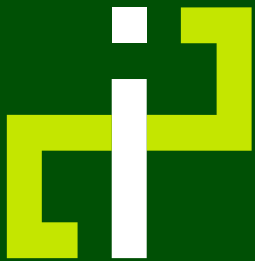**Infrastructure Masons**

iMasons Sustainability Framework

Every Click Improves the Future

Sustainability

Sustainability is becoming an ever-growing topic of interest and concern for the data center industry and its stakeholders. Both hyperscale and global enterprises are driving for change, insisting on a more sustainable and carbon-neutral future.

Realizing the opportunity/need before them, the iMasons Sustainability Committee created the "Every Click Improves the Future" campaign that includes the following initiatives:

1. Unify the industry on a sustainability vision and outline specific actions

2. Make renewable energy available everywhere

3. Define a sustainable data center framework

4. Drive sustainability through procurement

5. Achieve radical efficiency through innovation

On initiative #3, the iMasons Sustainability Committee work shopped a Sustainable Data Center Framework within the committee and has sought input from other leaders and members in the iMasons community. The following details iMasons' initial Sustainability Framework Maturity Model, the problems and solutions, as well as examples of how sustainability and carbon neutrality could be successfully achieved by every data center. We are interested in input on how to improve it and accelerate its adoption.

The Current Problem

In order to measure progress toward sustainability, there must be a definition as to what a sustainable data center is. The consequence of not having one framework is that companies often mean different things when they speak of a "sustainable data center."

This confusion makes it difficult to prioritize actions that slow progress and is inconsistent with initiative #1 above. The four bullets below are the primary areas that the industry currently focuses on in terms of sustainability:

- PUE — as a measure of energy efficiency

- Use of Renewable Energy — either through direct use of renewables or through acquiring PPAs, RECs, etc

- WUE — to minimize water usage

- Waste — i.e., how much is recycled

There are also hundreds of different certifications and initiatives in the market from regulators, certification agencies, interest organizations, and co-location or regional players.

Sustainability Framework

Our Ambition

iMasons' goal has always been to come together as one industry to share best practices, innovation, and exceptional ideas — "a rising tide lifts all boats" mentality. With respect to sustainability, there is no competition — it is a common task, one on which we must unite, and to which we must contribute. Your win benefits me, and mine benefits you.

With this mindset at the forefront of the design process, the iMasons' Sustainability Committee has created an Industry Best Practice/Sustainability Framework that covers all phases of the life of a DC from planning, to designing, building, operating, and decommissioning the data center. It is also intended to cover all aspects of sustainability including all environmental and social impacts throughout the value chain — a complete life-cycle perspective. The model also indicates at what stage of the sustainable journey is a data center, enabling it to be a helpful road map throughout the journey.

We also acknowledged that we needed a model that does not have all the answers, but which can be adapted and changed and keeps pushing ever higher performance as our industry continues to develop and new ideas, innovations, and concepts are introduced.

The Framework

A checklist could include:

Planning Stage

- Is the data center planned with a focus on the achievement of carbon neutrality?

- Is the data center planning to use alternative building materials to reduce its carbon footprint?

- Is the data center planning to implement heat-reuse alternatives?

Energy Acquisition

- Does the data center have a plan for using 100% renewables?

- Has the data center achieved 100% renewable usage 24/7?

- Has the data center achieved 100% renewable use through acquiring certificates?

- Is the data center matching renewable use?

Transparency

- Does the data center have 100% transparency when reporting its carbon footprint?

- Has the data center planned for reporting on scope 1-3 emissions?

- Has the data center implemented scope 1-3 reporting?

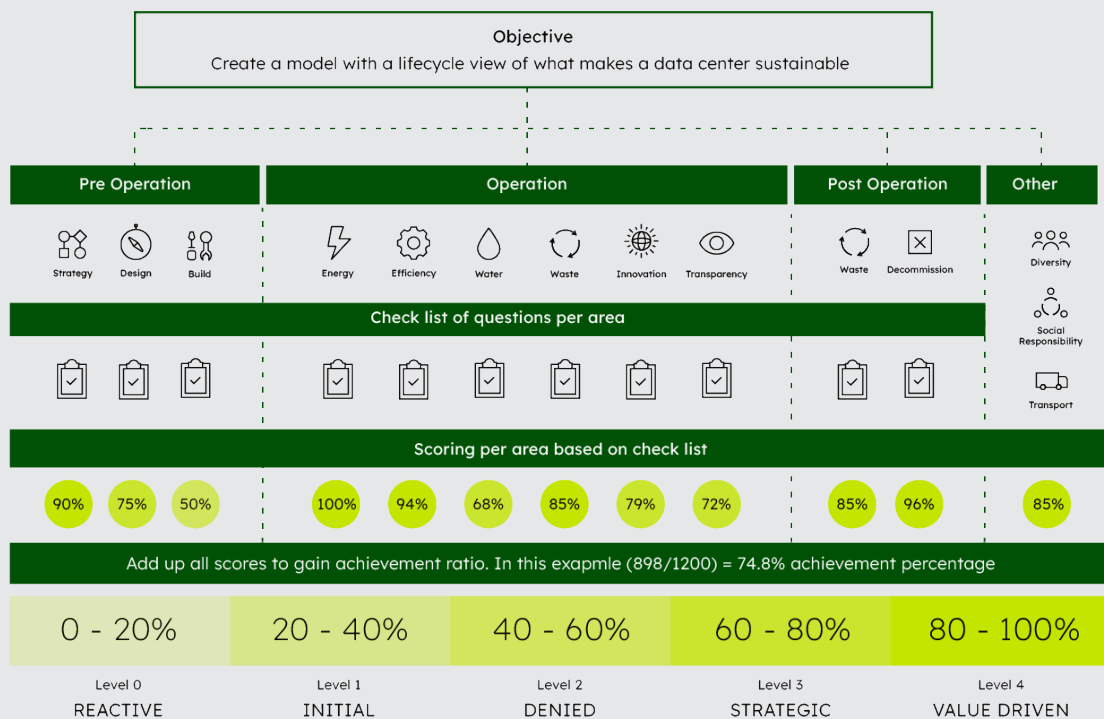- Is the company or data center issuing a public annual Sustainability Report?

Figure 1 - iMasons Sustainability Framework

The idea is that each different phase includes a simple yes or no checklist. The different questions that go into these checklists will be defined by the industry and will include everything from certifications, ideas, innovations, and specific, measurable metrics.

Based on these results of each phase's questions, a rating system shows how mature the DC is within each area. As you can see in the figure below, 100% is the goal. This achievement percentage summed across all impact areas defines the DC's Sustainability Maturity Level. A data center cannot consider itself a value-driven company if its score is under 20% in any given category. This is to ensure performance across all impact areas. For example, a center isn't value-driven just because they have access to 100% renewables. Instead, the center must also qualify in the energy efficiency, water use, recycling, and other areas.

The hope is that this maturity model will provide synchrony within the industry, and provide visibility and market incentives to move our data centers along this sustainability journey, so that "Every Click Improves the Future".

Implementation

When the first version is completed, the plan is to create a web tool with the checklists where companies can do a self-assessment to receive their score. This can be used to communicate sustainability progress in a standard format with prospects, customers, and other stakeholders. The assessment will also be registered with iMasons anonymously. This will enable iMasons to aggregate the assessments and produce reports on aggregate performance, by region, sector, age of DC, etc., allowing users to compare their own scores to their chosen peers. This will also allow iMasons to track and report performance improvement over time, and note how the industry has implemented iMasons Sustainability Committee's vision of "Every Click improves the Future".

The iMasons will not be a certification agency but would like to empower the industry by providing an accessible and measurable framework that creates a shared definition and vision of a sustainable data center and encourages companies to accelerate progress towards that goal.

Updates

The framework and model will not be static, and the committee will work to ensure that both are implemented and updated regularly in a transparent and open process. What was considered a sustainable data center 10 years ago is not necessarily true today and we need to have a model that is maintained and keeps pace with our industry.

Contribution, Insight, and Growth

If you have any insight, interest, and perspectives you are willing to share, topics that we should include in the model, or even good examples of what your company has done in a given area, we urge you to share them with us by email or at any of the many member summits and local chapter meetings planned to socialize this framework.
All perspectives are welcome and encouraged.
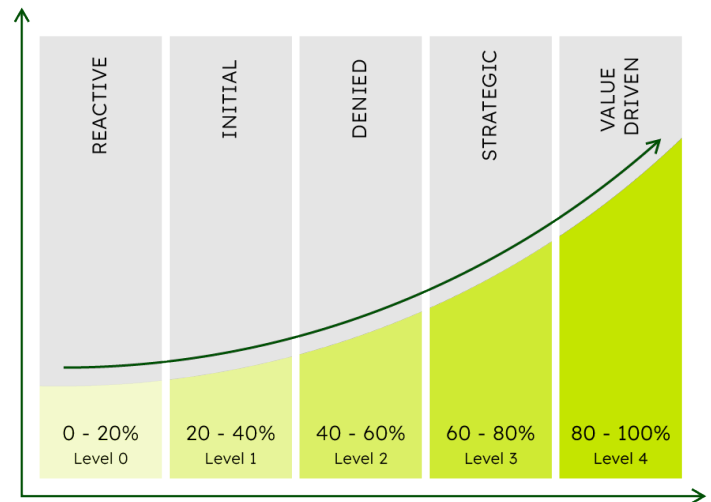
Every click improves the future!

Figure 2 - iMason Sustainability Framework Maturity Model

REACTIVE | INITIAL | DENIED | STRATEGIC | VALUE DRIVEN

| 0 - 20% | 20 - 40% | 40 - 60% | 60 - 80% | 80 - 100% |
| Level 0 | Level 1 | Level 2 | Level 3 | Level 4 |

About Infrastructure Masons

Infrastructure Masons (iMasons) is a global, nonprofit, professional association of individuals connected and empowered to build a greater digital future for all. Since its launch in 2016, the organization has brought together 6,000 individuals across 130 countries, a community representing USD 150+ billion in infrastructure projects.

iMasons provides an agnostic platform for members to connect, grow, and give back across four strategic pillars: Education, Inclusion, Innovation, and Sustainability. To learn more, visit imasons.org or LinkedIn.

United for
a Greater Digital Future

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