Reduce the Carbon Footprint of Your Cloud-Native Workloads
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Ynema Mangum, Director Product Management, Sesame by ITRenew
Data Center Carbon Footprint

As data moves to the cloud, data centers now lead the carbon footprint share.

In 2015, User devices was #1, followed by networks, then data centers.
Cloud-Native: a “ROBUST” ecosystem
Sesame foundation **components**

**COMPUTE**

Compute is at the heart of every data center. Now you can put hyperscale compute (including GPU options) to work for you for **half the TCO** AND **eliminate the carbon tax** associated with newly assembled equipment.

**STORAGE**

Storage is essential for data growth, seasonal upticks, and business expansion. Converged and Hyperconverged storage is flexible, whether **local** or in **HDD** or **NVMe** storage expanders.

**NETWORKING**

The network is critical in your infrastructure. **Dual 25G node** connectivity standard, with **100G** cross-rack uplinks. Scalable to **1000s of nodes** across dozens racks.

**INFRASTRUCTURE**

**Racks, power, and management** run the world. Our hyperscaler infrastructure management is ready for OS deployment and system monitoring, orchestration, and network virtualization.

**OPEN POSSIBILITIES.**
The Open Cloud-Native Stack for Renewable Infrastructure

Cluster management + systems intelligence

Lifecycle management

Orchestration

Virtual machines + containers

Monitoring / telemetry

Curated set of best of breed open-source solutions

Bring your own operating system

Quick and simple rack scale deployment

Infrastructure for Open Systems
CASE STUDY: deployed today in Amsterdam
CASE STUDY: Blockheating
Green data centers require innovative partners

“WE’RE SAVING 20 – 30% ON AIR-CONDITIONING COSTS BY GOING WITH OUR DECENTRALIZED APPROACH. CONSTRUCTION TIMES ARE ALSO SIGNIFICANTLY REDUCED. THOSE BENEFITS ALLOW US TO BE SUSTAINABLE AND ECONOMICALLY COMPETITIVE AT THE SAME TIME.”

JEROEN BURKS, CEO BLOCKHEATING

“WE CHOSE ITRENEW FOR THEIR SUSTAINABILITY CREDENTIALS, SUPERIOR TECHNOLOGY, ‘OPEN COMPUTE’ FLEXIBILITY, AND THE SKILL OF THEIR ENGINEERING TEAM TO DELIVER ON OUR REQUIREMENTS AT SCALE—ALL OF WHICH HAVE ENABLED US TO ACCELERATE OUR DEVELOPMENT.”

OPEN POSSIBILITIES.
“The current model for how to process and store data is broken. ‘Business as usual’ has met its limits and new thinking and leadership is required.

“Given the current global climate it’s more important than ever that business adopt sustainable, circular models that create value by making use of the resources already ‘in-play.’ But you have to also do this without compromise to performance or quality, and at the best economics.”

David Rowe, Founder CEO
Hydro66

“As concerns over the data center’s impact on global climate change become more acute, it becomes increasingly clear that the future of IT will center on sustainability and responsible digitization as a core pillar.”

Oliver Menzel, CEO
maincubes

“In curbing greenhouse gas emissions by up to twenty–five percent each year, OCP solutions are significantly more sustainable than vanity brand hardware.”

Daniel Njuguna, CEO
Atlantis

OPEN POSSIBILITIES.
The Power of Circular Economy

43% reduction

Total kg CO2e

Pre-Use Phase
Operational Phase (3-Years)
Post-Use Phase (EOL)

Circular Economy
Traditional Approach

OPEN POSSIBILITIES.
Looking at the full value chain

**PRE-USE PHASE**
CO2e and GHG from mining to manufacturing to deployment
Embodied Energy/Scope 3 emissions

**OPERATIONAL PHASE**
Electricity to run IT equipment
Scope 1 emissions

**POST-USE PHASE**
Recycling and EOL Processes
Embodied Energy/Scope 3 emissions

OPEN POSSIBILITIES.
Make sustainability your competitive advantage

Achieve your decarbonization goals faster, without compromising quality, reliability or performance

**ENVIRONMENTAL**

With Sesame, you can avoid up to 75%+ of the carbon emissions tied to legacy IT manufacturing. Materials used to build our systems are sustainably-sourced.

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**FINANCIAL**

Think of Sesame as the certified, pre-owned BMW of IT. High-density designs deliver significantly better performance, efficiency compute and storage economics.

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**OPERATIONAL**

Sesame is built on open architecture, which beats legacy solutions on compute density, operational efficiency and energy consumption.

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<td>Sesame has designed eWaste and CO₂ out of new hardware. Our circular economic model reduces your costs and carbon footprint.</td>
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| 75%  | 50%  | 33%  |
| CO₂ tied to IT mfg avoided | Higher density & lower TCO | more energy efficient |
Sesame by ITRenew

- Designed for your most demanding workloads
- Tuned to your specific requirements
- Ready to plug-and-play

**BARE-METAL SOLUTIONS**

- Engineered, tested, supported as a single stack
- Roll it in, turn it on

**PURPOSE-BUILT CONFIGURATIONS**

- Open Systems (Disaggregated)
- Converged (HCI)
- AI/ML

**FLEXIBLE SCALE & CAPACITY**

- 6 to 96 nodes per rack
- 600+ nodes per cluster
- 25/100G networking

**STANDARD RACK SIZE & POWER**

- No data center redesign
- Leverage existing power
Call to Action


- Read the full Blockheating Story: https://www.itrenew.com/resources/blockheating-customer-story/

- Learn more about Sesame by ITRenew solutions: https://www.itrenew.com/sesame/ ymangum@itrenew.com

- Watch Hardware for Kubernetes Webinar: https://www.cncf.io/online-programs/hardware-for-kubernetes-peeling-back-the-layers/

- Explore ITRenew on OCP Marketplace: https://www.opencompute.org/sustainability-solutions
Thank you!