Education

Education Vertical

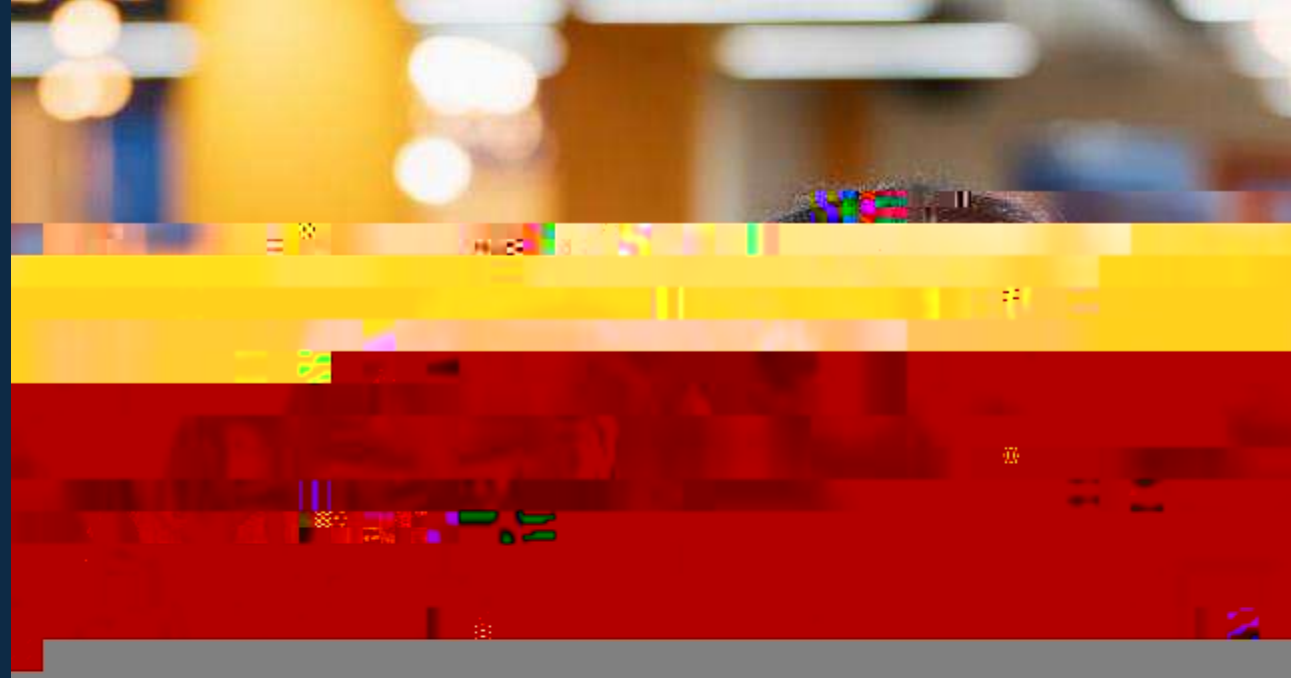
- **Global Aruba revenue:**
  - ~US $400-500 million
- **Aruba's largest vertical**
  - Split into K-12 (55%) vs. HED (45%) – with regional nuances
  - Some EDU $$ captured under GOV revenue
  - Fairly recession-proof due to high government priority
  - "Sharing" community – not as competitive as corporate sector
- **US eRate funding**
  - Mandated $$s to support K-12

JPAC	$	61,426,018	12.6%
EMEA	$	61,652,445	12.6%
Americas	$	364,921,126	74.8%

FY2018

GLOBAL EDUCATION

- **1.7 billion students**
  - 200+ million in higher education
  - 1.5 billion in primary/secondary education (K-12)



Sample: US Ed market

- K-12 Education
  - 13,600 school districts
  - 130,930 schools
    - Elementary schools: 87,498
    - Secondary schools: 26,727
    - Combined schools: 15,804
    - Other: 901
- Higher Education
  - 4,298 degree-granting institutions
    - 1,626 public colleges
    - 1,687 private nonprofit schools
    - 985 for-profit schools

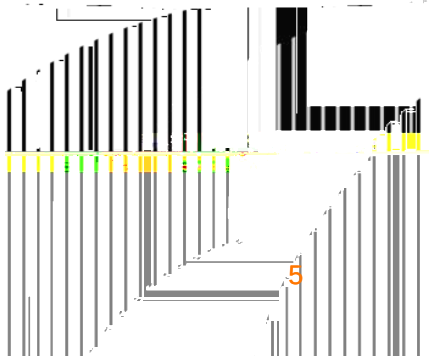
PRIORITIES BEFORE COVID-19*

K-12

HIGHER EDUCATION

1. Information Security Strategy
2. Privacy
3. Sustainable Funding
4. Digital Integration
5. Student-Centric

**EDUCAUSE 2019*



COVID-19 – GLOBAL REACTION

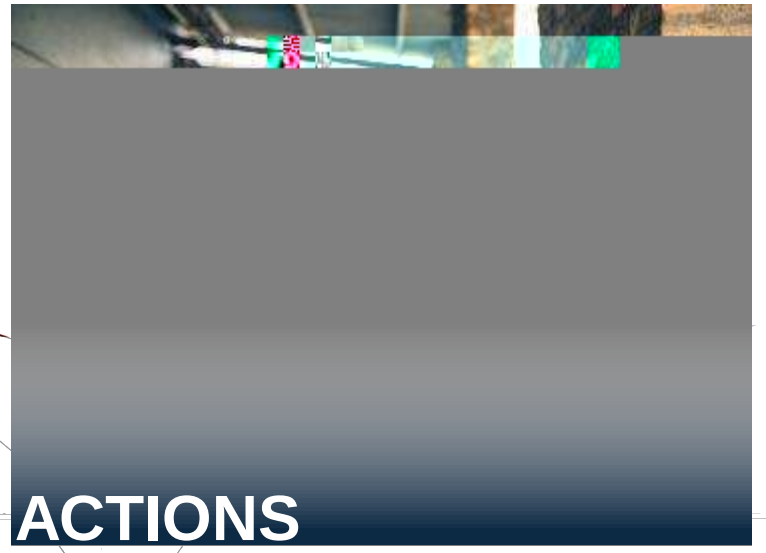
GLOBAL

- 105 country-wide closures
- 60% of all learners
- 1B students affected

UNESCO data – as of Aug 3, 2020

PLANNING

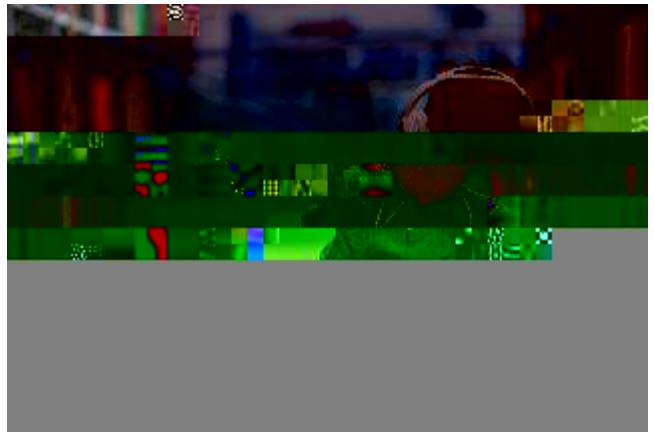
- Remote teaching and learning
- Reduced on-site instruction
- Hybrid/HyFlex modalities
- **FLEXIBILITY!**

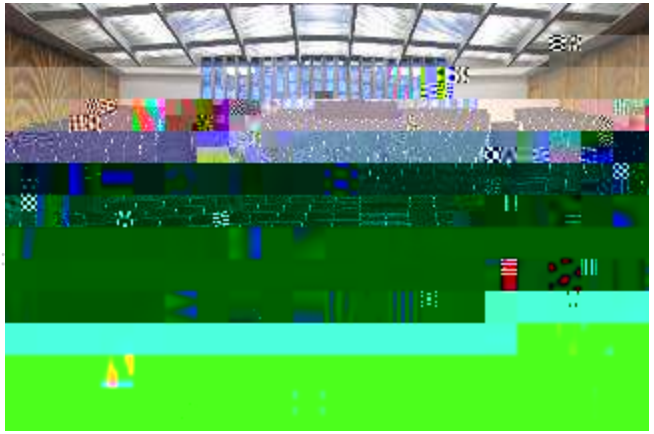


ACTIONS

- Institutions open/closed
- Majority of learning online
- Increase access and equity
- Next steps?

EDUCATION CHALLENGES





- Access & Support
- Evolving Instruction
- Class Delivery Engagement
- Labs, Sports, Graduation
- Student and Employee Health & Safety

CHANGE MANAGEMENT

ACCESS & SECURITY & HEALTH
- Secure home access
- Compliant with governmental mandates
- Testing
- Contact tracing

BANDWIDTH
- Higher bandwidth
- Multi-user households
- Added capacity in dorm rooms and outdoor locations

TOOLS & SUPPORT
-

PANDEMIC RESPONSE

- **Devices**

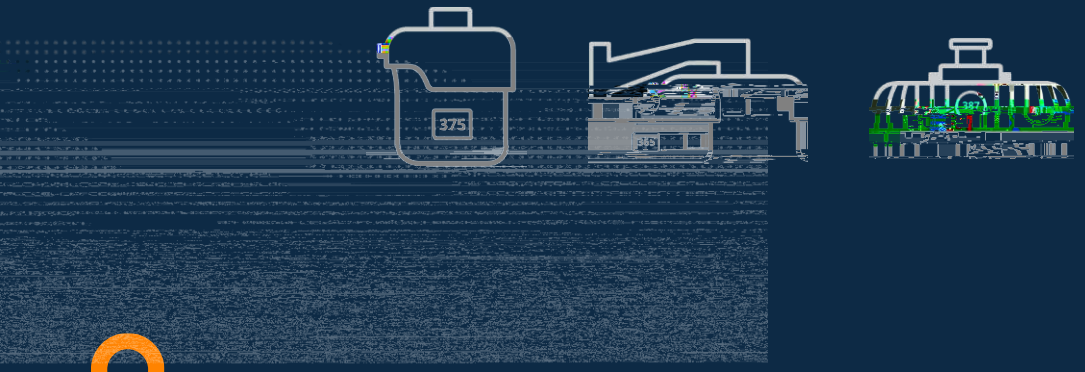
Target audiences

Title	Cares about
CIO	Operating budget; support levels; uptime; service delivery to business, long-term tech integration
CTO	Technology innovation; AI/ML; data visualization; outcome delivery
CSO	Security posture; consolidated tools; alert fatigue; attack surface reduction; data and user security
Director of Security	Hardware and software implementations that keep students, teachers and staff securely connected (gov mandates)
Director of IT Services / Networking	Ease of use; ability to operate; interoperability
IT Manager	Technical performance, ease of use, speeds/feeds
Network Engineer	Performance specifications, management plane, troubleshooting, installation
Facilities Director	Building management automation, ROI, and ease-of-use

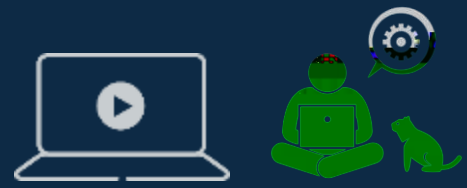
ARUBA SOLUTIONS

CAMPUS

Parking lot | Outdoor Classrooms |
Mobile Wi-Fi



HOME



Remote learning |
Working from home

An Open Ecosystem

From Access Security. To Contact Tracing.

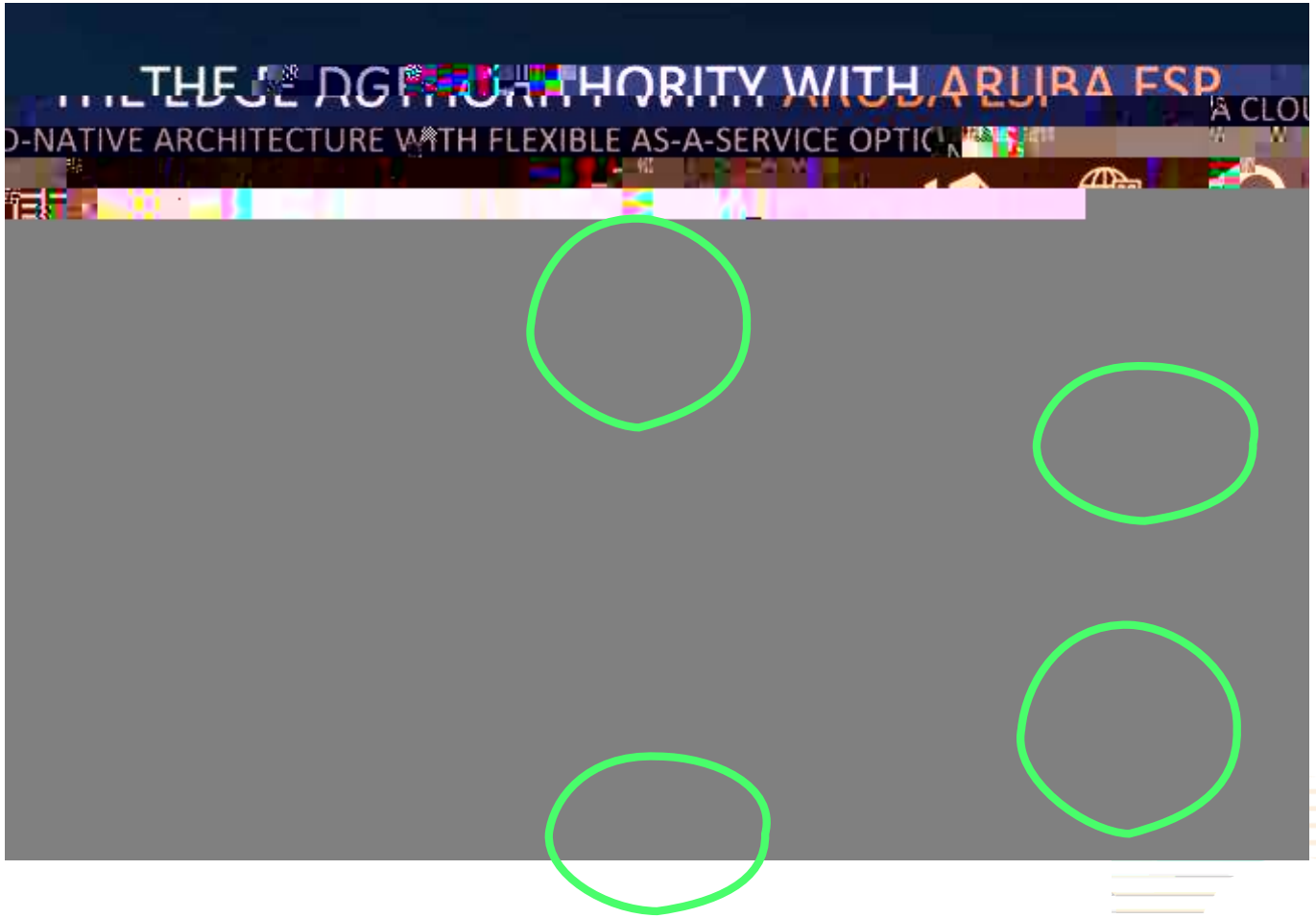
aruba
a Hewlett Packard Enterprise company

ESP: Back to School. It's time for 2 + 1

1. Aruba Central *as the Management Platform* for EDU

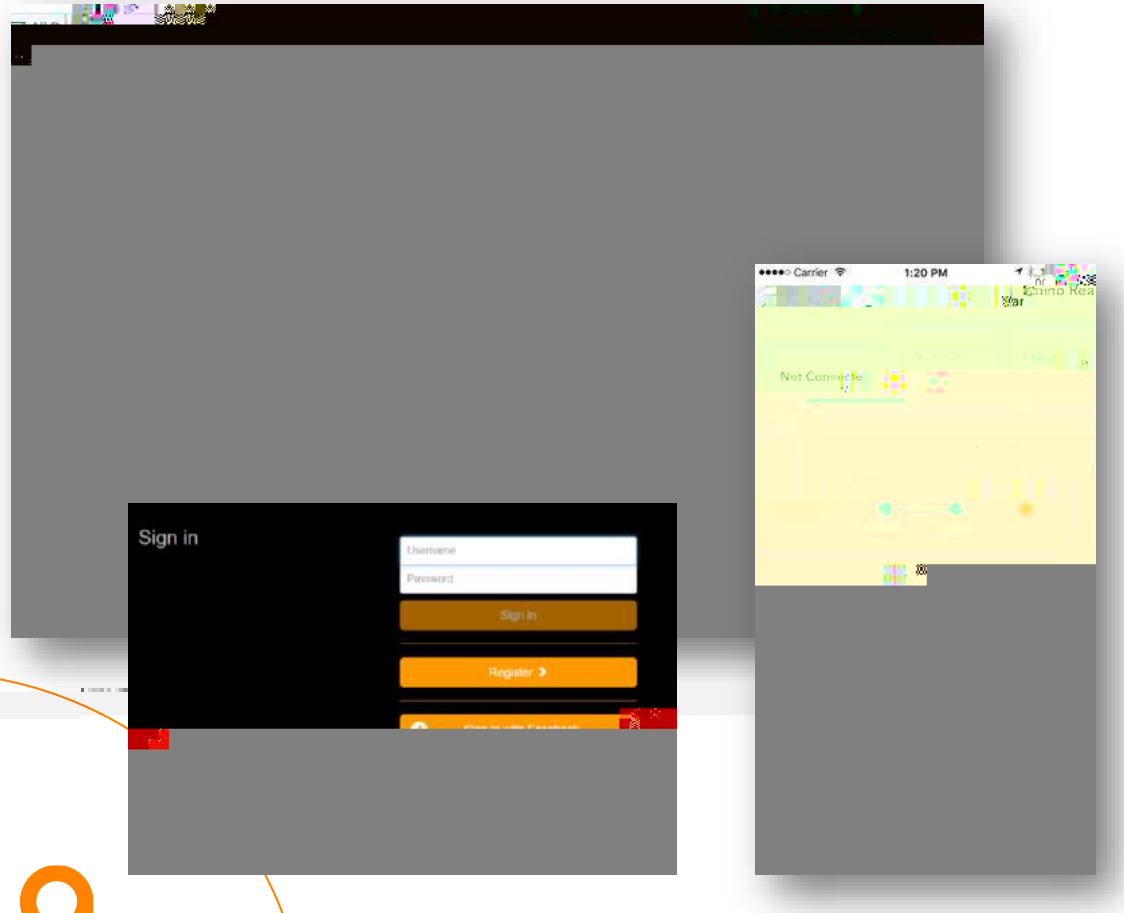
2. AI-OPS Automatically *Ensures* Application Performance and *Amplifies* IT Staff Skills

\+ 1. Position the Future of the *Network as a Platform*

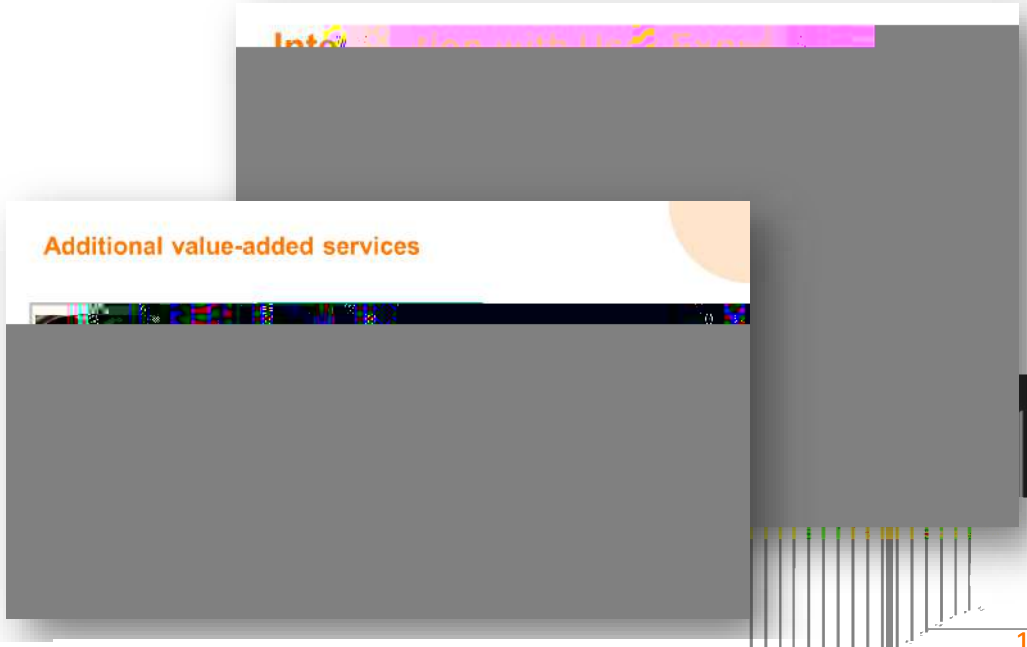


Central is Being Built for EDU: Scale, Choice, Agility

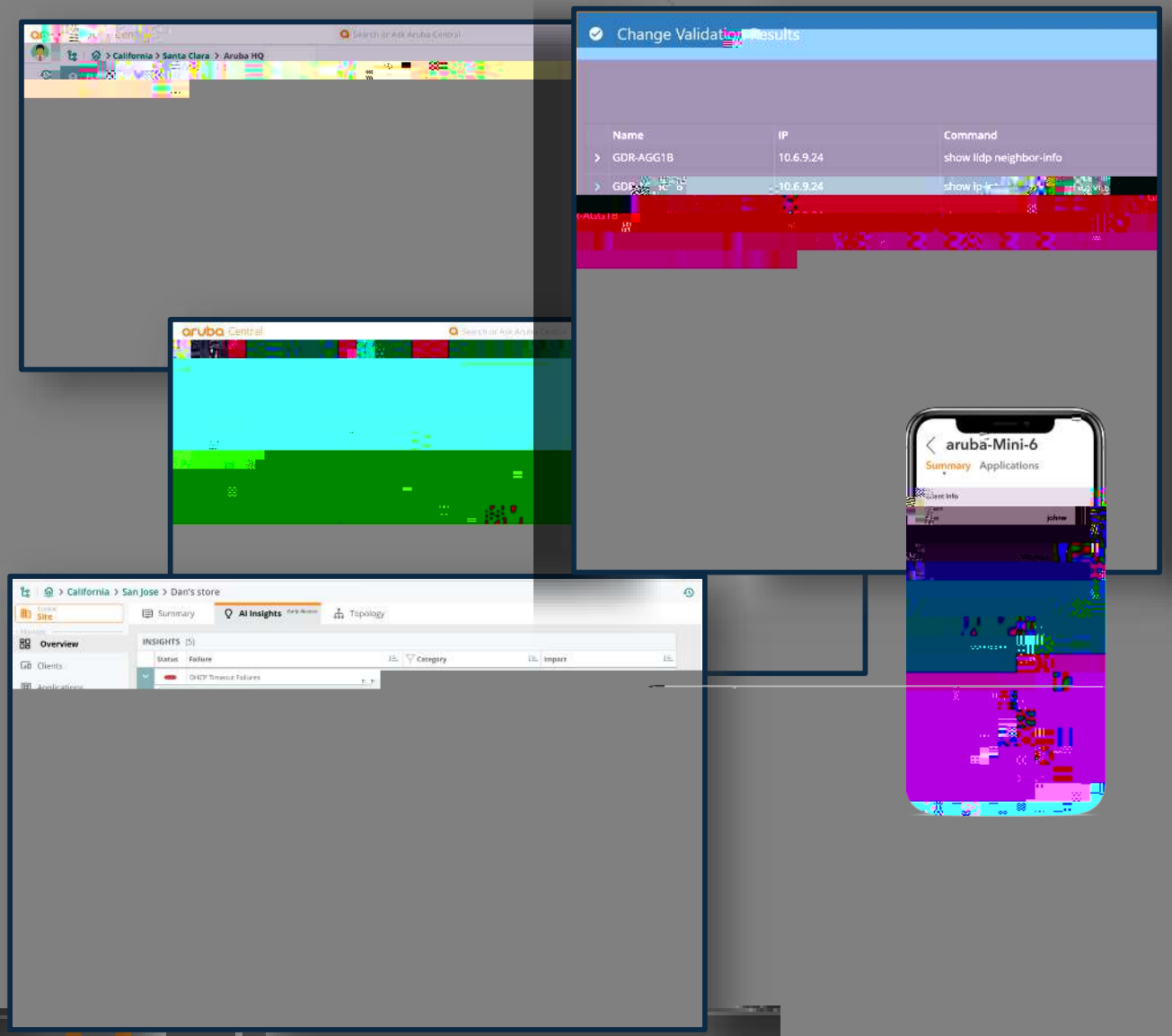
Aruba Central for K-12 Schools / ISDs



Aruba Central Is About Choice and Agility



ESP and Central becomes a Platform for Mid-Large EDU

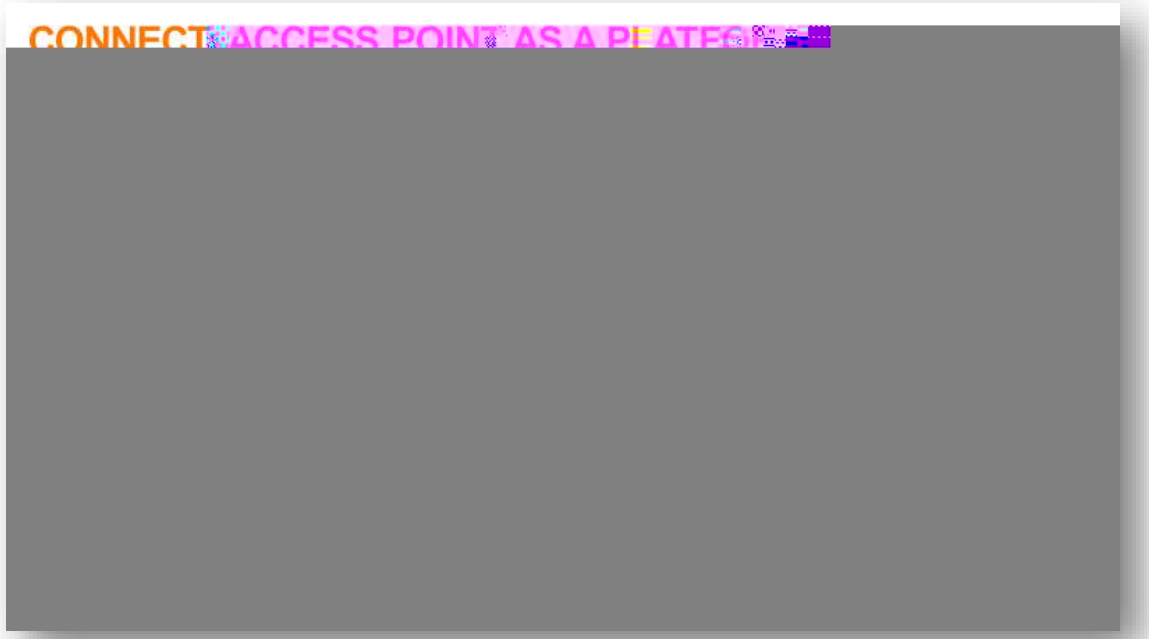


- **Operations Features**
  - Aruba Central as a cloud-scale management platform for all infrastructure, networks and use cases
  - Aruba Cloud Platform as a now and future architecture for network-centric services
  - ZTP, Mobile app for installers and operators
  - Network-wide planning, configuration management, auditing and validation through NetEdit
  - Device and network management through API and Ansible
- **Performance Assurance Features**
  - Essentially unlimited scale of operations
  - AI Insights – big data and ML network monitoring, automated fixes, proactive problem reporting
  - User Experience Insight - End-user monitoring and reporting of apps and performance affecting network services
- **Simplicity of Adoption**
  - Cloud architected, push-to-subscribe software
- **Ease of Operations**
  - Chain-able automated actions and proactive responses
- **Low cost of ownership**
  - True single platform with multiple personas for planning, operations, validation, security, other services

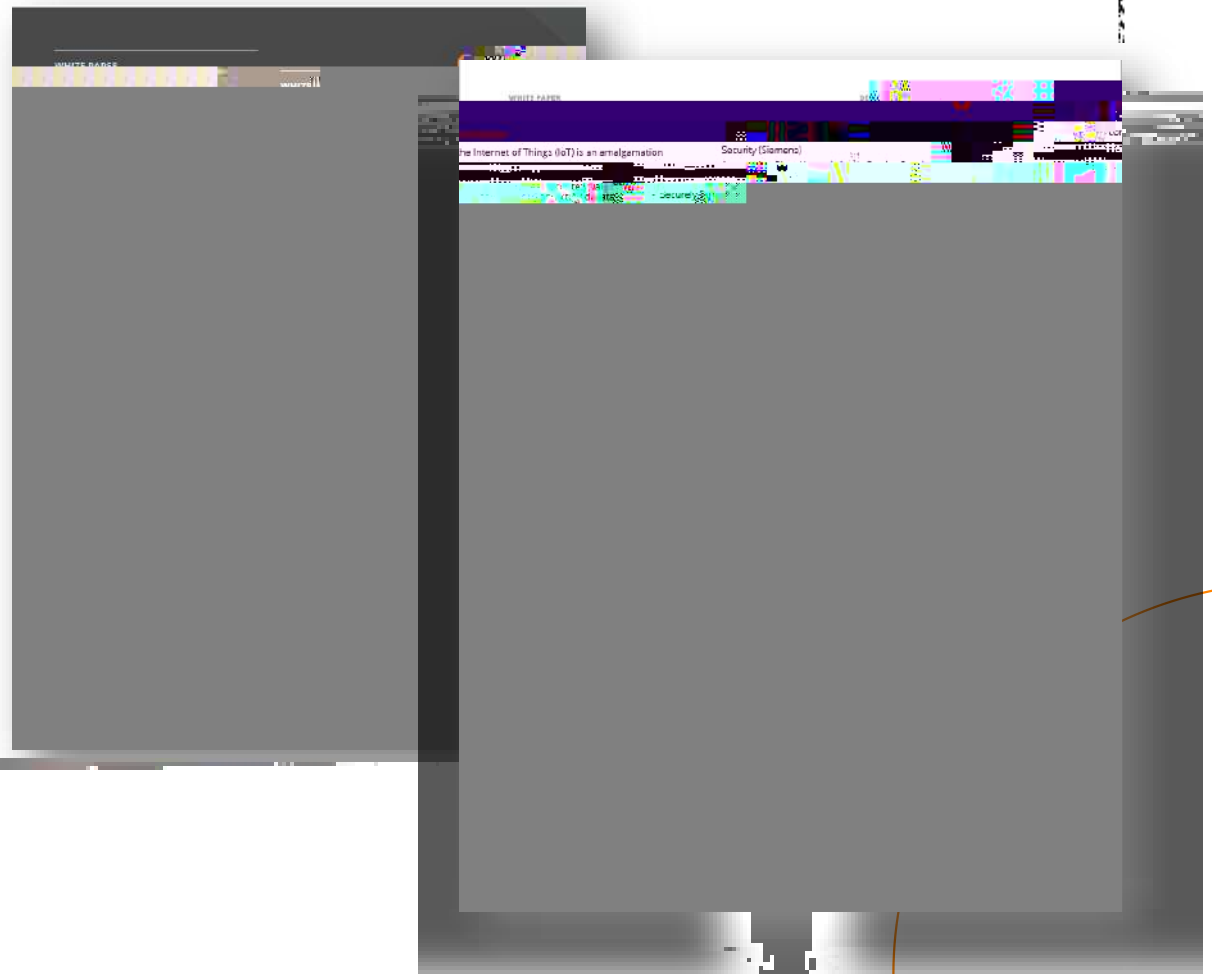
The EDU Network as a Platform

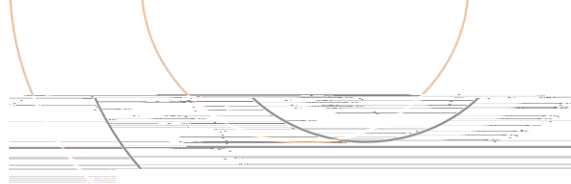
SEEMS FUTURE-Y. BUT IT'S A POWERFUL CAPABILITY TODAY.

The Access Point is a Platform



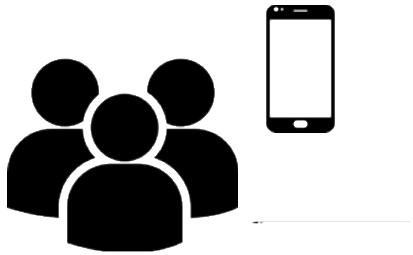
Many IoT Applications To Be Explored





CONTACT AND LOCATION TRACING

With WI-FI Location Data



Aruba APs listen for users, Wi-Fi devices

Proximity apps process location data ingested from Airwave or Central with AI/ML Proximity Models

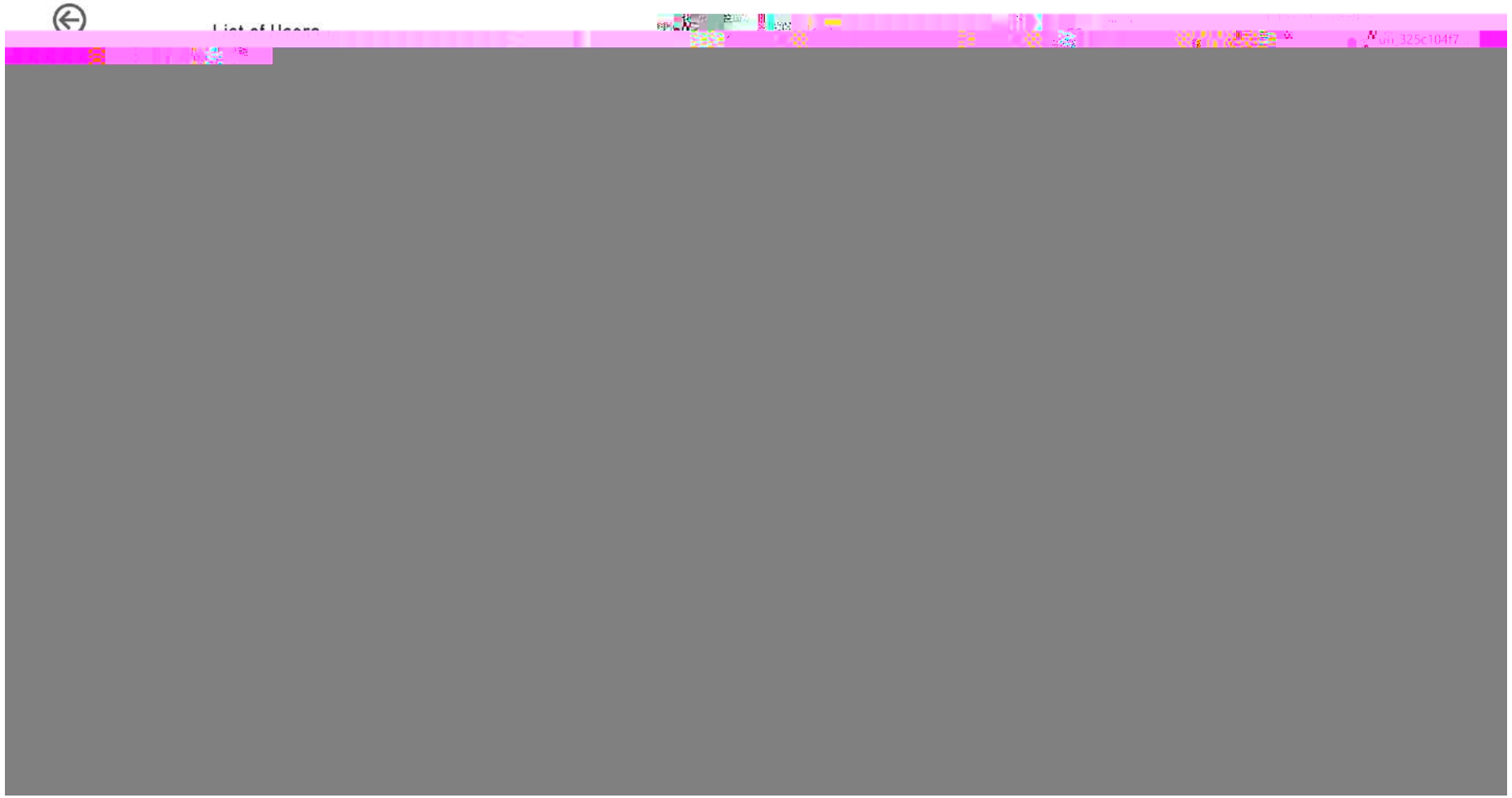
WI-FI CONTACT TRACING EXAMPLE

With Aruba Central

** Pre-production – final tool subject to change*

WI-FI CONTACT TRACING SCREENSHOT

Exported to PowerBI template



** Pre-production – final tool subject to change*

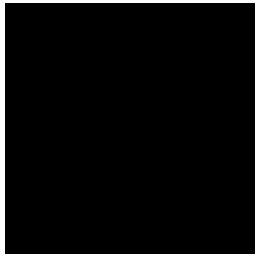
WI-FI CONTACT TRACING SCREENSHOT

CONTACT AND LOCATION TRACING

With Meridian and BLE Location Data

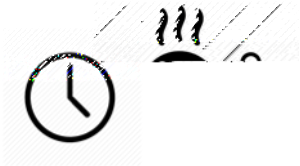
Users are issued Aruba Tags

Aruba 300/500 series APs sense tags in-building



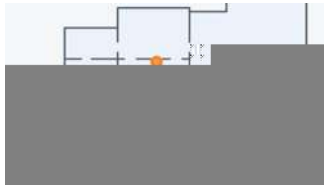
Meridian cloud determines tag locations

Data streamed to visualization and rules engine SW



User is sick and informs HR

HR looks up user tag and queries contact tracing SW for potential user and location contacts



Contacts traced (sorted by total contact minutes) with each infected person

Locations traced listing dwell time at various AP/building locations for sick person.

ARUBA ASSET TAG

BLE CONTACT & LOCATION TRACING SCREENSHOTS

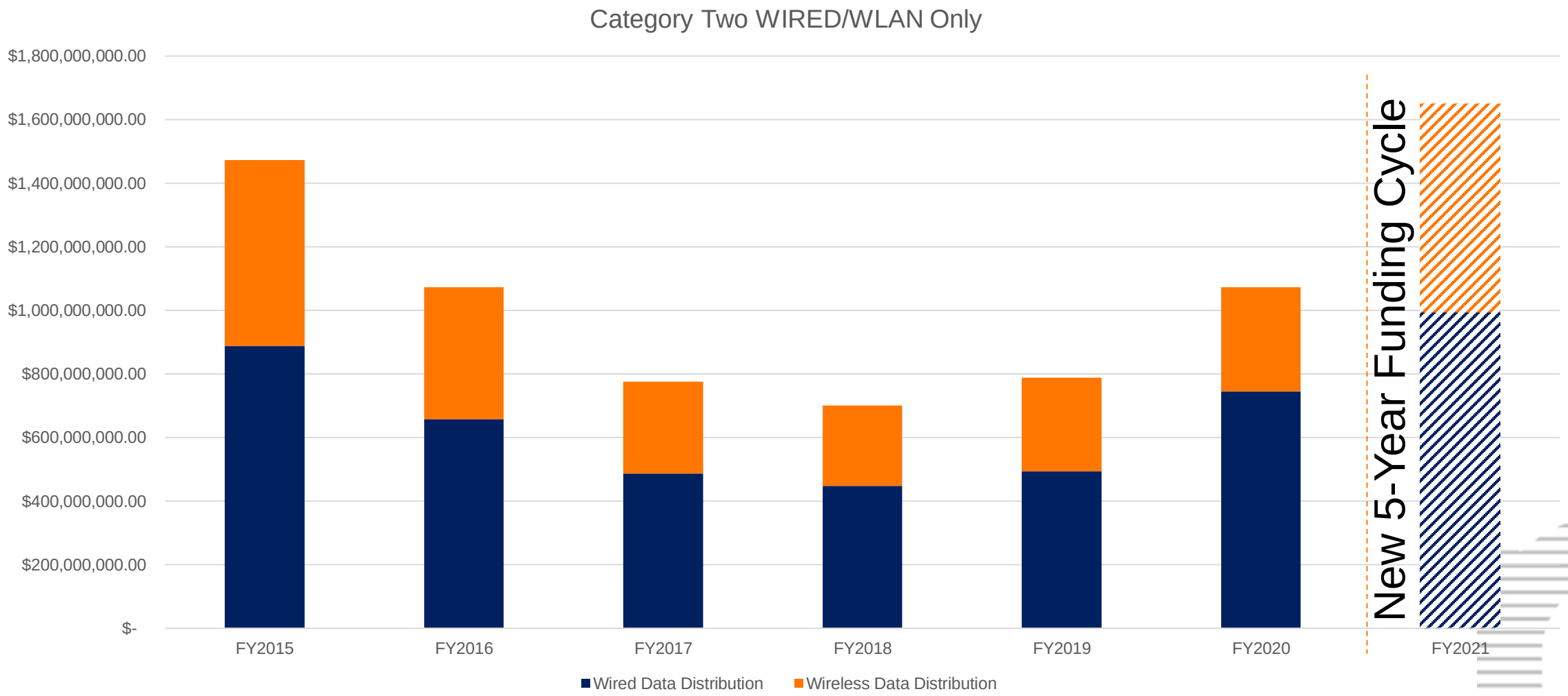
** Pre-production – final tool subject to change*

What's Right For You?

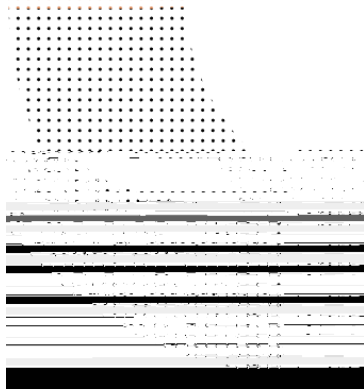
	Wi Fi-based	Bluetooth-based
Cost	Included	Hardware Tags Meridian License
Data	10m accuracy	1-3m accuracy
Deployment	Immediate	Tag setup
Additional Hardware	None	Asset tags (3xx or 5xx ap's)
Aggregation	AirWave or Aruba Central	Meridian

RICH PROXIMITY PARTNER ECOSYSTEM

E-rate Discounts Requested (FY2015-FY2021*)

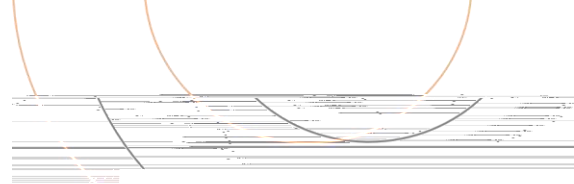


Other Federal Funding



Education Stabilization Fund

- Governor's Emergency Education Relief Fund
  - $3 billion will be provided to Governors for emergency support grants to LEAs and IHEs that the state determines have been most significantly impacted by the coronavirus.
- **Elementary and Secondary School Emergency Relief Fund**
  - **$13.5 billion will be provided directly to states to help schools**



Aruba K12/E-rate Team

RESOURCES

EDUCATION:

- HED:
  - Reimagine Education (PDF)
  - Higher Education Solution Overview (PDF)
  - Anywhere Education: Moving teaching and learning online - At-a-Glance (PDF)
  - Modernizing cybersecurity in higher education (PDF)
- K-12
  - K-12 School Solution Overview (PDF)
  - Modernizing cybersecurity in schools (PDF)
  - IT Guide for K-12 (PDF)
  - Aruba K-12 Webinar – 3 Must-Haves for Flexible Hybrid Instruction
  - Aruba Webinar – Maximize your school's CARES Act Funding
  - HPE - K12 Webinar – Implementing a D[H)5(E)-6196.WĐ[H)5(c(e)30( )41L(h)5(i)67(a)3( )15(Dm/F3 9.12 Tf179.21 214.66 Td[I)-10(m)-34(p)3(l)-14(e)30(m)-8(e)30(n)3(t)-10(i)-1)30(m)-8(e)30(n)3(t)-10(i)-1)30(m)-8(e)3

Thank you!