



OPEN
Compute Project



Regional
Community

OCP TAIWAN DAY

Road to 5G · AI · Edge Computing



OPEN
Compute Project



OCP TAIWAN DAY

Road to 5G · AI · Edge Computing

IT Gears for Modern Data Center Efficiency

► Dr. Sunlai Chang, Senior VP and CTO of Wiwynn



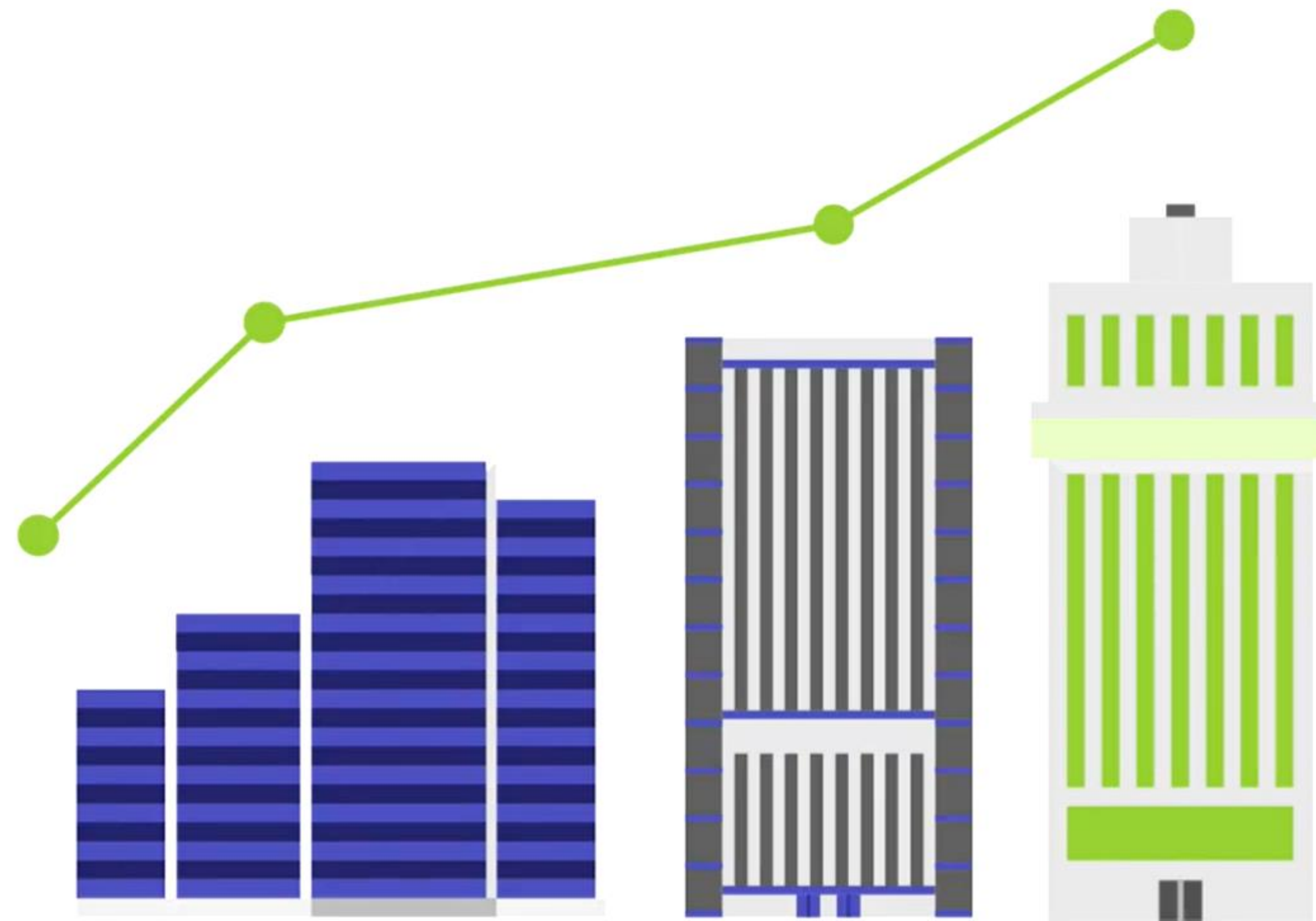
OCP COMMUNITY HAS BEEN GROWING



- **Hundreds Member Companies**



- **Thousands of Engineers Working Together on 10 OCP Projects**



OCP TENETS – Contributions & Workshops are attested with

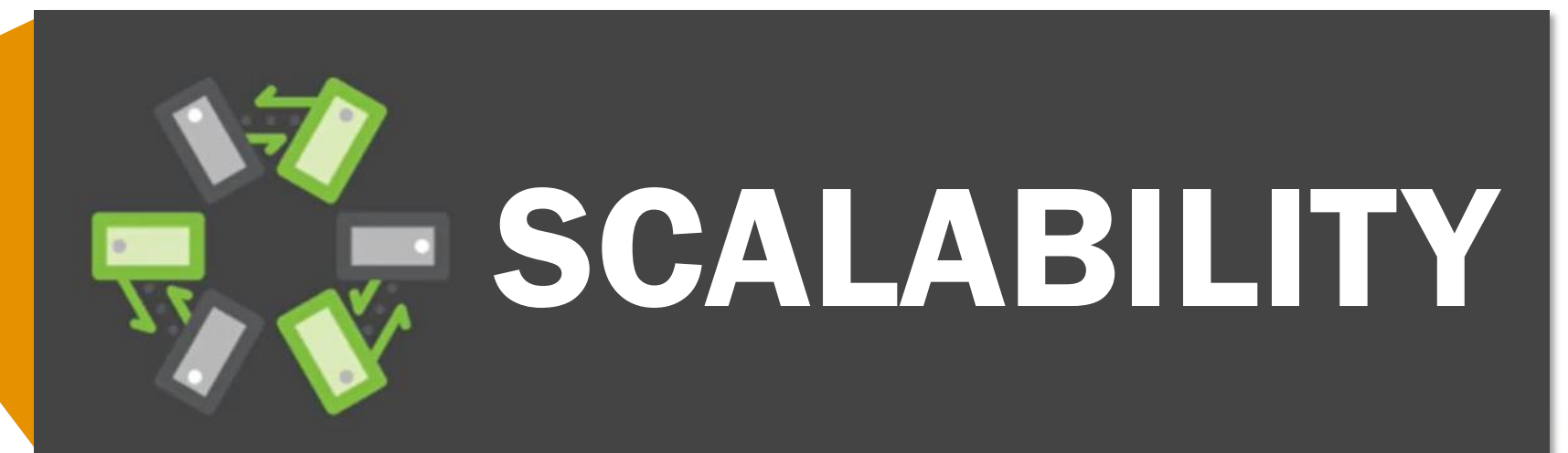
ALL PRODUCTS



All the design contributions and workshops are attested to satisfy the 4 OCP tenets.

Design Contribution &
Workshops

Accepted &
Presented



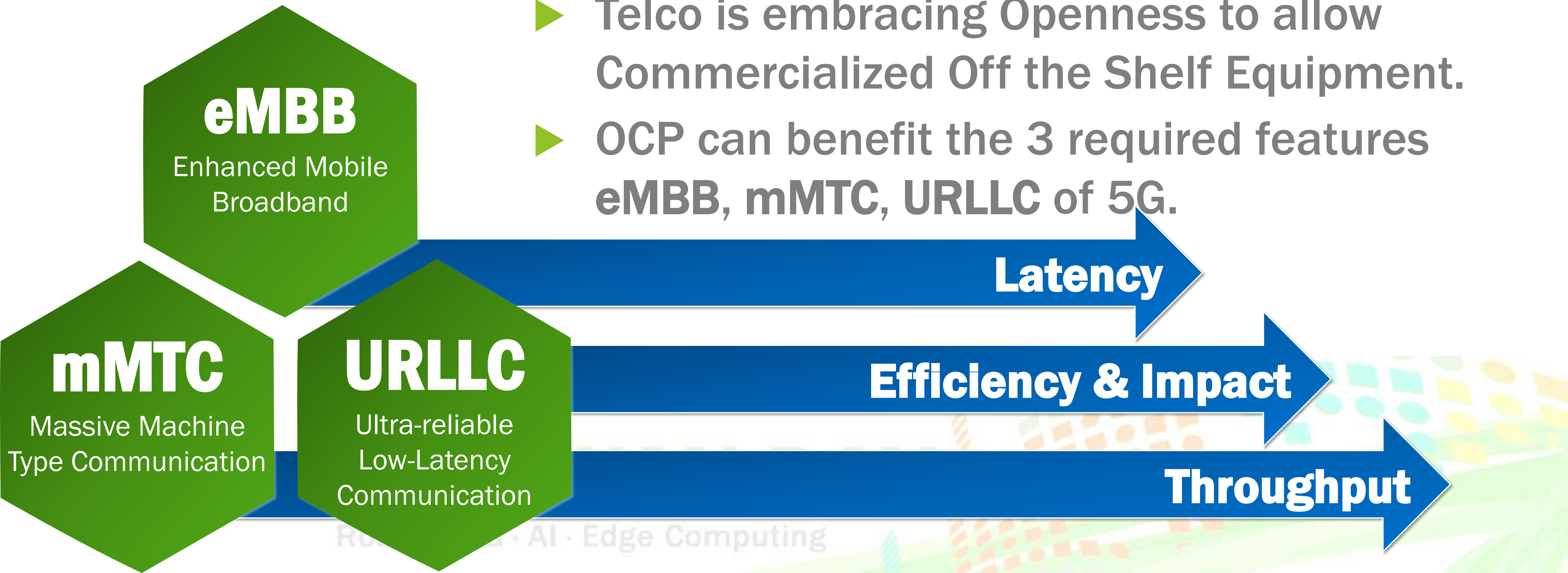
OCP TAIWAN
Road to 5G · AI · Edge



Bring OCP Benefits to New Applications - 5G



- ▶ OCP is collaborating with other technical groups such as **Linux Foundation & Open Network Foundation** to extend its impact.
- ▶ Telco is embracing Openness to allow **Commercialized Off the Shelf Equipment**.
- ▶ OCP can benefit the 3 required features **eMBB, mMTC, URLLC** of 5G.



WIWYNN EP100 Platform

The Platform Is Based on the OpenEDGE Project with OCP Ingredients

- ▶ Open Hardware for COTS & Open Software
- ▶ Expedite the Eco System of Openness
- ▶ Enjoy OCP Products & Benefit



**Open
BMC**

**Open
RMC**

**Open
FW**

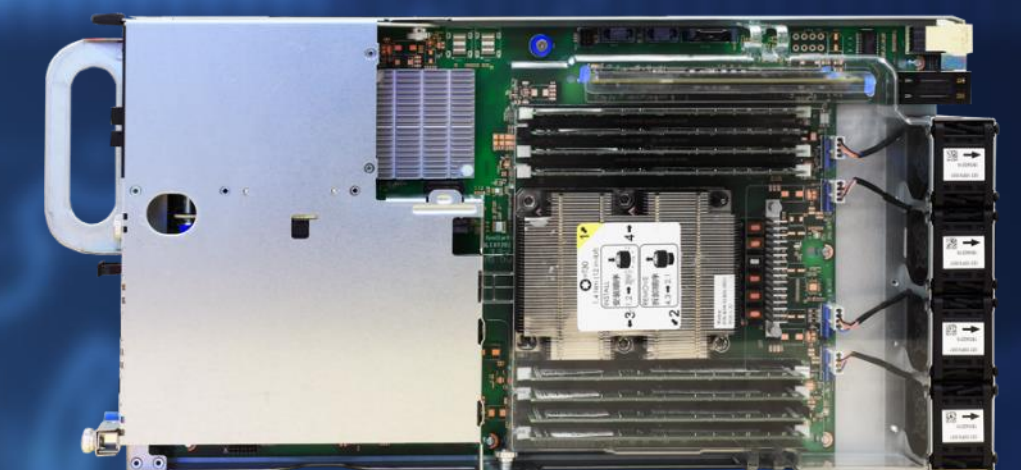
**Open
EDGE**

**OCP
Mezz NIC**

WIWYNN EP100 Platform

The Platform Is Based on the OpenEDGE Project with OCP Ingredients

- ▶ 3U Short-depth Chassis with Flexible Nodes for Far Edge Environment
- ▶ OpenRMC Development Platform for System Management
- ▶ Host COTS Sleds for Various 5G Applications
- ▶ Pooled Power Supply for Energy Efficiency & Utilization

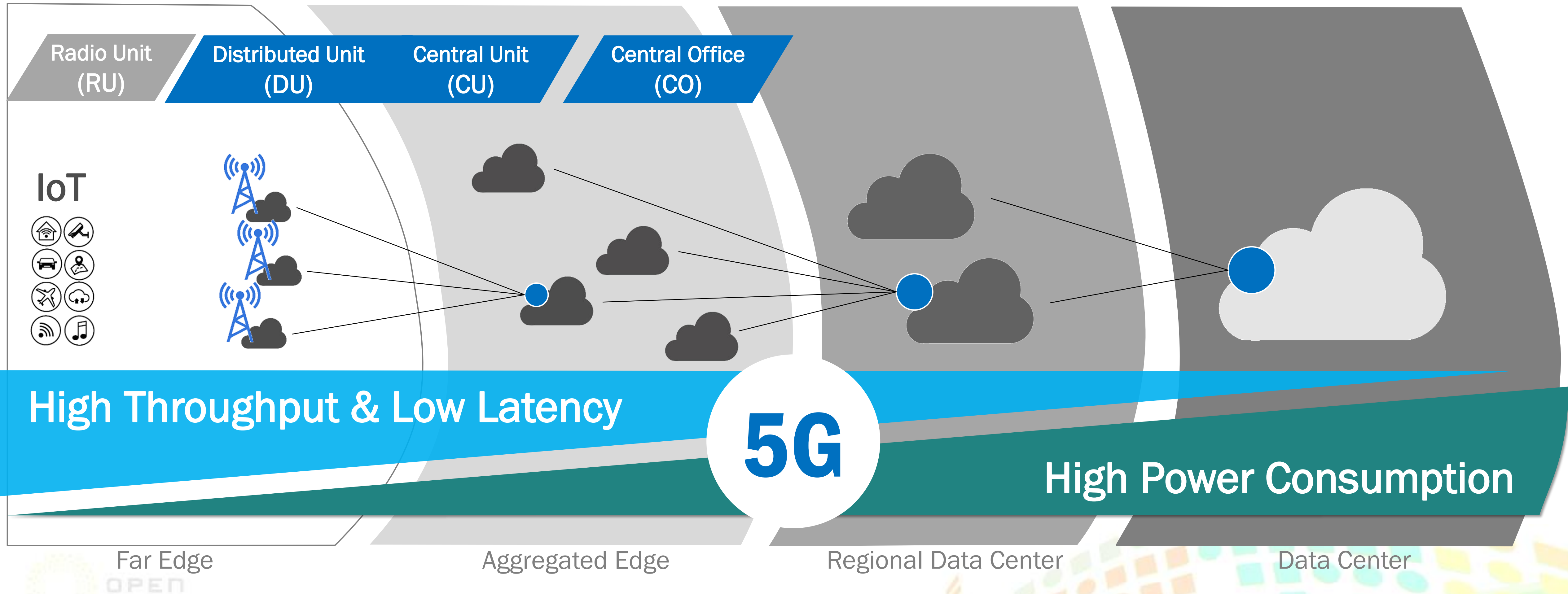


SPEC

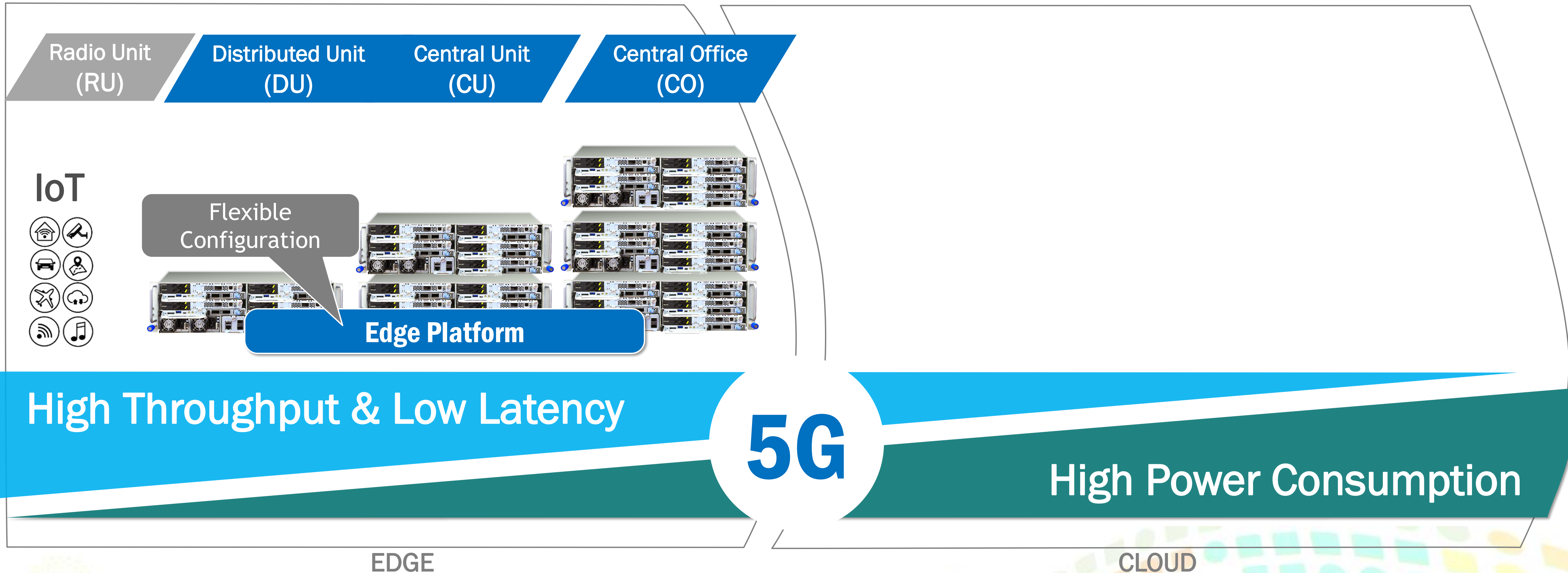
Flexible Node	1U Half-width , 2U Half-width, 1U Full-width for Various Computing Power New Features Added-on, such as Switch, Storage, etc.
Front I/O Interface	Power, Storage Bay, OCP Mezz 3.0 NIC, PCIe Card, USB, Debug
Power Supply	Fit 48V DC, -48V DC and 220 AC PSUs
Dimension	3U 19" Rack Mount System; 448 x 430 x 130.6 (mm)

- ▶ Will be Available with Software Development Kits

Wiwynn Extends Product Portfolio from DC to MEC



Wiwynn Extends Product Portfolio from DC to MEC




- Configure EP100 sleds for DU, CU, and CO to meet Power Consumption, Latency, and Throughput requirements.


Wiwynn Extends Product Portfolio from DC to MEC




Edge Platform




Olympus
(1U Multi-purpose Server)



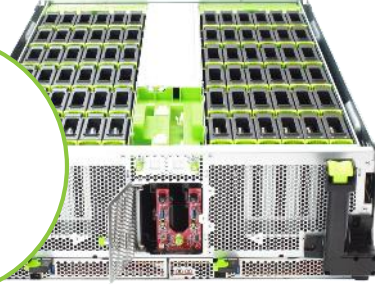
Tioga Pass
(2U3N Computing Server)




Yosemite V2
(4U16N Front-end Server)



Lightning
(2U30Bay All-Flash)



Bryce Canyon
(4U70Bay Storage)



19"/21" Racks

Rack-mount Server / Storage

High Throughput & Low Latency

High Power Consumption

EDGE

CLOUD



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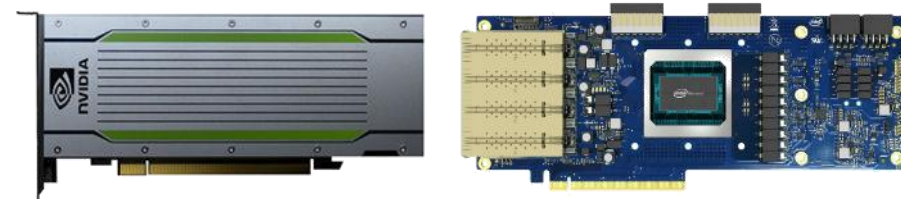
Enjoy Easy Maintenance and Reduce Down Time
OCP Product Feature

THE MOST VERSATILE OF ALL

SV 7000 G2

Achieve Low Latency with Compute Accelerators

PCIe Cards



AI Inference Accelerator

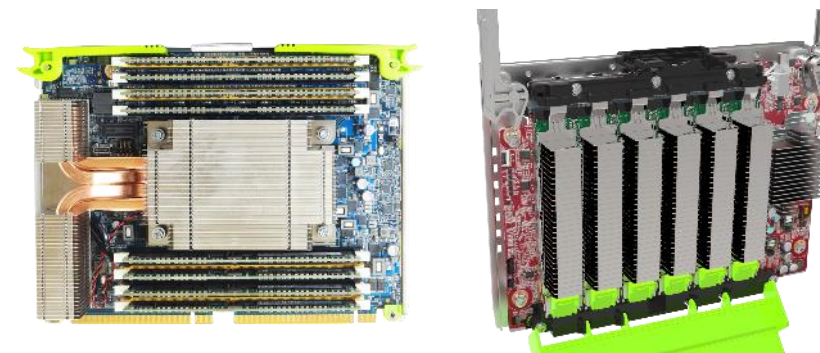


EP100 - Edge Platform



OCP
ACCEPTED
2019Q3

Twin Lake Glacier Point V2



- 6x ASIC Accelerators
- 12x M.2 Storage



SV7100 (4U16N Server)

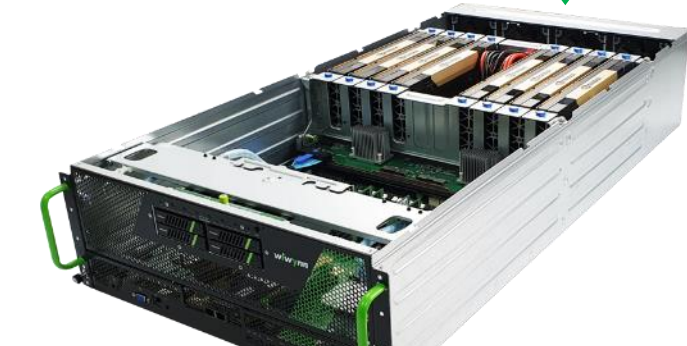


OPEN
INSPIRED
2019Q1

PCIe Cards



AI Training Accelerator



SV500G3 (4U8 GPU Server)



OCP
ACCEPTED
2019Q2

High Throughput & Low Latency

High Power Consumption

EDGE

CLOUD

- From DC to MEC, Wiwynn Offers Comprehensive portfolio for your AI Training and Inference.



Efficiency, Wiwynn Delivers!

- Improve Data Center Energy Efficiency
- Improve Edge Data Center Efficiency
- Innovate Liquid Cooling
- Advanced Immersion Cooling

EFFICIENCY - Wiwynn Delivers!

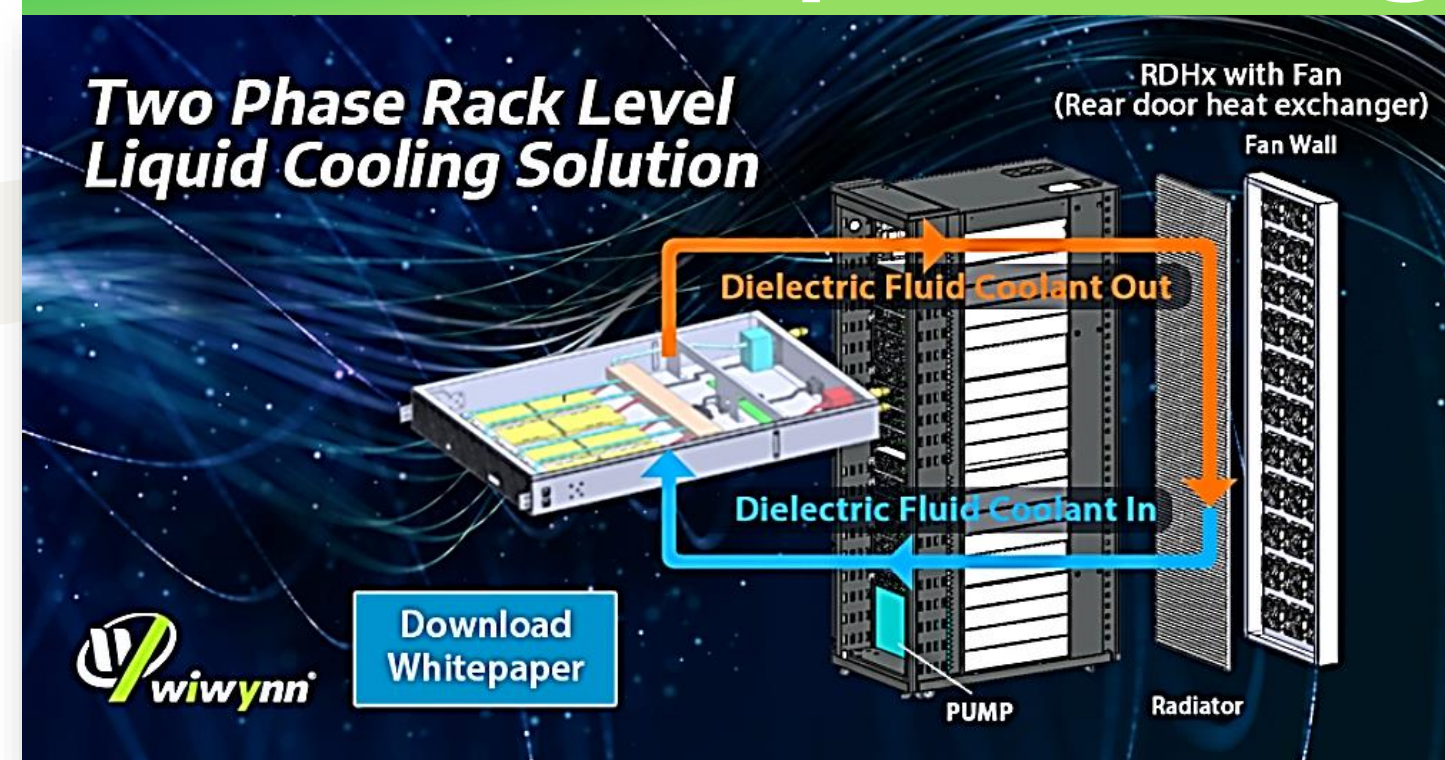
► Improve Data Center Energy Efficiency

Edge Computing



Wiwynn Rack Level Validation Room

Rack Level Liquid Cooling



Two Phase Liquid Cooling Whitepaper

**Data Center
Energy Saving**

Immersion Cooling



3M

48V Immersion Cooling Solution
with 3M™ Fluorinert™ Electronic Liquids

EFFICIENCY - Wiwynn Delivers!

- Improve Edge Data Center Energy Efficiency

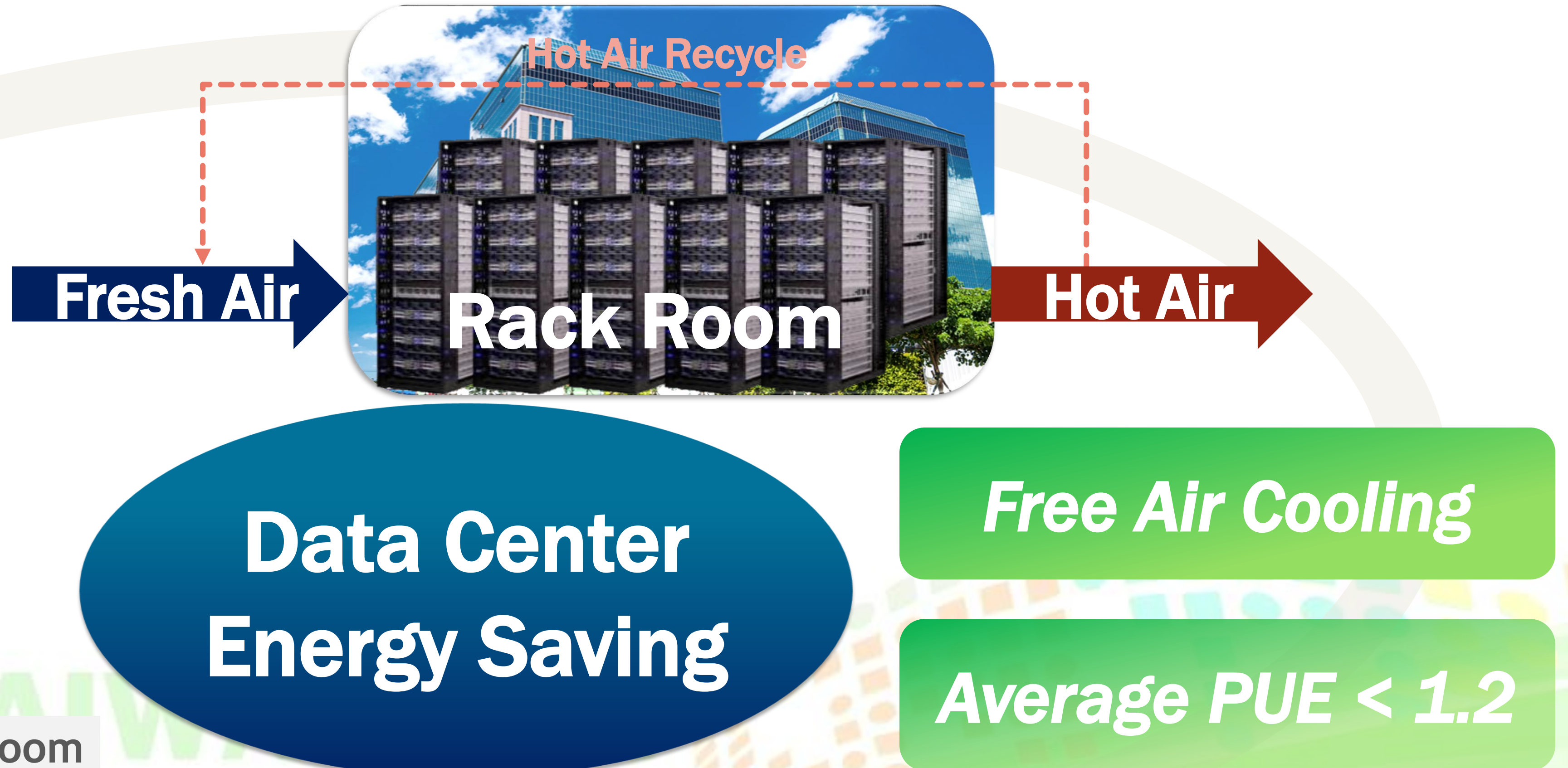
Urban Data Center in Asia Pacific

Edge Computing



34 Racks

Wiwynn Rack Level Validation Room



Fresh Air

Rack Room

Hot Air

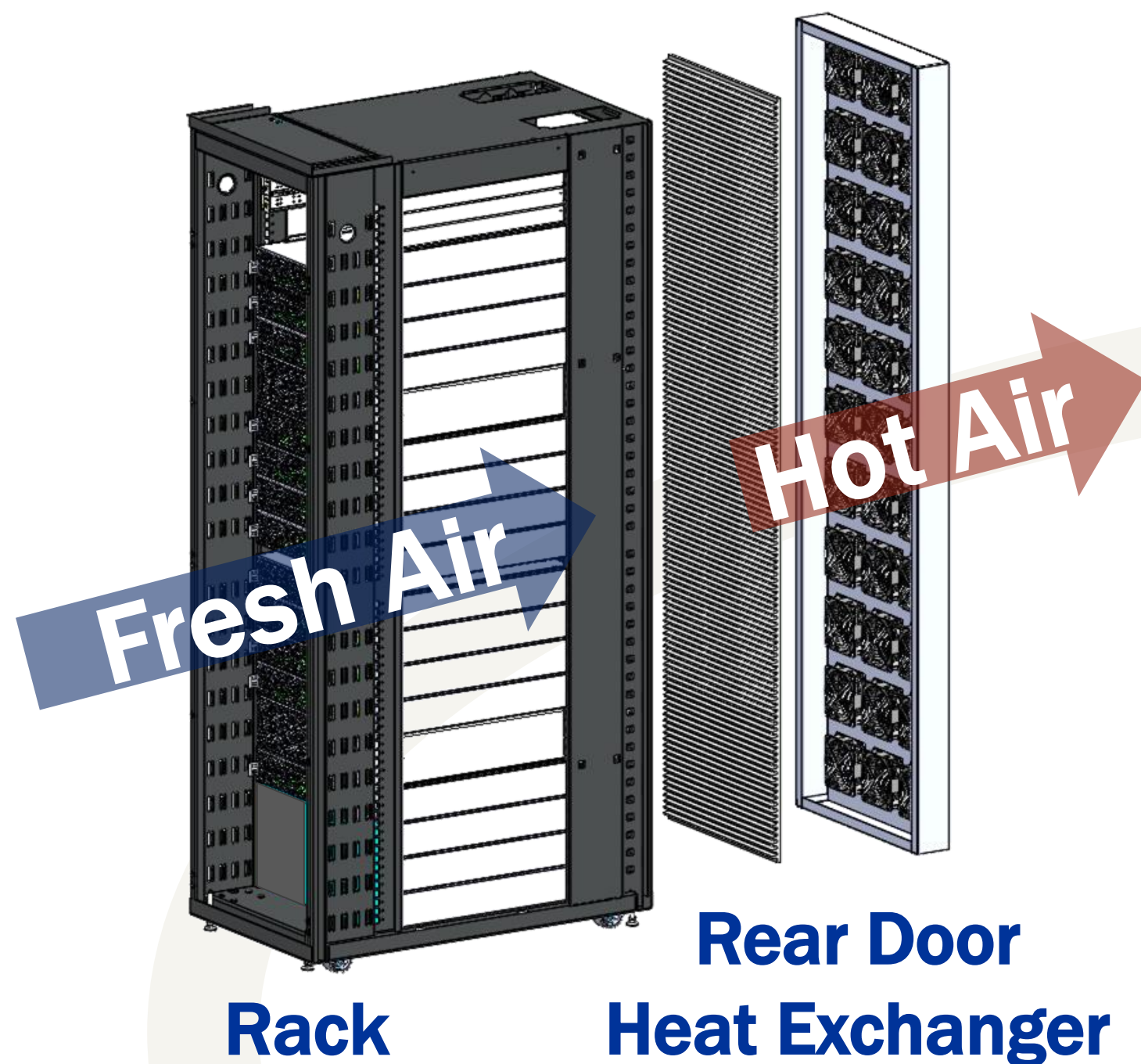
**Data Center
Energy Saving**

Free Air Cooling

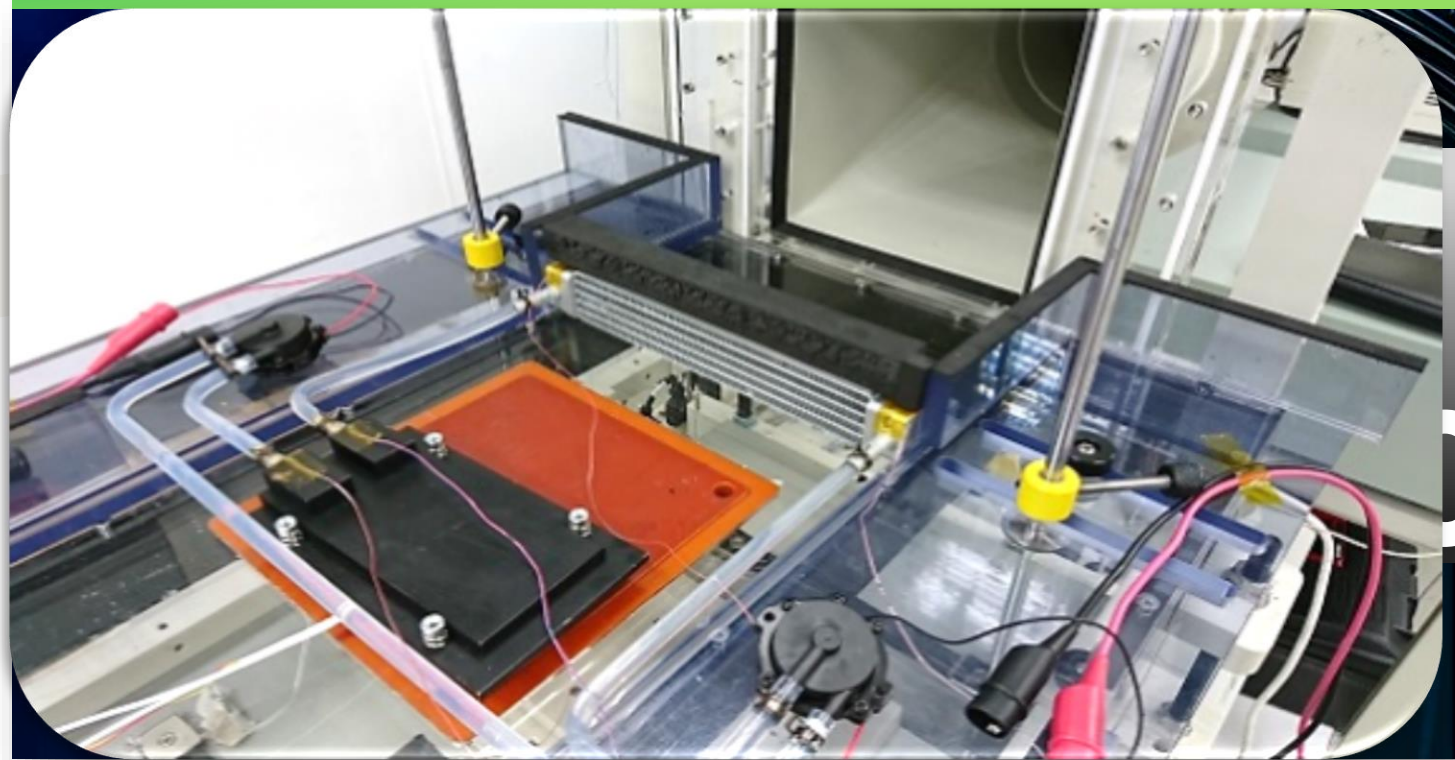
Average PUE < 1.2

EFFICIENCY - Wiwynn Delivers!

► Innovative Liquid Cooling



Two Phase Liquid Cooling



Rack Level Liquid Cooling Optimization

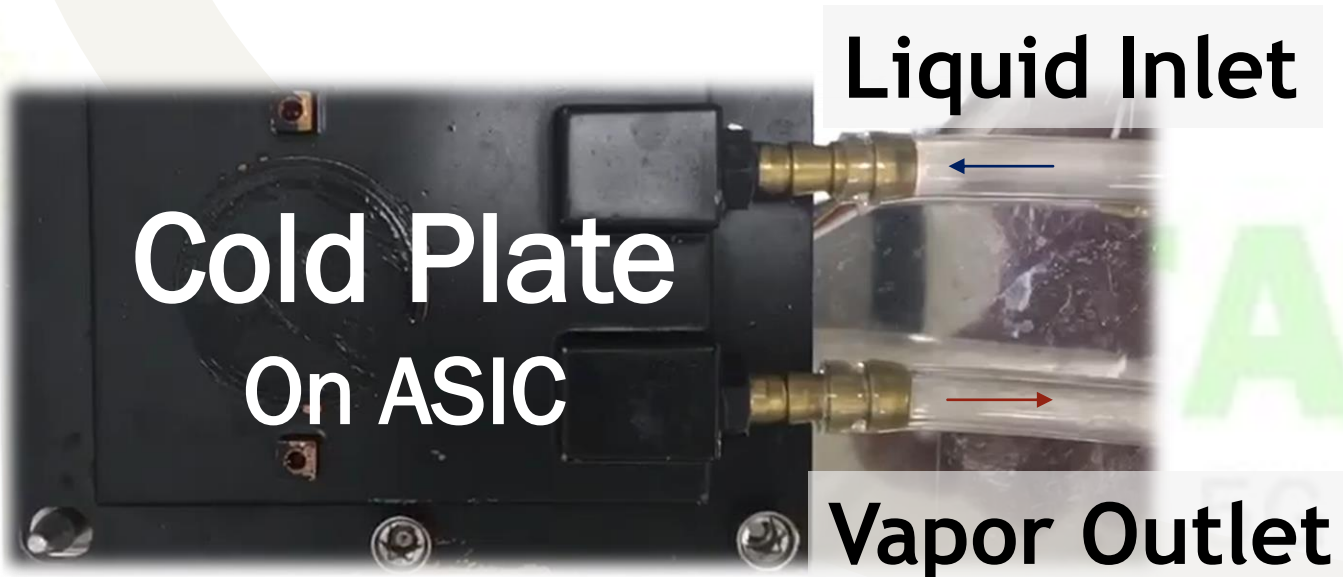
Major DC Customer Recognized

Two Phase Liquid Cooling Whitepaper

**Data Center
Energy Saving**

*Dielectric Liquid
Cooling*

No Facility Change



AI · Edge Computing

EFFICIENCY - Wiwynn Delivers!

► Advanced Immersion Cooling

Solution for High Power ASICs



Management & UI Development

48V for High Power Efficiency

Optimization for OCP Server



100 OCP Servers in One Tank

Data Center Energy Saving

Immersion Cooling



3M

48V Immersion Cooling Solution with 3M™ Fluorinert™ Electronic Liquids

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WELCOME TO Wiwynn BOOTH @ TICC 1st Floor

