

Nominee: EcoRacks

Nomination title: High Density Upgrade with Immersed Computing

Ecoracks datacentre in Eindhoven, the high tech heart of the Netherlands known as one of the “smartest” regions in Europe was operating a 750 KW datacentre with +- 1000m2 footprint serving cloud providers and hosting providers.

Foreseeing a shifting requirements from customers towards high density platforms for emerging technologies, often GPU clusters for High Performance like applications they decided to review their datacentre design strategy. Multiple strategies were reviewed including a hyperconverged infrastructure not meeting the requirements of their customers. Ecoracks decided to focus on efficient compute facilities and they approached Asperitas for their Immersed Computing technology.

Ecoracks also aimed for efficient floorspace usage and a flexible and modular scalable infrastructure. Asperitas is product portfolio includes the AIC24 a plug and play Immersed Computing system with a standard IT power capacity of 22 kw. Only three connections are needed to operate the Immersed Compute systems: water, power and data. For this project Asperitas, Ecoracks and their launching end user initiated a brief R&D project with a focus on IT optimization and increasing the density. This resulted in a 1st phase deployment in a dedicated Immersed Comput datahall with ten AIC24 Immersed Computing systems facilitating a record breaking GPU cluster of 300 KW on less than 40m2.

According to EcoRacks this deployment requires limited cooling infrastructure taking 1% of the power capacity of this Immersed Computing facility. The CAPEX of this project was around 10% of a traditional facility.

This project was awarded by the Dutch Ministry of Economy and Environment as first large scale Immersed Computing datacentre project in the Netherlands and the impact it had on energy efficiency. Annually a selection is made for lighthouse projects of innovative Dutch cleantech which , very few datacentre projects are being selected and the EcoRacks deployment was one of them.

The impact of the deployment was two-sided, it is a reference project on sustainable innovation, but it also allowed for a direct refresh or upgrade of the EcoRacks datacentre facility with low investments and impact on operations. Resulting in an infrastructure being able to facility a new customer segment requiring high density.

Why nominee should win

- EcoRacks is an innovation pioneer with the first large scale Immersed Computing datacentre deployment



- **Result 1: Minimized CAPEX (10% of traditional)**
- **Result 2: Energy Efficient & selected as Dutch Energy Innovation Lighthouse project**
- **Result 3: Minimized floorspace: 300KW on 40m2**
- **Result 4: Future ready facility for a new customer segment requiring high density infrastructure**