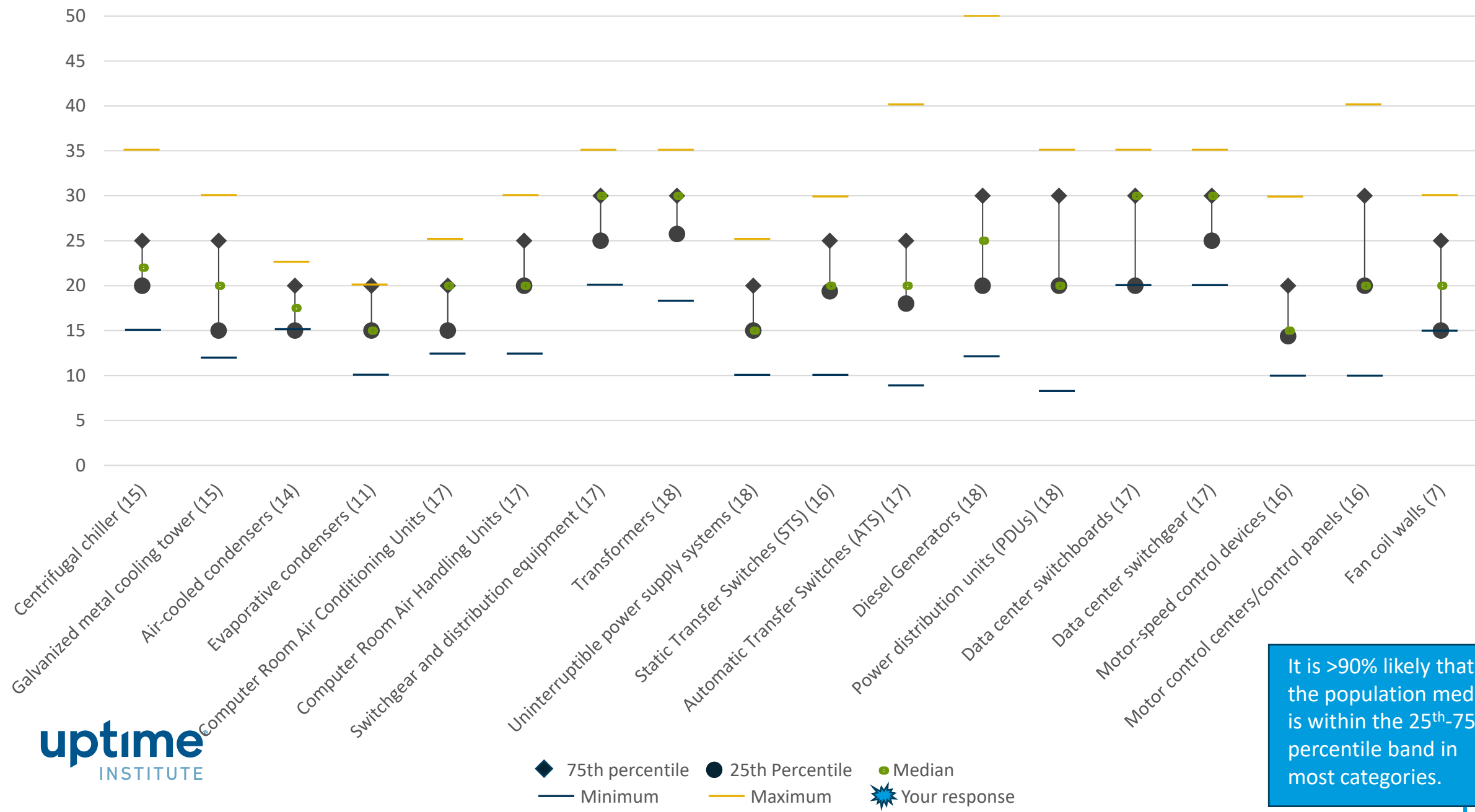This slide provides a simplified view of mean inputs on 18 categories from our 18 contributions:

- The X axis shows mean expected useful life across the 18 equipment categories.
- The Y axis represents variation in these inputs. As the legend on the right shows, categories with more variation are plotted higher on the graph.
- The quadrants divide the responses in half by EUL (greater or less than 22 years) and variability of answers (greater or less than 23% per the calculation).

Categories at the bottom right are consistently reported as having longer expected useful lives; those in the top two quadrants vary more widely across facilities than those towards the bottom of the chart.

Charting mean EUL vs. variation in responses

EUL medians and response ranges – single pane view

Legend:
- 75th percentile
- 25th Percentile
- Median
- Minimum
- Maximum
- Your response

Categories (x-axis):
- Centrifugal chiller (15)
- Galvanized metal cooling tower (15)
- Air-cooled condensers (14)
- Evaporative condensers (11)
- Computer Room Air Conditioning Units (17)
- Computer Room Air Handling Units (17)
- Switchgear and distribution equipment (17)
- Transformers (18)
- Uninterruptible power supply systems (18)
- Static Transfer Switches (STS) (16)
- Automatic Transfer Switches (ATS) (17)
- Diesel Generators (18)
- Power distribution units (PDUs) (18)
- Data center switchboards (17)
- Data center switchgear (17)
- Motor-speed control devices (16)
- Motor control centers/control panels (16)
- Fan coil walls (7)

It is >90% likely that the population median is within the 25th-75th percentile band in most categories.

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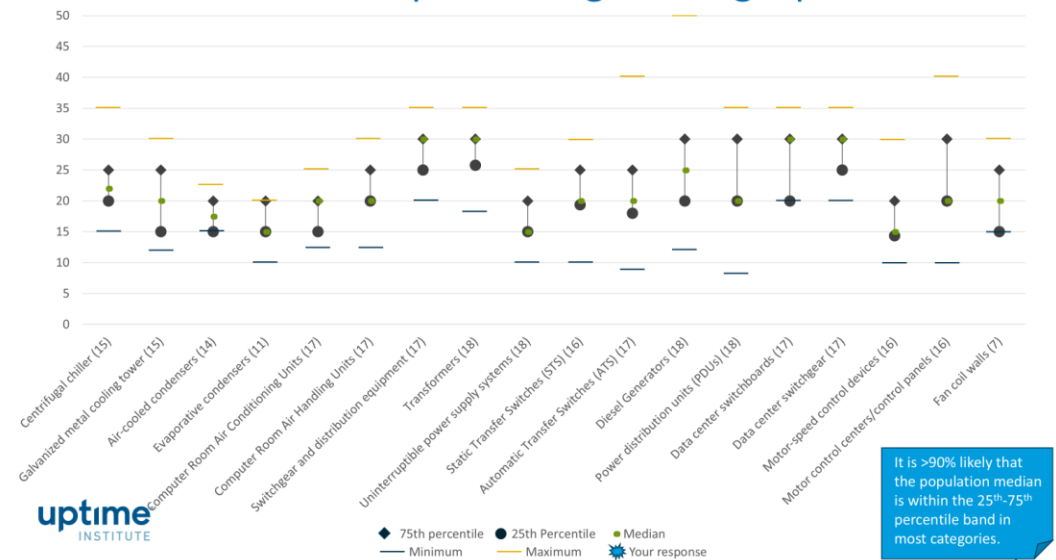# About EUL medians and response ranges

This slide provides a "single pane" view of inputs from our contributors:

- The figures in each column represent the 25th percentile (circle) and 75th percentile (diamond) in each category. The green dot shows the median response for the category.
- Each category also shows the minimum value provided (black lines) and maximum value (beige lines) for each category.

Per the note at the bottom right, it is at least 90% likely that the median for the entire population of data center owner/operators would fall between the 25th and 75th percentile in most categories.

Members who provide input to this initiative receive a version of this slide that highlights their own responses within each category, enabling them to see at a glance how they compare to the peer population.

Your results in context

Equipment types	# of cases	Your response	Most common	Minimum	25th Percentile	Median	75th Percentile	Maximum	Average
Centrifugal chiller	15		20	15	20	22	25	35	24
Galvanized metal cooling tower	15		15, 20, 25	12	15	20	25	30	20
Air-cooled condensers	14		15	15	15	18	20	23	18
Evaporative condensers	11		20	10	15	15	20	20	17
Computer Room Air Conditioning Units	17		20	12	15	20	20	25	19
Computer Room Air Handling Units	17		20	12	20	20	25	30	21
Switchgear and distribution equipment	17		30	20	25	30	30	35	29
Transformers	18		30	18	26	30	30	35	28
Uninterruptible power supply systems	18		15	10	15	16	20	25	17
Static Transfer Switches (STS)	16		25	10	19	20	25	30	21
Automatic Transfer Switches (ATS)	17		20	9	18	20	25	40	22
Diesel Generators	18		30	12	20	25	30	50	26
Power distribution units (PDUs)	18		30	8	20	23	30	35	24
Data center switchboards	17		30	20	20	30	30	35	27
Data center switchgear	17		30	20	25	30	30	35	28
Motor-speed control devices	16		15, 20	10	14	15	20	30	17
Motor control centers/control panels	16		20	10	20	20	30	40	23
Fan coil walls	8		15	15	15	20	25	30	21

(Your data here)

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Putting facility expectations in context

This slide shows how we feed back tabular data to contributors:

- The table provides the total number of responses, the most common (mode) response(s), the 25th percentile, median, and 75th percentile EUL expectations (shaded in green), and the minimums, maximums, and average (mean) for each category.
- The "Your response" column contains the figures that you have submitted to Uptime (thank you!).
- We are happy to discuss findings and possible implications with all contributors.
  - Each contributor is invited to participate in a call with Uptime data and subject experts.

Your results in context

Equipment types	# of cases	Your response	Most common	Minimum	25th Percentile	Median	75th Percentile	Maximum	Average
Centrifugal chiller	15		20	15	20	22	25	35	24
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Your data here

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Obtain your own custom EUL readout!

We encourage Uptime Network members to obtain their own customer view of EUL expectations.

Each member that inputs data gets an updated report that compares their internal perspectives to peer EUL data, providing a quick benchmark perspective that members have used to confirm or adjust EUL assumptions. Members looking for additional insight receive invitations to follow up with data analyst Michael O'Neil and Uptime Vice President, Digital Infrastructure Operations Ron Davis to walk through findings and implications.

Please join the growing list of Uptime Network members engaged in this initiative! [The input spreadsheet takes only a few minutes to complete, and can be found here](.).

Thank you!
We appreciate your input.

For questions or a personalized review, contact:

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