



# TOWN OF PARADISE VALLEY

## IT Update





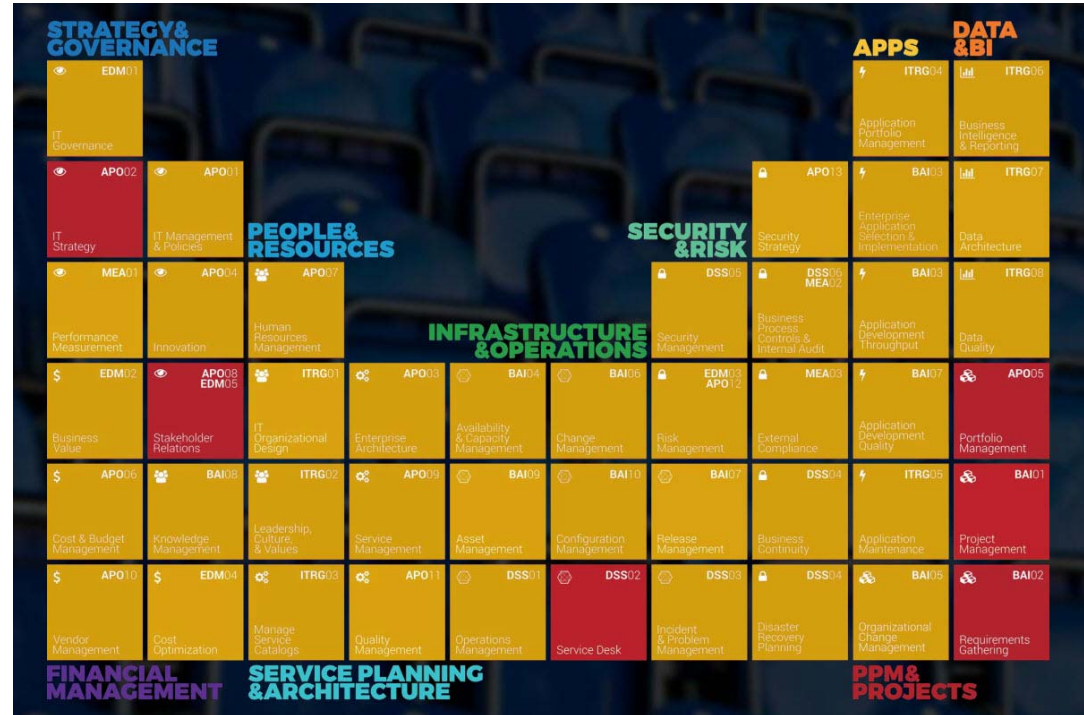
# Presentation Objectives

- Inform Council and Public on status of IT
- No action required



# IT Processes – Overview from Budget Session

- IT Strategy – Long Term Plans
- Service Desk – keep systems operating
- Stakeholders – Work with all departments
- Requirements – Meet the needs
- Portfolio Management – Manage what we have
- Project Management – Plan and execute





# IT Purpose

- IT Solves Business Problems for our Users
- Increase productivity of all staff
- Apply technology solutions where needed
- Maximize value over technology lifecycle







Transforming IT from 1990s -> 2016 solutions

# IT CHANGE

## 4 out of 5 staff are new

1 New CIO

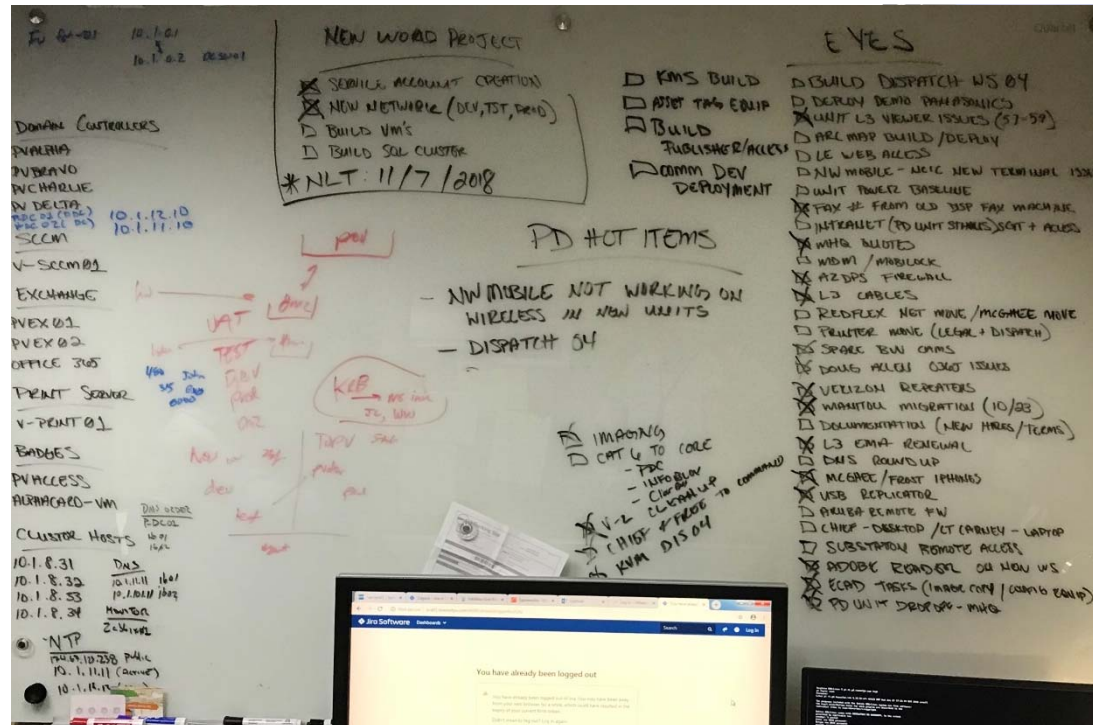
2 New Analysts, 1 Existing Analyst

1 New GIS Analyst

1<sup>st</sup> 90 days – 2/3 staff departed

New Staff - Private Sector Background

- High skill
- Ownership
- Very Productive
- Dedicated to improving PV
- My Staff is why we can get so much done, so efficiently







# Clean up so we can get to work.



FM200 Fire Suppression System  
Before After





# ~35 Projects in ~5 months

- New VPN Services
- Complete Email move
- Town Hall Wiring Redesign\*
- Fiber Optic Campus upgrade\*
- Cyber Security Intrusion Detection
- Standard Microsoft Software
- Asset Tags - Inventory
- New Data Center Net
- Centralized Storage
- VMWare Virtualization
- Private internal cloud
- New Wireless Network\*
- VoIP Phone Evaluation\*
- Standard Laptops, PCs
- Rebuild Police Vehicle Tech Platform







## Standard Computers – Ready in 30 minutes

Dell Desktops or Laptops

20 email support clients to Outlook 365 on Windows 10

Dual Monitors – 20-30% increase in productivity – spend \$160.79 get 10k on 50k staff member



**eCAD Project**

BigGantt eCAD Deployment

TYP	KEY	SUMMARY	TIME TRACKING	ICONS
ECAD		eCAD New World	0%	
ECAD-1		Kim from Tyler needs an updated GIS	0%	
ECAD-2		Copy Server images to drive array	0%	
ECAD-3		Build VM's for new eCAD Infrastruct	0%	
ECAD-4		Deploy new NWS network - 120-127	0%	

Activity Stream

Your Company Jira

Today

Joe Curtis commented on IN-53 - Decommission PVAAlpha

With the goal of decommissioning (removing from domain) PVAAlpha

- Wireshark PVAAlpha as exploration of roles installed
- Migrate Roles from PVAAlpha
  - Known Roles
    - AD
    - DNS
    - DHCP
  - Unknown Roles exploration
    - Other Wireshark

Read more >

11 hours ago Comment Watch

Days Remaining in Sprint Gadget

IN board

IN Sprint 1 - 20181115

4 Days Remaining

Heat Map: ECAD - All Open by Pri

Jason Mitchell Taylor Hunter

There are 2 distinct 'Assignee' values in 3 Issues

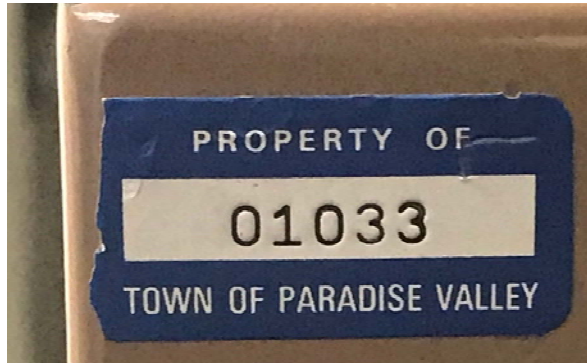
Assigned to Me

T	Key	Summary	P ↓
A	PI-6	Picking & executing the right modelling	
A	PI-3	Configuring, using, and managing test environments and test data	
A	PI-4	Measuring and reporting test coverage	
A	PI-1	Gather external opinions on	

## Project Management Software

Tracking PV IT, GIS and eCAD projects

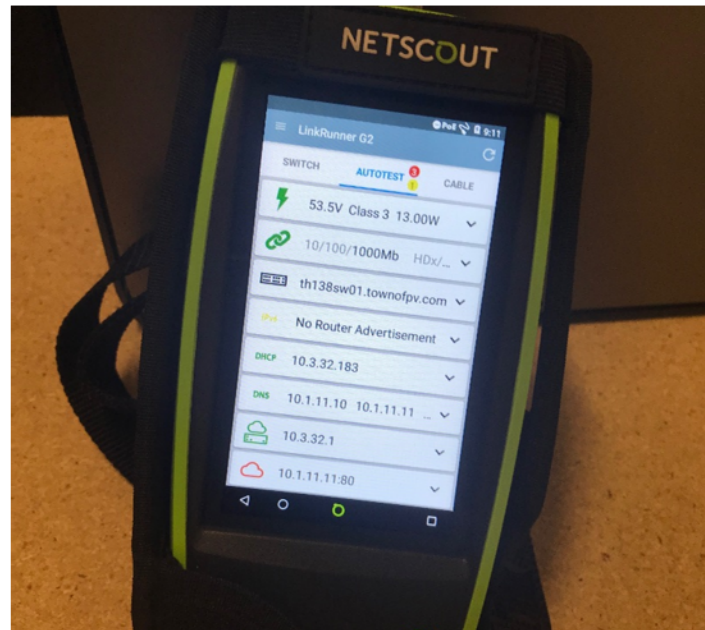
Collaborative AGILE methodology (Based upon KanBan, Lean, JIT Manufacturing)



## Asset Tags

Reestablished an Asset Management System





## Staff Tools

Network testing and diagnostic tools help get staff back to work quicker





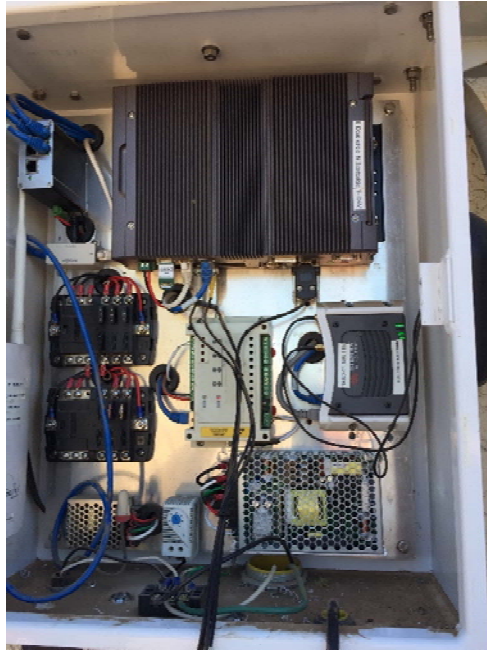


## Deferred Maintenance – Public Works, Finance

Found 5 Computers/Laptops and iPad pro still in boxes

3 Months to build a computer -> 30 minutes

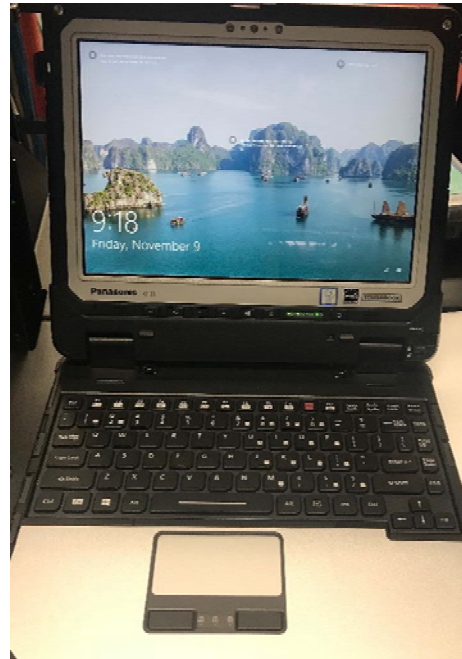
Regular Scheduled Maintenance Now – Upgrading line of business applications



## Deferred Maintenance – Fixed Site LPR

Reviewed each site

Develop short term support plans as they reach end of service life

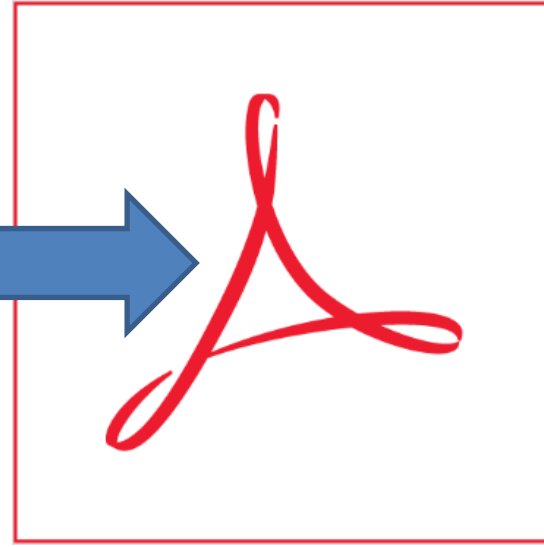


## **New PD Laptops to Replace Tablets**

Reviewed each site

Develop short term support plans



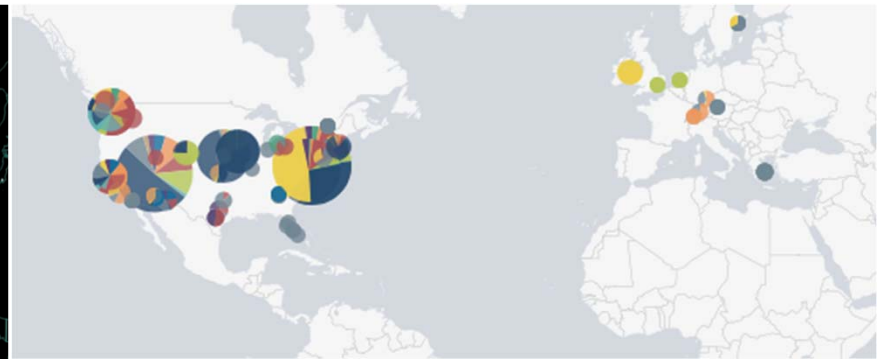


## Moving to Paperless Processes

Deployed Acrobat Pro to migrate documents to PDF where possible  
Centralized processes, faster processing







Network Connections – 10 Minutes

## Cyber Security

Centralized logging – see 9,047 to 20,100 attacks a day on the Town at 1 of our 64 addresses

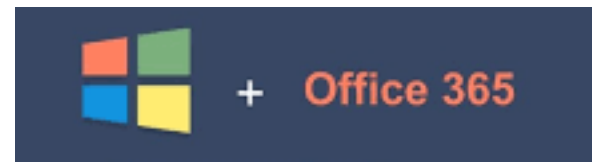
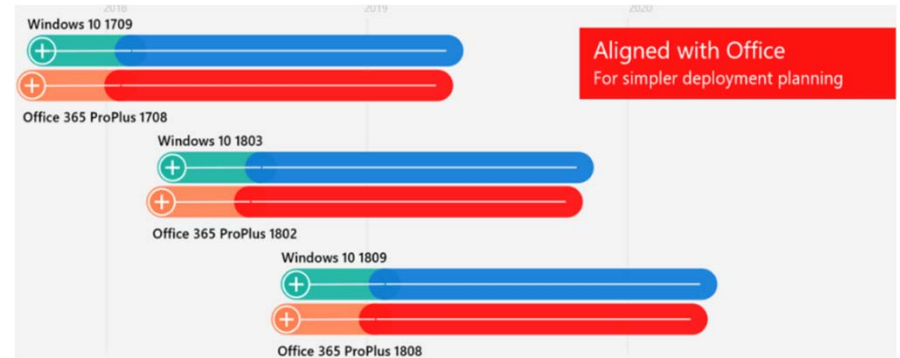




## Existing Environment



CDD, Legal, IT, Finance, HR  
[1/2 PD, 1/2 PWD, Courts TBD]



## Staff Productivity Killers

Office 2010, 2013, 2016 and Student Editions

Directors had to save in different version depending on staff assigned





Global view

System Information

Parameter	Value	Details
Zabbix server is running	Yes	zabbix@zabbix.com 100%
Number of hosts (zabbix@zabbix.com)	95	13 / 0 / 82
Number of items (zabbix@zabbix.com)	892	794 / 2 / 116
Number of triggers (zabbix@zabbix.com)	4216	4210 / 5 (1 / 421)
Number of users (total)	3	0
Required server performance, new values per second	44.52	

Problems by severity

Host group	Classifier	High	Average	Warning	Information	Not classified
Edge Router			1			
PV Net - L2		27	1			
PV Net - Router		38		6		

Local

Problems

Time	Host	Problem / Severity	Duration	ACK	Actions	Tags
20:00:00	TH-BC-waf01	Interface Cloud Desktop Operating System has changed to lower speed than 1 and below	4m 35s	No		
22:00:00	PD-waf01	Interface T10 Link down	0m 42m 36s	No		
17:14:00	TH-BC-waf01	Interface C20 Link down	0m 15m 36s	No		
16:00:00	TH-BC-waf01	Interface C20 Link down	0m 15m 36s	No		
16:00:00	TH-BC-waf01	Interface C20 Link down	0m 15m 36s	No		
16:00:00	PD-waf01	Interface S40 Link down	7m 36s	No		
16:00:00	TH-BC-waf01	Interface C130 Link down - Lerrng interface Link down	7m 4m 36s	No		
16:00:00	TH-BC-waf01	Interface VLAN1300V130M-T10-Physical Link down	7m 4m 36s	No		
16:00:00	TH-BC-waf01	Interface LRU Link down	7m 27m 36s	No		
19:27:00	TH-BC-waf01	Interface C20 Link down	7m 27m 36s	No		
Today	PD-waf01	Interface C20 Link down	1d 19 5m	No		
Yesterday	DC-R11-waf01	Interface S40 Link down	6d 12h 00m	No		
2018-11-02 01:41:00	TH-BC-waf01	Interface C20 Link down	7d 0h 36m	No		
2018-11-01 16:56:00	TH-BC-waf01	Interface C20 Link down	7d 12h 00m	No		
2018-11-01 16:01:00	DC-R14-waf01	Interface S20 Link down	7d 12h 00m	No		

ZABBIX Monitoring Inventory Reports Configuration Administration

Dashboard Problems Overview Web Latest data Graphs Screens Maps Discovery Services

Maps

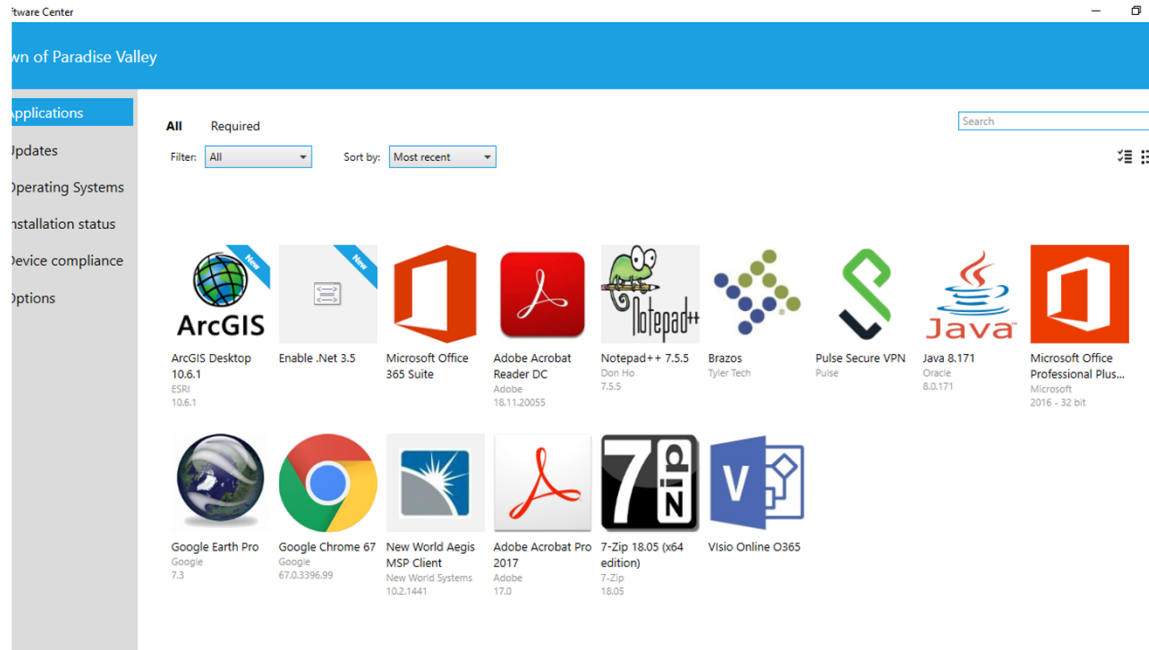
All maps / PV - Network Overview Upper level maps: PV-PD-App-NewWorld Enterprise

## Open Source Network Monitoring Software - Free

Avoided a 15K cost for commercial network monitoring software

No Capital Costs, no O&M other than talented staff





## Employee Self-Service

Staff can load their own software without waiting for IT  
Internal PV App Store for our most needed tools





PING

3

ms

DOWNLOAD

91.3

Mbps



JITTER

1

ms

UPLOAD

93.7

Mbps



Cox - Phoenix  
Phoenix, AZ

Cox Business  
174.67.123.230

Cox - Phoenix  
Phoenix, AZ



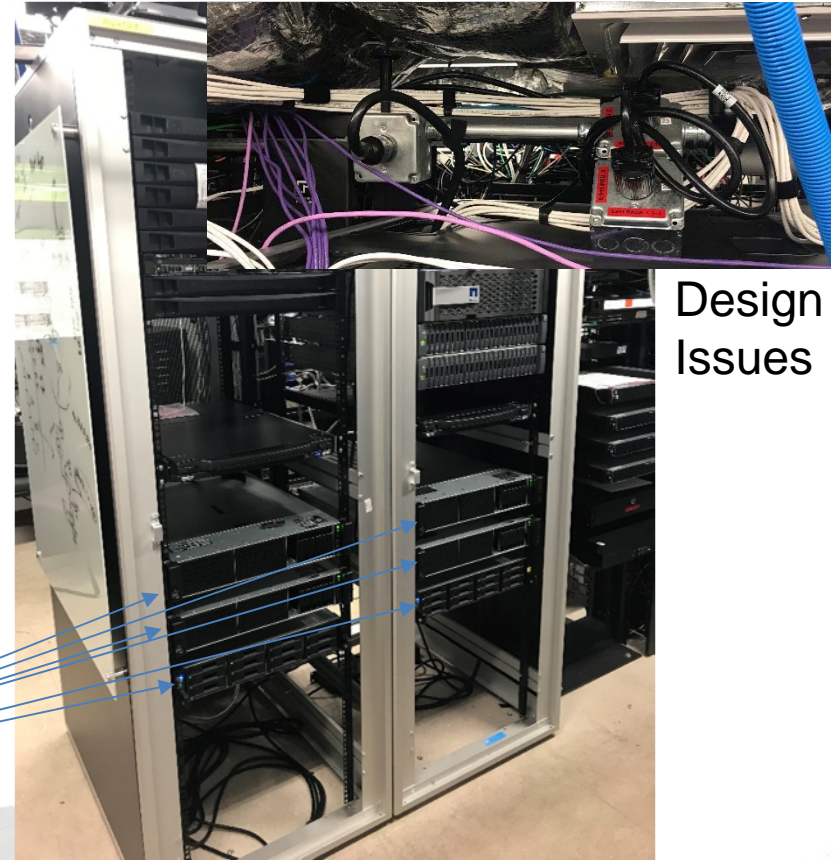
## Internet Connection

100Mbps (70% = 31.5Gb/hr) – low for cloud services  
Zabbix network monitoring tool collecting data for upgrade  
BWC, Cloud Backups, Dual Link for Redundancy





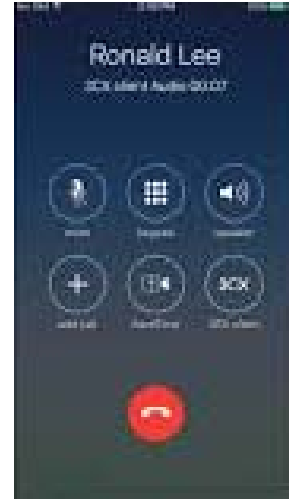
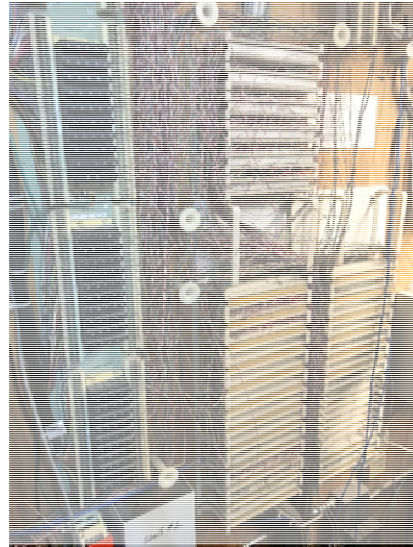
Existing Servers (22)



## PV Private Cloud

- 4 Virtual Private Cloud Servers
- 2 Storage Arrays (Disk)
- 2 Network Switches (Hidden)

Design  
Issues



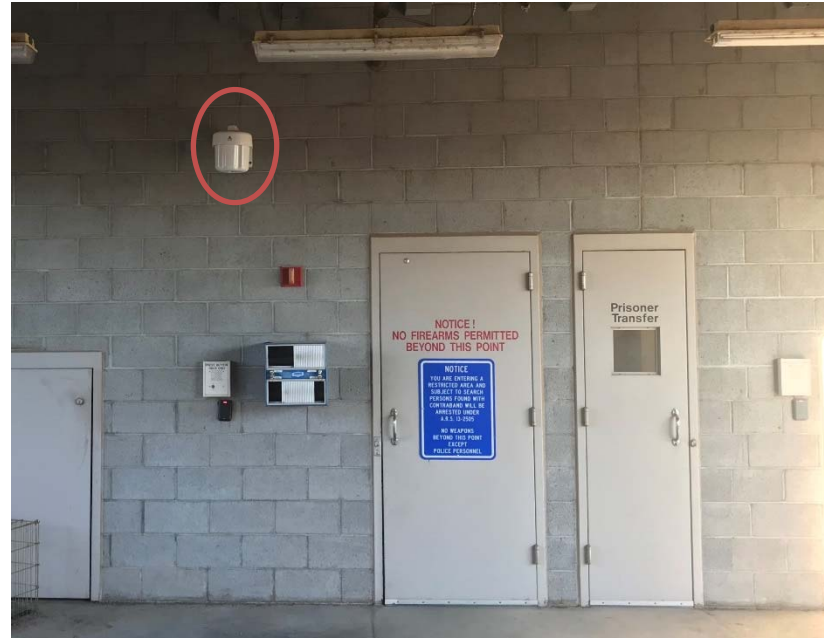
## Piloting new VoIP Phone Systems

### 1999-2000 Phone System

300 phone numbers, 100 lines capable  
Last service man retired in 2017  
End of Sale circa 2006



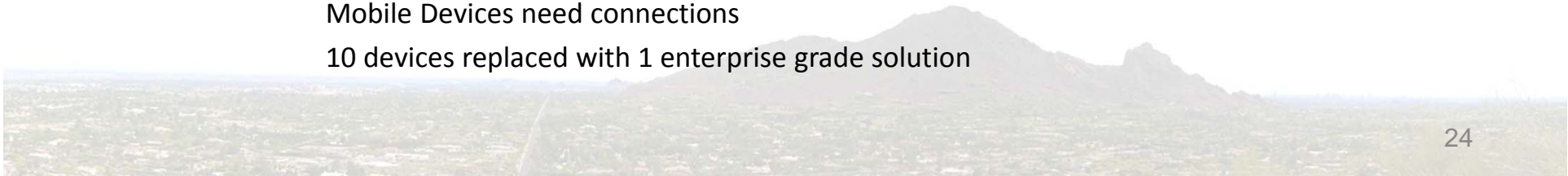




## Campus Wi-Fi

Mobile Devices need connections

10 devices replaced with 1 enterprise grade solution







# External Support

- Only used one vendor in the past
- Evaluating 3 good local vendors
- Internal PV Design
- Develop on Total Cost of Ownership – reduce hidden costs
- Open Source Software
- Documentation so we can have good scope on future projects





# New Management Controls

- Inventory
- Monitoring
- New Accounting Codes
- Beginning IT Standards
- Annual Maintenance Agreements Schedule
- Clear Purchasing





Thank you

# QUESTIONS & COMMENTS