



SROA IT Task Force: 2023-2025 IT Strategy

Presentation to Board
December 16, 2022

Meet the Core Task Force: Owner Members and SROA Representatives span a broad spectrum of IT, business and Sunriver operational expertise

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Task Force Vision / Mission / Goals

Vision:

- IT to serve as a strategic enabler for all SROA operations, thereby improving operations, productivity and satisfaction of SROA team members
 - This plan will focus on SROA operations; at the same time, we acknowledge and embrace the broader observation that better leverage of IT offers significant potential for improving the Sunriver experience for ***all key stakeholders***

Mission:

- To create a 3-year strategic plan and budget proposal addressing SROA IT requirements
 - Leverage the expertise of SROA owners to lay a strategic foundation upon which SROA can 1) operate confidently and 2) follow a roadmap to build for an increasingly IT-centric future
 - Embrace an approach that protects SROA and owner interests while also being practical, affordable and actionable

Goals:

- Strategic plan to be approved by SROA Board in time to be incorporated into 2023 planning cycle, with mid-year revisit to ensure adequacy for immediate-term needs
- Waste no time in acting on any opportunity or risk areas that can be immediately addressed

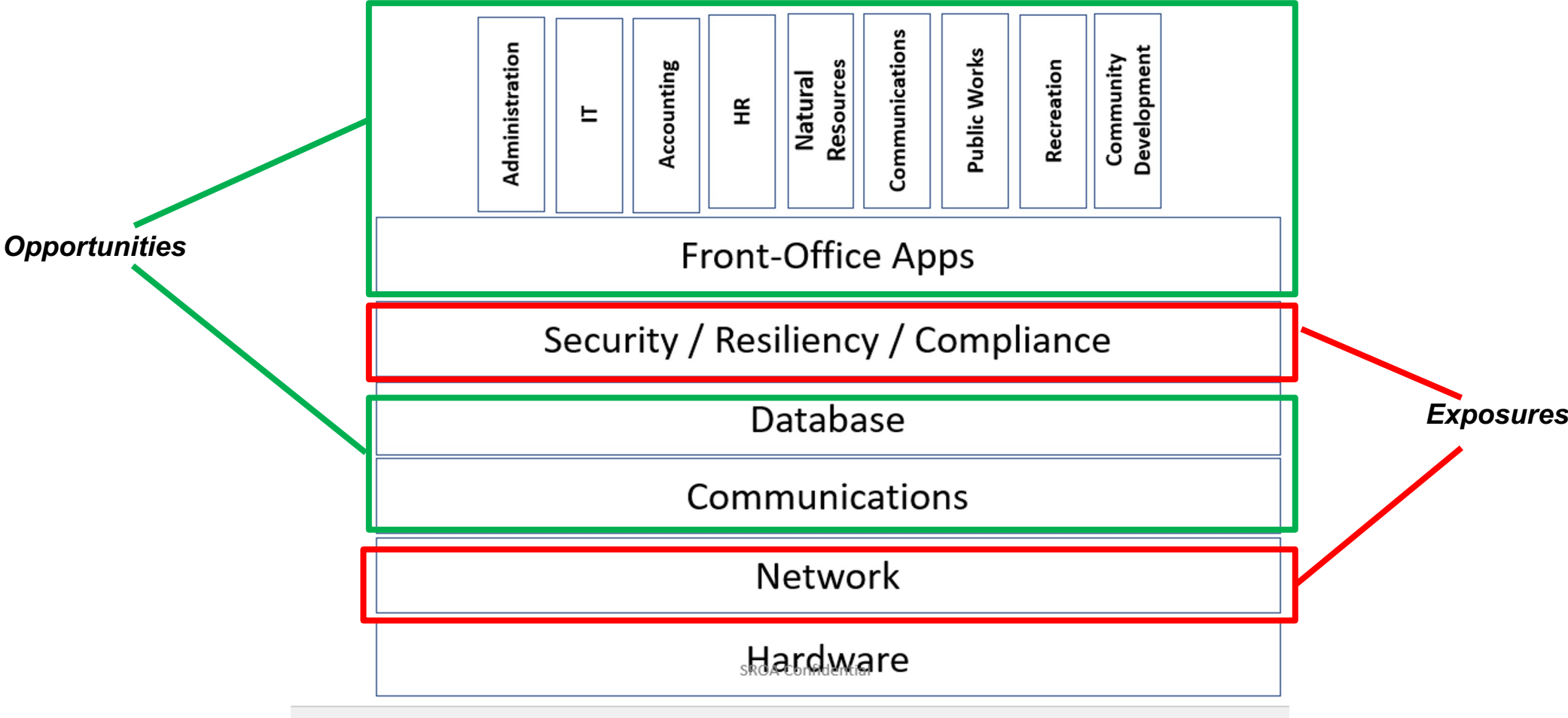
SROA IT Priorities Identified by the Task Force: Big 3 + 1

1. **Security & Continuity** to deliver reliable, continuous and secure IT services
2. **Networks** to provide ubiquitous, reliable, fast and secure IT operations
 - Proprietary network is industry standard
 - SROA network is partial, incomplete (eg, Owners Pool)
3. **Cross-departmental GIS** requirements for public safety, better operations and increased owner value (Public Works, Natural Resources, Community Development, Recreation)



**Migration to
Cloud**

SROA IT Priorities: Architectural View



Security & Continuity Observations: Today's #1 IT Concern

A strong Security posture is a requirement for organizations of all sizes

- Average cost of a Data Breach in the US is >\$9M per event
- Security breaches are the #1 reason for rapid CIO/CISO departures and 'what keeps them up at night'
- Bad actors have many opensource tools to find and target the most vulnerable systems
- SROA has experienced at least two documented incidents, including a ransomware attack

Security has three major components: Protect, Detect, and Respond. We observe:

- Protection has been the focus for SROA, and is minimally acceptable: Requirements include better tools, more automation (including Multi-Factor Authentication [MFA]) and less reliance purely upon the IT team
- Detection and Response capabilities are minimal and need attention / investment

The historical Meets Minimum approach, highly dependent upon the IT manager and staff, is an untenable strategy going forward

- Presents undue risk for SROA and its stakeholders
- Puts undue stress and exceptional working hours upon the IT staff
- Impedes overall SROA productivity by closing down systems access off-hours

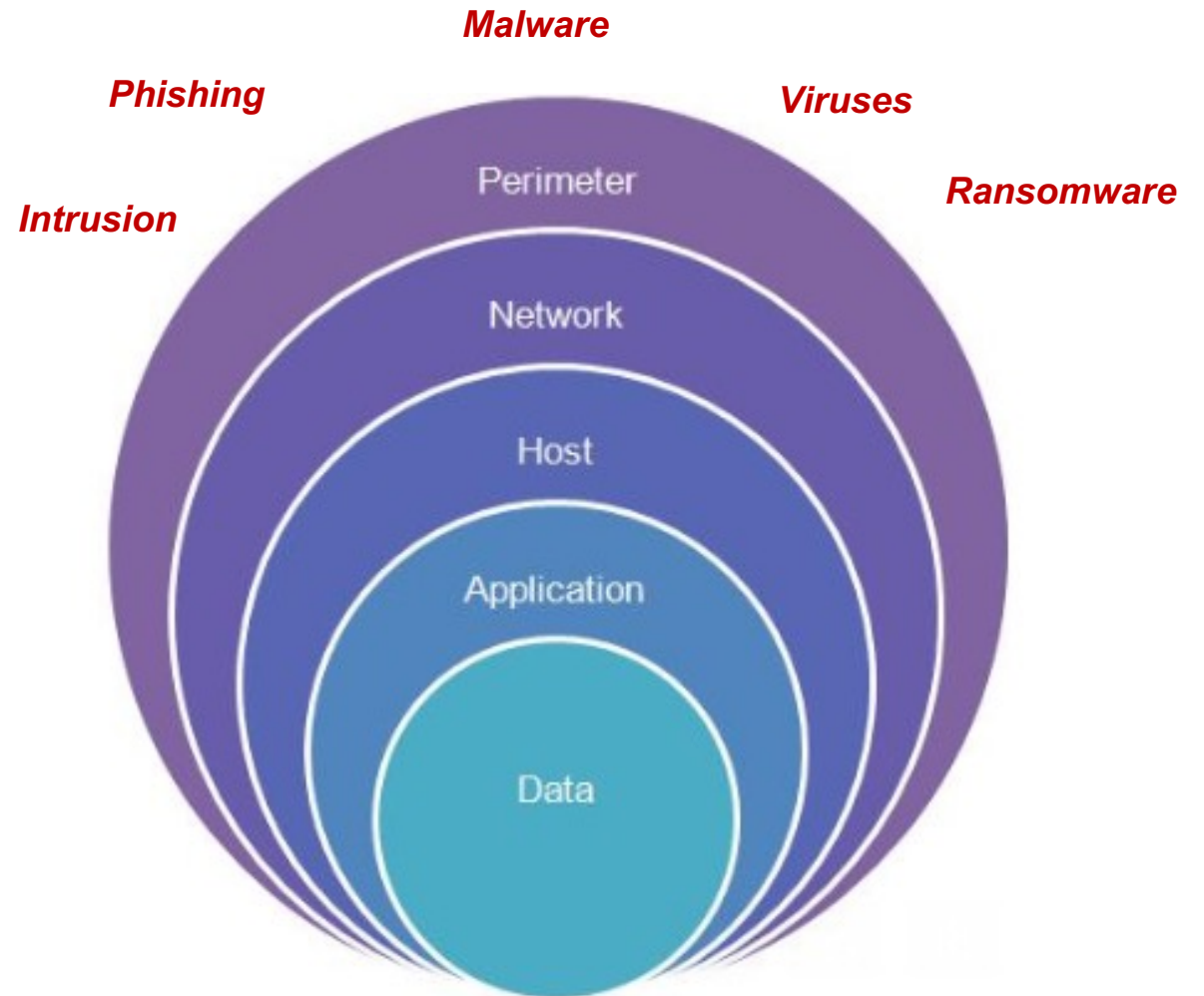
Continuity and recoverability have gotten minimal attention and need a substantial upgrade

Human vulnerability is a key risk for organizations of all sizes and must be prioritized

Why Security matters

- In order to continue to maintain the continuity of services required, SROA's digital footprint will continue to grow significantly for the foreseeable future.
- As we add connected endpoints (servers, desktops, laptops, tablets, and smartphones) and services (cloud, software, etc), our threat landscape grows with each addition adding additional paths into our critical data and services.
- We must ensure we secure our compute infrastructure (threat landscape) to ensure we are not an easy target for bad actors. Security incidents are inevitable, but we can make it difficult to impact our most critical assets.
- Bad actors are ROI focused and will move on to easier targets if we make it sufficiently difficult to target SROA.

Bad Actors Across the Globe



Security & Continuity Assessment Summary

Considerations:

Going from Meets Minimum to Defense in Depth requires:

- Constant need to prepare for continuously increasing threats
- Planning for the double-edged sword of automation
 - Increasing use of IT inevitably also increases threat risk
 - + Modernized / Cloud systems have better security built in
- SROA needs to get ahead of the curve in order to enable increased systems usage, modernization and protect stakeholder interests
- Undue reliance upon IT staff is a risk
- Security is not just IT's issue: All SROA employees and volunteers with systems access hold a responsibility and need to be prepared
 - SROA employees with systems access are the weak link
- Continuity and recoverability need attention and planning
 - Not just a Security hazard -- Human error and physical interruption are major contributors to disruption, too

Options:

Threat Protection

- Has been primary area of focus for SROA to date
- Penetration test results encouraging
- Top priorities -- Automated perimeter monitoring and MFA – in 2023 budget
- Annual / ongoing training should be a condition of employment for all anyone with systems access

Threat Detection & Response

- Automated capabilities need to be implemented
- Advanced training for IT staff needed
- Maintain Cyberinsurance policy, which includes Response options

Continuity & Recovery

- Functions as a primarily manual process today (exception: virtual servers)
- Overly dependent upon IT manager and team
- Automation and outsourcing options should be explored as a priority in 2023

Security and Continuity/Recoverability Strategic Recommendations

- **Immediate / Horizon 0**
 - Set baseline through CIS Self-Assessment and ‘friendly hacking’ exercise – DONE
 - Set immediate priorities for 2023 budget and include in plan – DONE
 - Implement staff training – UNDERWAY
- **Intermediate / Horizon 1**
 - Shift physical security responsibility to Public Works (eg, gate cameras)
 - Adopt a metrics-driven approach to ensure that we stay ahead of the threat
 - Develop Continuity / Recoverability priorities and detailed plan. Do scenario planning with Departments (ie, wildfire, major power outage, human error, etc.)
- **Longer / Horizon 2**
 - Continuously improve Security and Continuity posture through management of SROA proprietary network and Cloud migration

Network and Communications Observations: The lifeblood of everything IT and Digital

Network requirements for a strong, secure and reliable SROA IT infrastructure are essential and continuously growing.

- Sunriver-wide requirements: Recommend a clear and ongoing process to define the ‘campus’
- Speed, reliability and security are essential: For a strong IT infrastructure, the network needs to move first, be secure, and be ‘always on’
- Spot improvements are helping, but recommend a strong upgrade plan for the entire “SROA campus” for
 - Operations at SROA facilities
 - Field operations
 - SROA Owners-driven requirements to be assessed in future

High-level network/infrastructure priorities:

- Get ahead of backbone upgrades to existing facilities
- Secure 10-year (forward-looking) reliability across the campus
 - Optimize options: Lease, buy, partner, build & own
- Living process for upgrades and growth

Network & Communications Connectivity Assessment Summary

Considerations:

- Criticality of connection – current & future
- Requirements for GIS
- Strategic implications, including public safety
- Possible partnering
- Ease of connection (of any type or capability)
- Upgradeability
- Need for rapid response to change in BW
- Opportunity for infrastructure expansion for SROA
- Future resident/visitor needs

Options:

Critical own/partner:

- Admin/PW
- SHARC
- North Pool/Tennis
- North Storage (trunk access)
- Circle A/B Vault

Partner or Lease

- Ft. Rock
- Boat Launch/Mary McCallum
- Entry Signage
- River/weir controls/sirens

Non-critical, but watch

- Satellite Tennis
- Pocket Parks

Network & Communications Strategic Recommendations

- **Immediate / Horizon 0**

- Increase bandwidth at SHARC to eliminate network bottleneck -- DONE
- Capitalize on opportunity to lay fiber to North Pool at significant cost savings – DONE
- Confirm key SROA hub locations included in fiber-to-home plan -- DONE

- **Intermediate / Horizon 1**

- Assess potential of creating direct access to network source and Owner Storage
- Alternate direct access network option from SHARC to Circle A/B vault
- Explore options for ubiquitous connectivity throughout the campus via an efficient combination of fiber and wifi
 - Including possibility of cell towers integrated into existing siren structures
- Assess and develop plan for owner and visitor requirements in concert with fiber-to-home

- **Longer / Horizon 2**

- Consciously stay abreast of new and improved technologies as they emerge (eg, satellite)

GIS Observations: “Digital Sunriver”

Critical need long term: Full GIS map for all of Sunriver (‘down to every tree’)

- Budget to fully map Sunriver using standard GIS
- Can be done over time (suggest 3-5 years)
- IT owns how it is created & maintained, Departments own how it is used

Departments can plan and budget for GIS adoption as they build their plans

- Let this be a ‘business unit’ decision
- Unleash additional cross-departmental collaboration for mutual, optimal benefit across the board
- Expect that there will be benefits realized with adoption, improved experience for stakeholders
- Current 2023-2025 proposal includes +1 HC for x-Departmental GIS analyst
- Every SROA staff member / vehicle connected in the field as an aspiration

Recommend the board set a full implementation goal via Strategic Plan

- For departmental operations – including associated workflow changes and transformation management
- Public Safety (i.e. Public Works) and disaster response

GIS Assessment Summary

Considerations:

- Currently our database is limited to owner properties
 - Option to add common properties
 - Condo assoc. need to be resolved beyond single property
- County GIS system has greater resolution/detail
 - Negotiate with county to get DB access
- Departmental decisions on application requirements and use of GIS equipment in field

Options:

Critical ownership:

- Equipment/personal outfitting
- Add critical detail on existing properties
- Add dedicated personnel to improve our capabilities

Partner

- Utilize County GIS
- Look for contract resources/opportunities

GIS Strategic Recommendations

- **Immediate / Horizon 0**

- Start with owner lots, then tie all SR parcels into the GIS database (including common and other SROA parcels)
- Link to county GIS map/resources (some cost involved)
- Identify and address immediate improvement opportunities
- Set and manage to Departmental goals (eg, cut Community Development compliance management steps in ½)

- **Intermediate / Horizon 1**

- Increased resolution on GIS items (“map every tree”)
- Mid-term improvement opportunities

- **Longer / Horizon 2**

- All vehicles/personnel in field equipped to use/update GIS DB
- Blue Sky opportunities

Cloud Observations: Catch up to Stay Up

Cloud is quickly becoming the de facto standard for IT

- Sunriver has gotten a start, but only in the most basic areas forced by obsolescence (Office 365, new VOIP phone system)
- Lagging areas are the ones with the highest potential benefit (eg, GIS)

Rearchitecting SROA's IT can be an evolution, not a revolution

- Start with an inventory of all hardware and applications
- Develop a 'to be' architecture and modernization / migration plan
- Identify and prioritize opportunities as well as sensitive areas/'crown jewels' for protection
 - The security benefits from Cloud are key
- Leverage deep Cloud expertise and migration programs (eg, AWS)

Capitalize on potential subsidiary benefits that modernization brings

- Access to best-in-class capabilities – Be where the software vendors are putting their focus
- Architected for better/built-in security
- Potential for cost savings by obsolescing legacy systems

Cloud Benefits & Risks

Benefits to SROA

- Moving to the Cloud provides all technical resources for corporate applications
 - Avoids the need to hire or contract supplemental engineering resources
- Can be set up in multiple locations for disaster recovery
- Near instant deployment and enablement
- Broad array of choices, and configuration of server infrastructure
 - Can be set for time-of-day requirements avoiding the cost of constant operation
 - More cost management choices

Considerations

- Moves costs from a Capex + maintenance model to a Opex model
- Close management required to avoid unnecessary costs
- Choice of managed services such as Data Base Management, Photo services, etc.
- Requires network connection is on all the time
 - Recommend dual network providers in critical locations

Cloud Strategy Options/Process

- Embrace Cloud as the IT platform for the future
- Avoid sunk costs – assume a ‘Cloud first buying strategy
- Work with Accounting to prepare for IT budget’s shift over time from primarily Capital expense to majority (?) Operating expense
- Create detailed 3-year IT operating plan including
 - ‘To be’ IT architecture
 - Department requirements
- Codify institutional knowledge before it is lost through automation and improved workflow
- Address transformation, training (IT and Departments) and change management requirements
- Set appropriate metrics for both IT and Departments / SROA overall, reflecting Cloud strategy
- Opportunity for infrastructure expansion and services for SROA

<u>Application</u>	<u>Description</u>	<u>Already Cloud Based</u>	<u>SaaS Target</u>	<u>Standard Cloud</u>	<u>Change not suitable</u>
Accounting system One	Jonas			?	
Accounting system two	Traverse			X	
ADP	Employ evals, recruiting, payroll	X			
GIS	ERSI GIS (tied to database)				
Office 365 (in the cloud)		X			
Telephone system - Fonality/NetFortris moving to cloud			X		
Document Management – DocuWare			X		
Recreational software	ActiveNet – cloud based	X			
ID Cards – AlphaCard					X
Gate Access System	Lenel				X
SmartSheets		X			
File System	Approximate 3 TB (historical and active)			X	
SHARC Alarm Panels					X
Photo Management Software	DAM – store pictures into a document management system			X	
AV system for SHARC					X
Gas Management – Phoenix System				?	
Database – Internal	(Gaining owners information from Jonas) Coupons, Citations, Owner Properties, RV Storage, Sell Check, ID Card, Submittals, Building Permits, Compliance Reviews, Contractors, Ballot Verify, Owner Concerns, Com Roster, and SROA Vehicles			X	

Cloud Strategic Recommendations

- **Immediate / Horizon 0**

- Replace obsolescing phone system with Cloud-based alternative – Q4-Q1
- Complete IT inventory & build ongoing management system – Q1
- 3-year IT operating plan to be completed by new IT Director – 1H
- Identify and plan for ‘low hanging fruit’ migration opportunities – 1H

- **Intermediate / Horizon 1**

- Select primary cloud provider (AWS, Microsoft, Google)
- Build single environment with perimeter security
- Build sub domains for individual applications
- Solicit SaaS cost for SaaS likely applications
- Configure all reports and recommendation services

- **Longer / Horizon 2**

- Annual Strategy & Operational Plan update, feed into SROA annual planning cycles
- IT as a strategic enabler for SROA operations (vs. current Help Desk standing)
- Complete all migrations

Investments Outlook

A minimum 2x increase in the IT budget is required to operate at the deserved standard

- This translates into approximately \$100 per year per property (on average)
- Can be achieved incrementally – 1/3 of the increase included in 2023 plan
- As is typical today, this will also bring a substantial shift in expense category – from almost entirely Capital Expense to 50% or more Operating Expense in the near future
- Opportunities for self-funding will be actively explored
- Departments should participate directly in the IT budgeting process to foster collaboration and accountability

- **People**
 - Hiring IT Director is a priority
 - GIS Analyst and Security Specialist are next
 - Hire vs. outsource or contract should always be considered due to naturally fluid requirements and opportunities
- **Processes**
 - Increased automation can significantly increase SROA productivity across the Board
 - Close cross-Departmental collaboration is strong and will remain key
 - IT's role to be defined as strategic, not reactive / help desk
 - Pursue continued collaboration with other Sunriver entities (Lodge, Village, etc) and like municipalities
 - Transformation planning and change management requirements will abound
- **Tools**
 - Base investments included in current 2023 IT budget
 - Address low-hanging-fruit areas identified in Departmental interviews (eg, Zoom, DAM)
 - Shift approach from 'affordable' to 'best in class @ value'
 - IT Director's detailed IT Operational Plan to define for 2H 2023 budget consideration

Next Steps

1. Act on any follow-ups from today's meeting
2. Maintain focus on Security & Continuity
3. Support and advise on hiring of SROA IT Director (eg, input to job description, candidate assessment, etc.)
4. Continue to be 'on call' in an advisory capacity while the strategy is operationalized in 1H'23

IT Submission to Board for 2023-2025 Plan

INFORMATION TECHNOLOGY

- ▶ IT Strategic Plan Recommendations

- ▶ Security and Continuity
 - ▶ Ongoing perimeter monitoring and improvement
 - ▶ Hardware and Services for monitoring real-time events
 - ▶ Employee Training with Dual Factor Authentication

- ▶ GIS - Real-time field data collection and management
 - ▶ GIS Employee - Split between departments
 - ▶ Natural Resources
 - ▶ Community Development
 - ▶ Public Works

- ▶ Communications
 - ▶ Scalable Internet Bandwidth to meet traffic requirements
 - ▶ Reliable and Secure Connectivity to all SROA facilities ¹