ENCONNEX

Born to Innovate

2022 Q3
Final Push Update

Global All-Hands
September 1, 2022

Agenda

- News - Robert
- Product Roadmaps - PMs
- Market Insights - Duke
- Operations - Thane

What's Happening at Enconnex?

News

New hires

Vic Elias - Eng - US

Bella Zheng - Ops - CN

Johan Zuo - Eng - CN

Big Wins!

USNet - 12 containment door project
US Cellular - cabs & cbl mgr

Congratulations!

Andrew Sieracki - Graphic Design & Web Manager
Michael Gollaher - Content Manager
Cody Schauer - Manufacturing Manager
Duane Coder - Logistics Supervisor
Jason Weber - Warehouse Supervisor
Brandon Brower - Production Supervisor

Heads Up!

Labor Day US: 9/5

Mid-Autumn Festival CN: 9/10-12

National Day CN: 10/1-7

PM and Engineering

Real Device Testing - Roadmap

Fandoor for standard cabinets (no change from Aug)

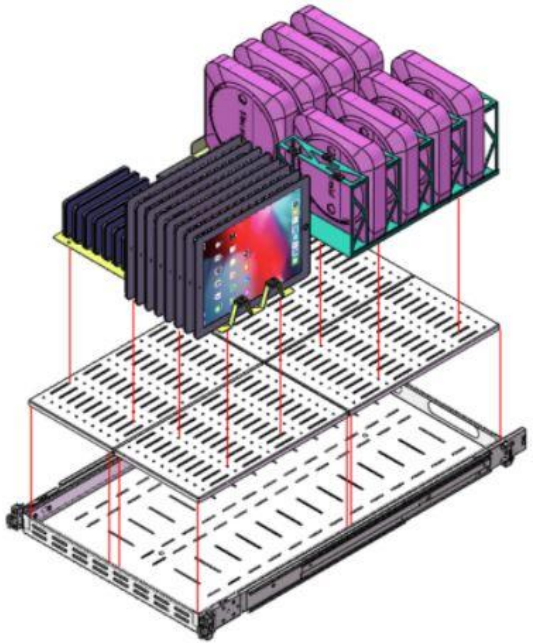
- V5 to integrate the power cutoff switch into the door
- Estimated availability Q3 2022

New Customized iPad Shelf (no change from Aug)

- Fits 32 iPad Pro, 2 Mac Minis and 2 USB hubs
- Integrated USB hub brackets
- Under Sample validation process

Device holders for flat sliding shelf (no change from Aug)

- 6 different type of device holders that can securely place phones, tablets, Mac Minis or USB hubs in any combination at any place in the shelf
- Under Sample validation process
- Estimated availability end of Oct 2022



Connectivity - Roadmap

Copper and Fiber local sourcing

- In sample review phase of qualifying one alternate CM.

Transceivers Coding and Code Validation Capability

- Reno production team working with the factory team on transceiver programming/coding, target readiness this quarter for select SKUs.

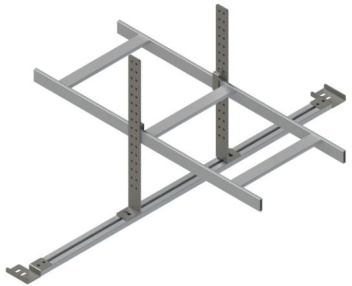
Metal - Roadmap

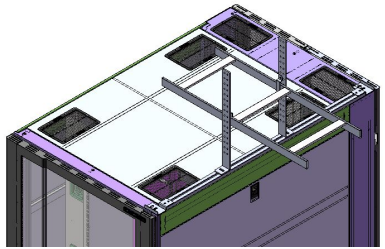
New Cabinet Project (Target Launch March 2023)

- Better function and features.
  - Increase load-ratings to 4000 lbs Static, 3000 lbs Rolling.
  - Frame and Beam Upgraded. Increase internal useful width by 30mm and internal useful depth by 100mm.
  - Rear frame integrated PDU channel, recesses PDUs
  - Flat package optimization
  - Shock pallet and packaging solution
  - Unique Industrial design
  - Cable management system and Air Dam kit.
- Prototype in processing.
- Verification in mid of Sep.
- + One Accessory->Cable Ladder Support Arm
- ->New Brand Name!

New 4 Post Open Rack (No Update, In PRD creation)

- Low cost
- Short lead time
- Fast assembly
- Cable management and accessory family





EdgeRack - Roadmap

EdgeRack 5M (**UPDATE**)

- Self-contained cooling unit, 5kW, variable capacity, 31U usable IT space.
- **Easy installation**, with rollers, bottom rack-mounted .
- Built-in water processing device.
- Environmental control inside cabinet.
- Prototype verifying, estimated launch Q4 2022.

EdgeRack Industrial 8M (**UPDATE**)

- 900mm x 1300mm x 2100mm , NEMA 12 / IP54.
- Self-contained cooling unit, 8kW, variable capacity, 42U usable IT space.
- Built-in water processing device.
- Environmental control inside cabinet.
- **Easy installation and maintenance**.
- Compliance test, estimated launch Q4 2022.

Fans,
Hot Swapped

Power - Roadmap

AC6000 next generation (**no update**)

- New battery selected for better safety factor and supply chain
- New controller design for much more features and space for future updates
- Expandable design for AC9000 and for longer run battery
- Estimated Availability - **Q2 2023**
- Outsourcing some portions of the design to speed up the development

TAA PDU (**no update**)

- 3 models sent to CSA for UL testing
- **8-15** models being released to cover the wide range of North American circuits
- General availability **Q4 2022**

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Product Management Market Insights

Cabinet Level Airflow Management

By Duke Robertson
9.01.22

Question #1

Which of the following is typically the highest operating expense in a data center?

A. Staffing

B. Insurance

C. Electricity

D. Landscaping

(Type the letter of the answer in the chat.)

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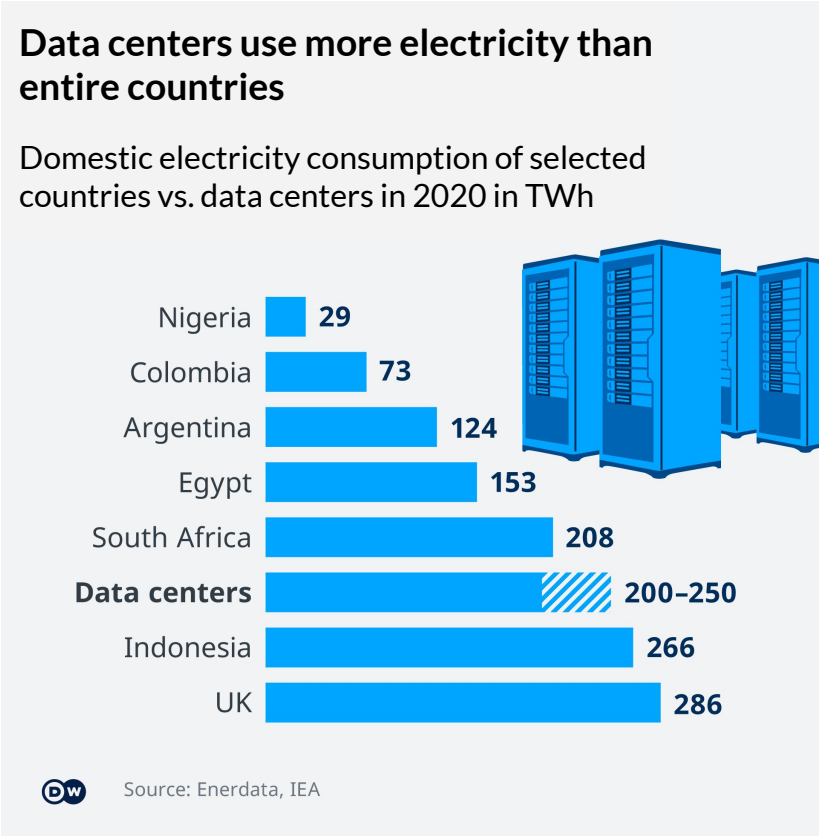
Data Centers Require a Lot of Power!



PUE - Power Usage Effectiveness

What is PUE?

Power Usage Effectiveness (PUE) was introduced by the Green Grid, a nonprofit made up of a consortium of various disciplines (technology providers, facility architects, end-users, utility companies and policy makers) that collaborate to improve the efficiency of data centers.

Using PUE as a measurement helps understand how efficient a datacenter is and compare with similar data centers in similar locations or with similar environmental conditions, to determine whether there are areas that could be improved by adopting new technology and by applying best practices and architectural choices.

https://submer.com/blog/how-to-calculate-the-pue-of-a-datacenter/

PUE	Level of efficiency
3.0	Very inefficient
2.5	Inefficient
2.0	Average
1.5	Efficient
1.2	Very efficient

Source: https://www.42u.com/measurement/pue-dcie.htm

PUE - Power Usage Effectiveness

How to Calculate your PUE?

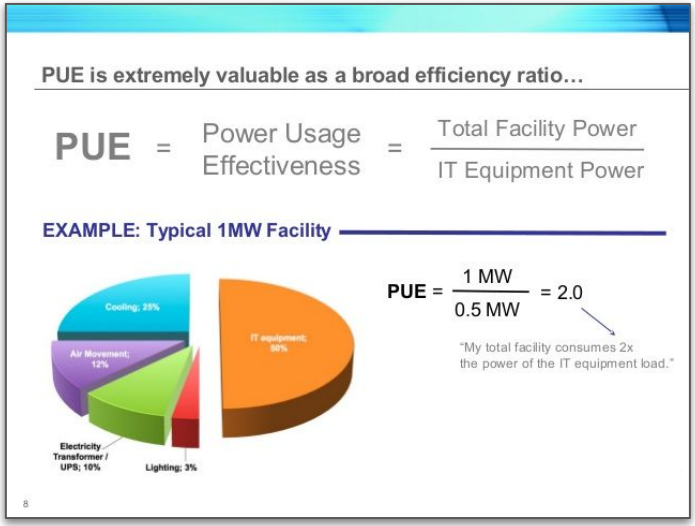
PUE represents the ratio of the total amount of energy used by a computer data center facility to the energy delivered to computing equipment:

PUE = Total energy entering the data center / Energy used by IT equipment inside the datacenter

Studies show a wide range of PUE values for data centers, but the overall average tends to be around 1.58 to 1.8. Newer data centers focusing on efficiency typically achieve PUE values of 1.2 or less.

Data center operators calculate instantaneous PUE using the following components:

- Lights and utility plugs
- Cooling / HVAC
- Pumps
- IT equipment



https://submer.com/blog/how-to-calculate-the-pue-of-a-datacenter/
https://journal.uptimeinstitute.com/data-center-pues-flat-since-2013/
https://www.nrel.gov/computational-science/measuring-efficiency-pue.html#:~:text=Studies%20show%20a%20wide%20range,power%20delivered%20to%20computing%20equipment.

Question #2

Which of the following is typically among the largest contributors to a data center's electricity usage?

A. Facility lighting

B. Cooling

C. Security cameras

D. Breakroom coffee machine

(Type the letter of the answer in the chat.)

Question #2

Which of the following is typically the largest contributor to a data center's electricity usage?

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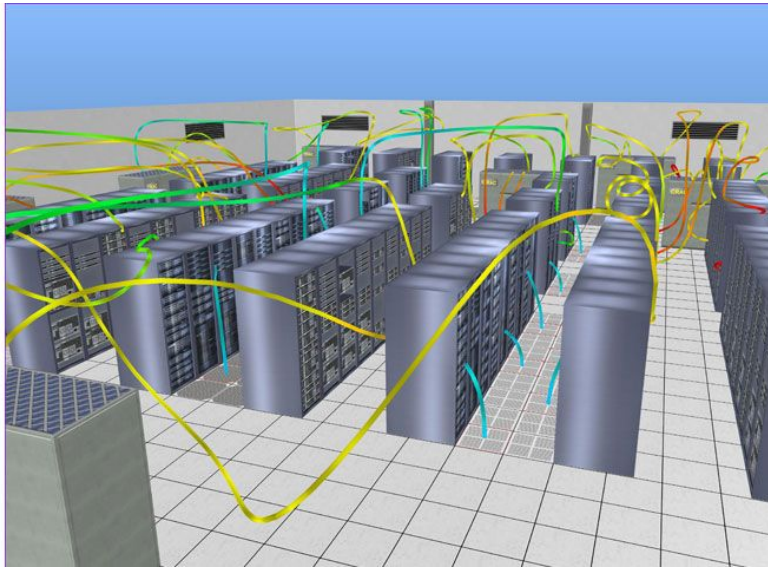
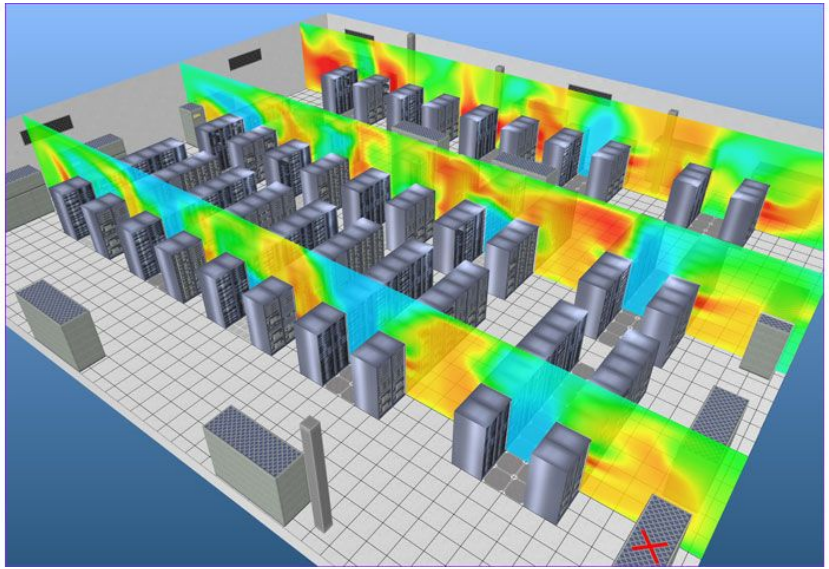
How can Enconnex help lower a data center’s PUE?

Or, to put it another way, how can our products promote the efficient consumption of conditioned air by the IT equipment?





Cabinet Level Airflow Management

Airflow Management - Our new cabinet design

What are the typical areas of a cabinet where airflow efficiency is often compromised?

Cable openings in the top panel allow hot exhaust air back into the room, mixing with conditioned (cooled) air

Cable openings in the front equipment mounting rails allow conditioned air to bypass IT equipment and follow patch of hot exhaust air.

Conditioned air can also pass through gaps around the front rails, along the top, bottom, and sides

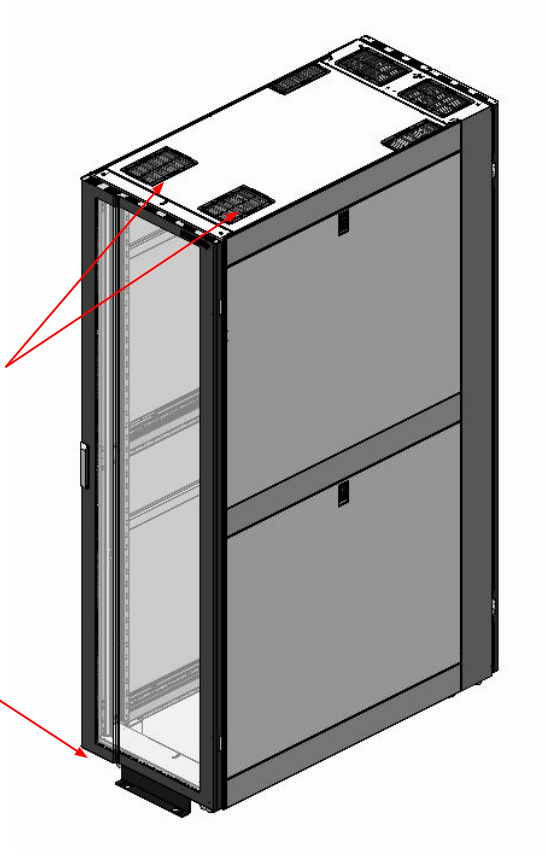
Open, unused rack units are also a source for bypass airflow

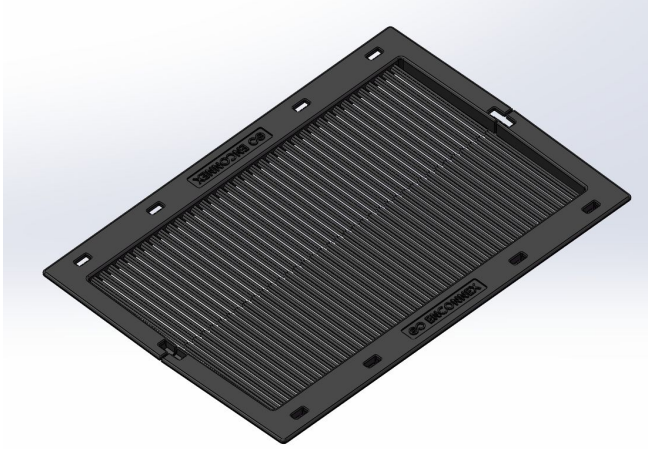
Airflow Management - Our new cabinet design

Solution!

New two-piece brush design seals around cabling, minimizing air leakage

New “Skirt Kit” installs around the lower perimeter of the frame, also minimizing air leakage.



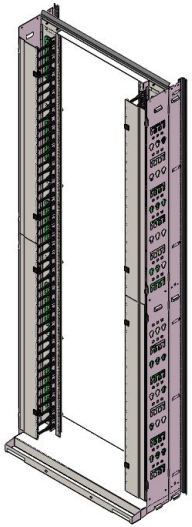


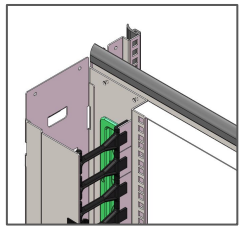
Airflow Management - Our new cabinet design

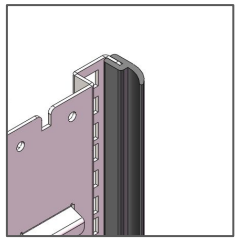
Solution!

New cable grommet seals openings in front rails

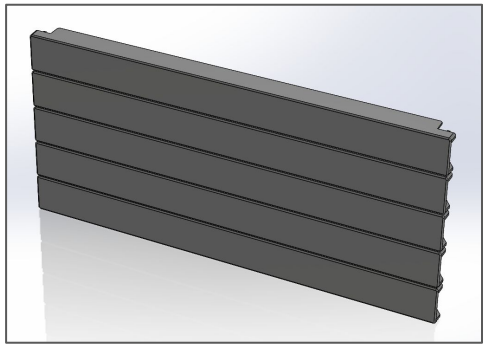
New Air Dam Kit seals perimeter of front rails







Snap-in blanking panels occupy unused rack units on the front rails



Question #3

What is bypass airflow?

A. Hot exhaust air that recirculates from the back of a cabinet to the front of a cabinet

B. Hot exhaust air that is ducted back to the cooling unit

C. Conditioned air that is consumed by active IT equipment in a cabinet

D. Conditioned air that flows through a cabinet but does not go through active IT equipment

(Type the letter of the answer in the chat.)

Question #3

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D. Conditioned air that flows through a cabinet but does not go through active IT equipment

Bypass airflow = wasted airflow = wasted $$$

Question #4

Which of the following features and accessories promote efficient airflow at the cabinet level?

A. Rack mounted blanking panels

B. Brush or grommet sealed cable openings

C. Air dam or air baffling around the perimeter of the front equipment mounting rails

D. Cabinet frame-to-floor skirt kit

E. All of the above

(Type the letter of the answer in the chat.)

Question #4

Which of the following features and accessories promote efficient airflow at the cabinet level?

A. Rack mounted blanking panels

B. Brush or grommet sealed cable openings

C. Air dam or air baffling around the perimeter of the front equipment mounting rails

D. Cabinet frame-to-floor skirt kit

E. All of the above

Airflow management features and accessories will be key selling points for our new cabinet platform.

But, what do we call it?

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New Cabinet Naming Exercise Results

We have a winner!

Honorable Mention

$50 gift cards awarded to the following…

Thane Moore
(SynergyRack, InnovaRack)

Andrew Sieracki
(AtlasRack, AlphaRack)

Omega Zareno
(OmegaRack)

..and the winner is!

InfiniRack

Submitted by Jerod Green

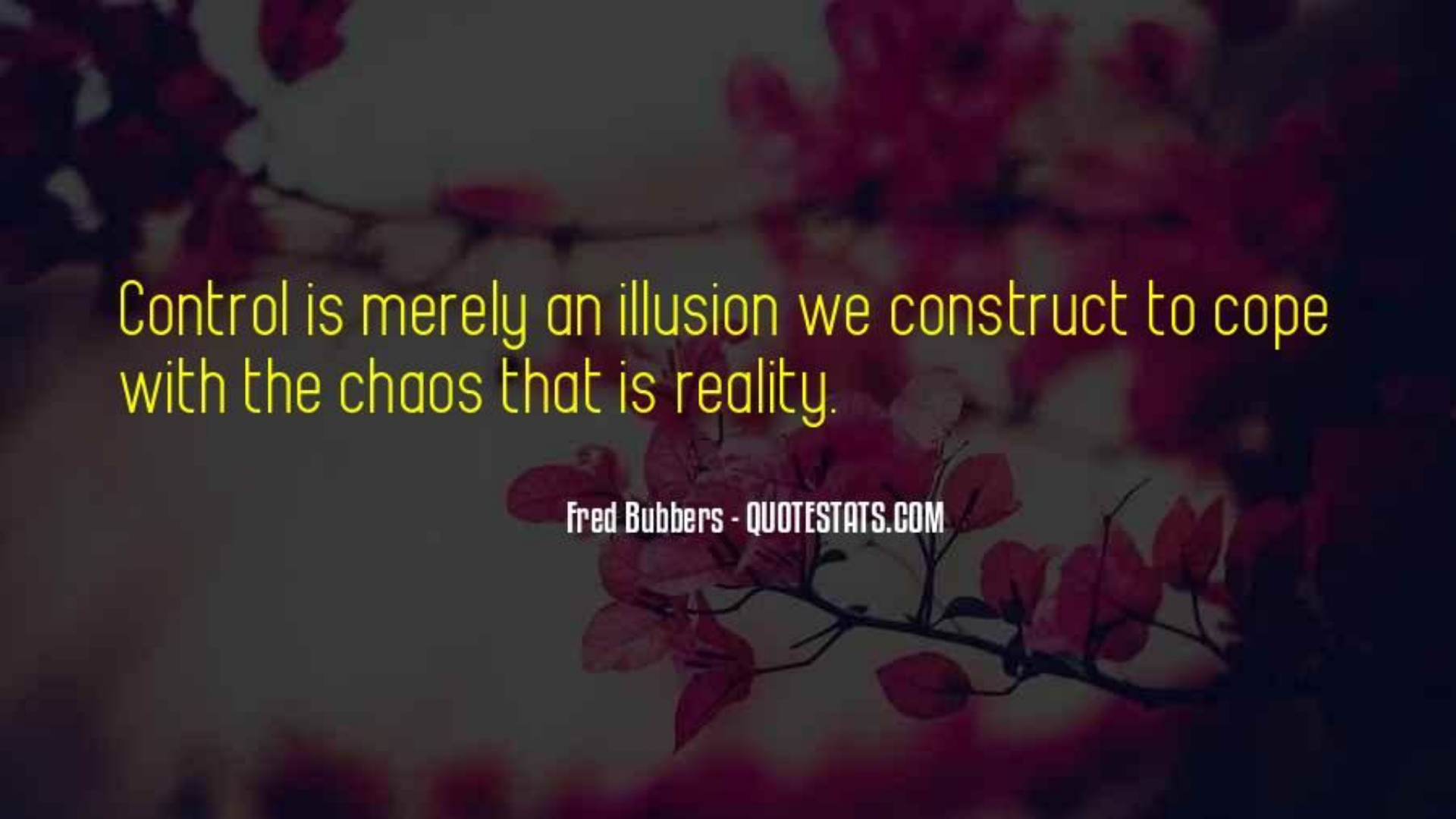
$250 gift card

THANK YOU to all who participated!

InfiniRack

Arriving early 2023

Operations
Sales Ops, Manufacturing, Logistics


Control is merely an illusion we construct to cope with the chaos that is reality.
Fred Bubbers - QUOTESTATS.COM

Sales Ops Q2 Performance Data

- 4 weeks left in the qtr!!!
- Current bookings: $2.9M
- Current Invoiced: $2.8M (Q1: $2.6M, Q2:$2.8M)
- Projected forecast: $5M - Adjusted $4M
- Total orders booked: 133 (Q1: 141, Q2: 162)
- Total quotes sent: 219 (Q1: 202, Q2: 239)
- Total invoices sent: 199 (Q1: 157, Q2: 197)
- Deal sizes continue to increase

Q3 SAW PLENTY OF UPS AND DOWNS

- Supply chain issues continued
- Port strikes / congestion
- Lead times and rates slowly coming down
- Shifting ports to reduce lead times and cost

Looking Forward To Q4 + 2023

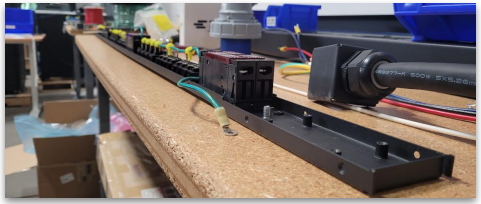
- Work with Sales to focus on 2023!!!
- Backlog down from $2.8M to $2.4M but need to improve
- Work with Sales to set delivery expectations
- New rack design landing in Q4 - very exciting!
- Start planning for new dashboard features in Odoo
- Ordered a ton of material in Q2 to buffer us from lead time issues at EOY
- Chinese New Year- start planning now!!!

MANUFACTURING UPDATES

- **Google AV Project**
  - Consignment effort was massive - TY Katie, Komal, Renny, Brandon, and Dan
  - Lectern upgrade complete - Awesome work Leanna!
  - New version AV Rack prototype complete and test plan being reviewed this week
  - Production to tentatively start in 2 weeks
  - Gearing up for Phase 3

- **AC6000 Production PENDING**
  - Goal was to build remaining units by ~~EOQ1~~ ~~EOQ2~~ EOQ3
  - Other priorities took place - no resources
  - Version 2 in development for 2023 launch

- **Basic PDU Line**
  - CSA approval took longer that expected
  - Team prepping production line area for first runs (20-30 units)
  - Goal was to be up and running by mid Q3 but will push into Q4



LOGISTICS UPDATES

OSHA 10 Certification for Warehouse crew complete!

Promotions during Q3:

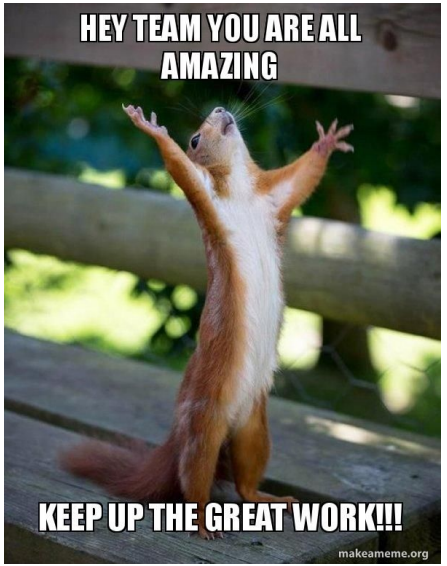
- Cody Schauer to Manufacturing Manager
- Brandon Brower to Production Supervisor
- Jason Weber to Warehouse Supervisor
- Duane Coder to Logistics Supervisor

New Hires in Q3:

- 2 new resources joining us next week
- Still looking for 1-2 Warehouse employees to support Jason

Looking Ahead:

- Maximizing space and trying to stagger shipments
- Flex areas of production as necessary to conserve space
- Plan space and resources for a BIG Q4 - some very large rack deals
- New space to support growth - looking for warehouses now for 2023 move (potential)



Thank You

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