



The University of Alaska Information
and Communications Technology:
Strategic Findings


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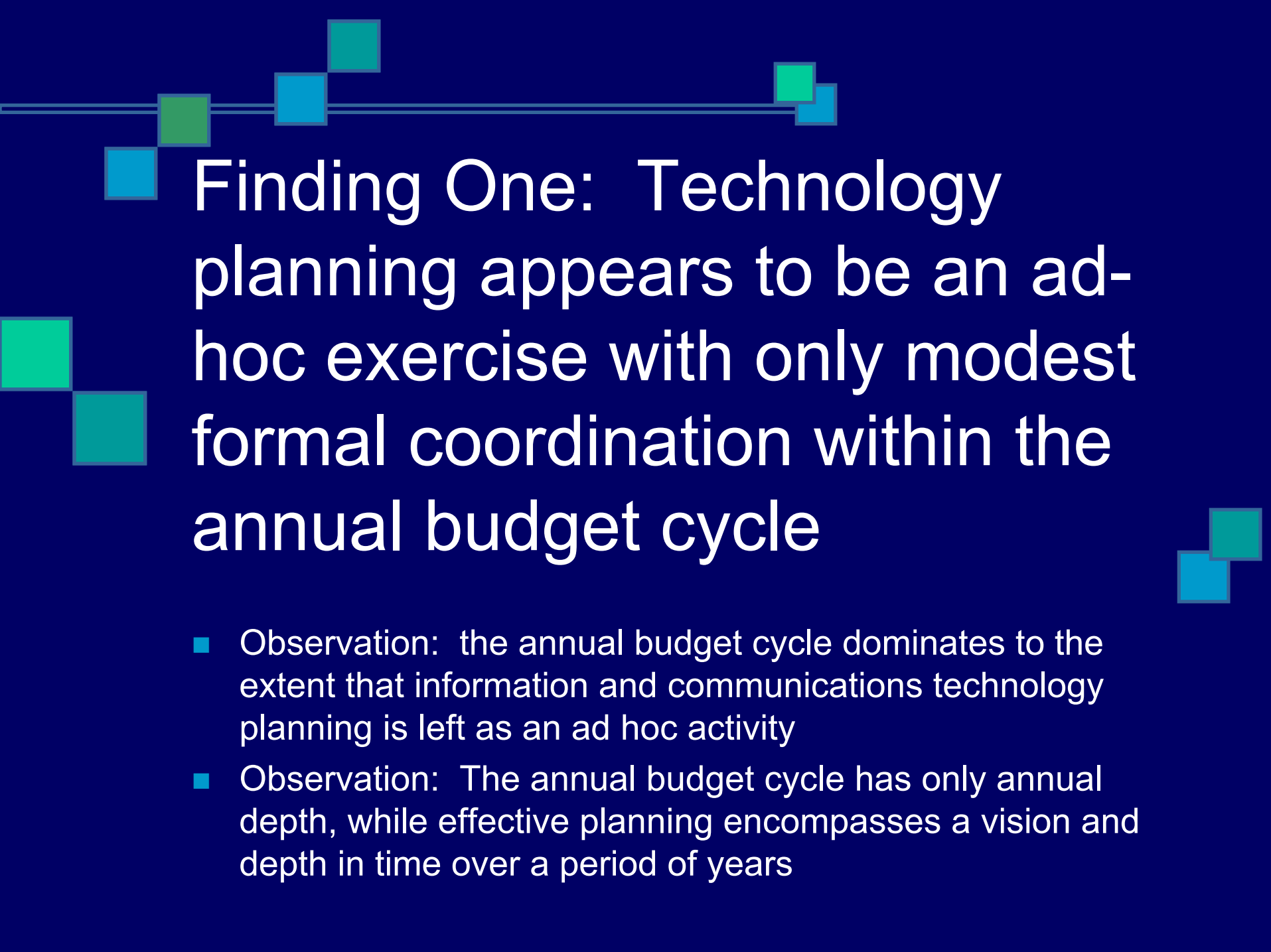
Observations and Associated
Recommendations

July 24, 2002
Moore, Foster, Bohn, Inc.




Methodology: A Whole Systems Approach

- Interviews with key personnel
 - Production network asset surveys
 - Assessment of current operations procedures and annualized operations process
 - Comparative survey of current Alaskan markets and relevant national and global telecommunications markets
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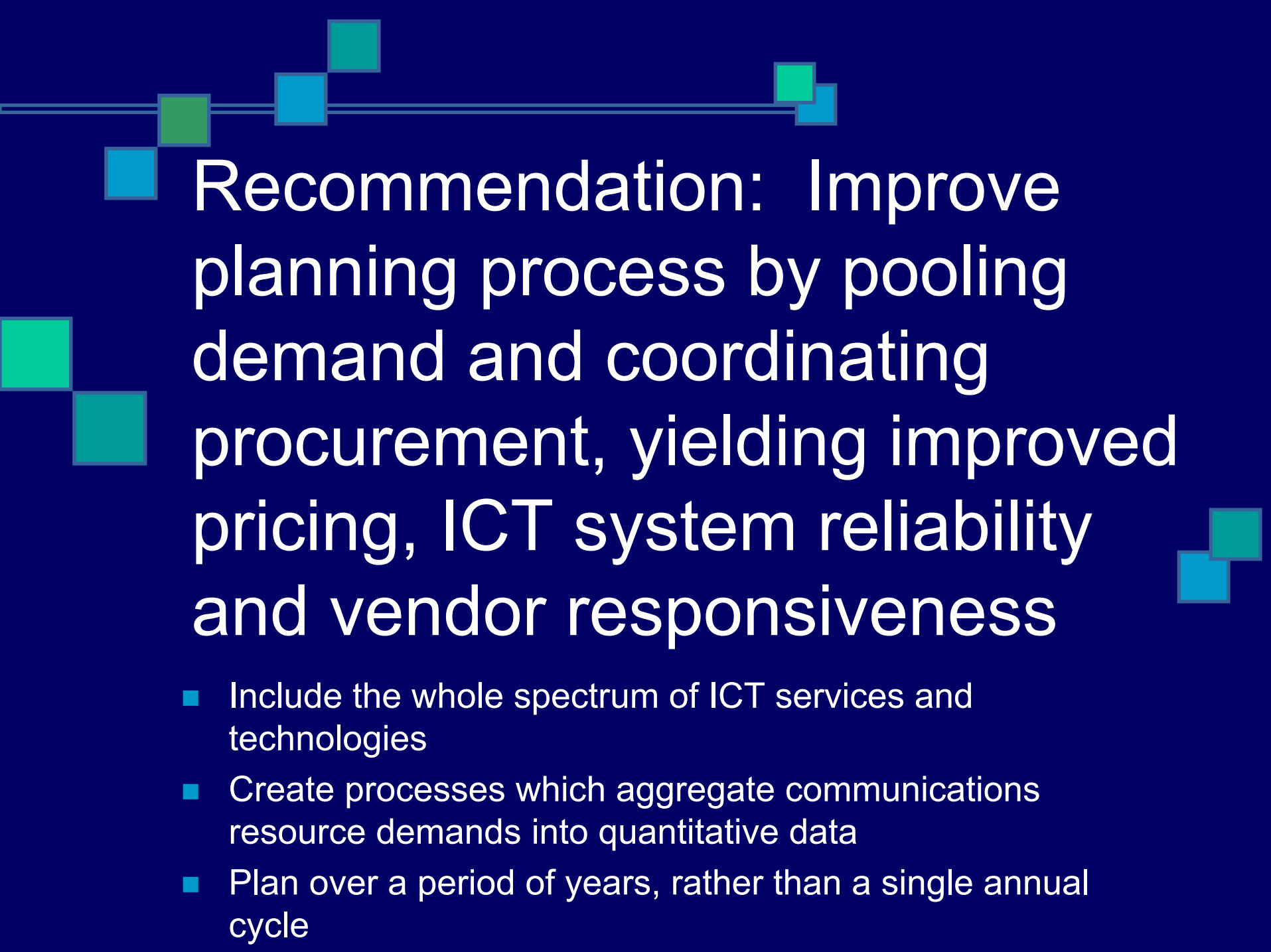
Finding One: Technology planning appears to be an ad-hoc exercise with only modest formal coordination within the annual budget cycle

- Observation: the annual budget cycle dominates to the extent that information and communications technology planning is left as an ad hoc activity
- Observation: The annual budget cycle has only annual depth, while effective planning encompasses a vision and depth in time over a period of years



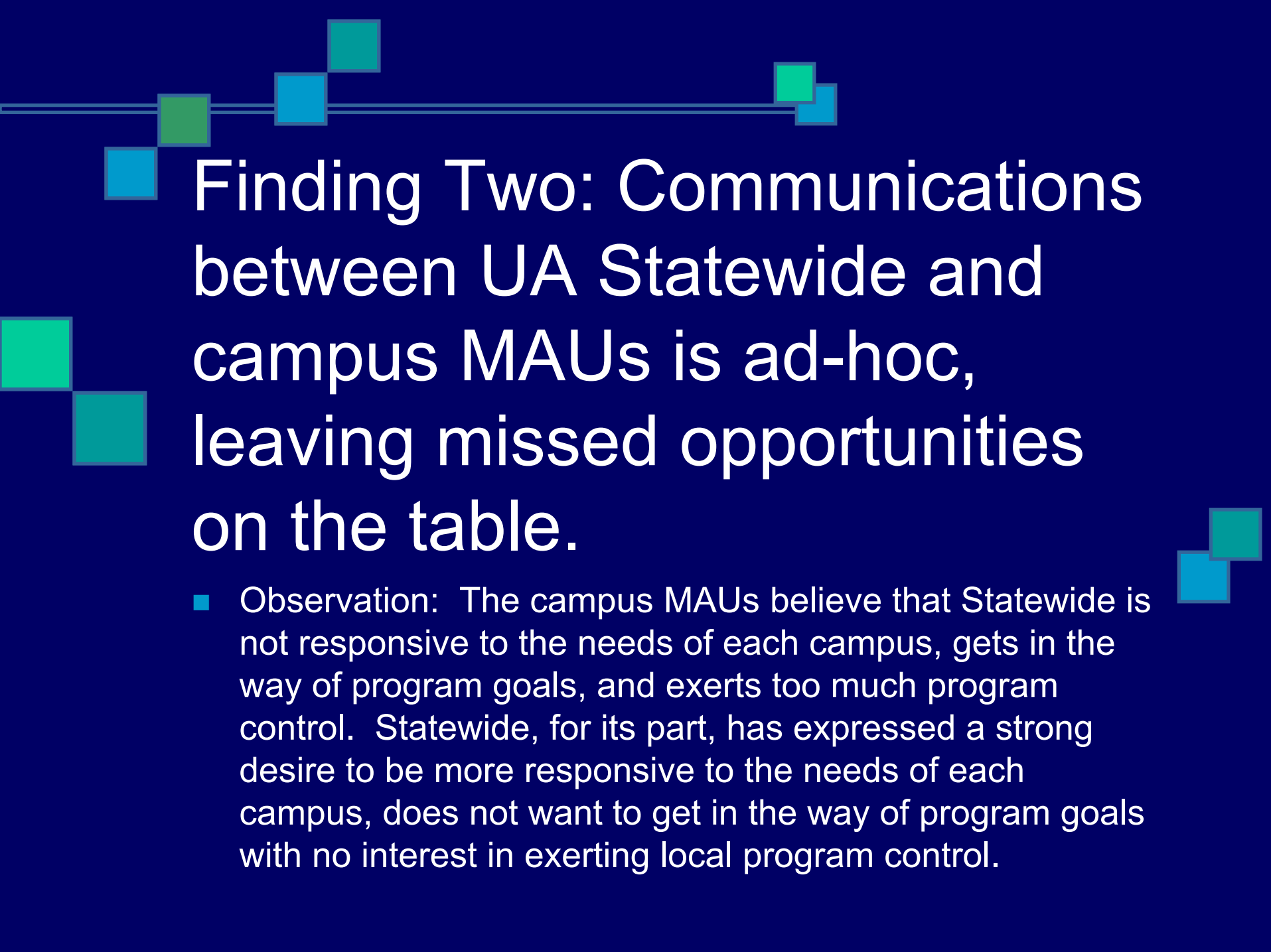
Finding One: Technology planning appears to be an ad-hoc exercise with only modest formal coordination within the annual budget cycle

- Observation: ad hoc planning leads to procurement inefficiencies
 - Observation: consistent pooling of demand leads to a better bargaining position (emphasis on consistent!)
 - Observation: vendor independence is a key bargaining strategy
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Recommendation: Improve planning process by pooling demand and coordinating procurement, yielding improved pricing, ICT system reliability and vendor responsiveness

- Include the whole spectrum of ICT services and technologies
- Create processes which aggregate communications resource demands into quantitative data
- Plan over a period of years, rather than a single annual cycle





Finding Two: Communications between UA Statewide and campus MAUs is ad-hoc, leaving missed opportunities on the table.

- Observation: The campus MAUs believe that Statewide is not responsive to the needs of each campus, gets in the way of program goals, and exerts too much program control. Statewide, for its part, has expressed a strong desire to be more responsive to the needs of each campus, does not want to get in the way of program goals with no interest in exerting local program control.





Finding Two: Communications between UA Statewide and campus MAUs is ad-hoc, leaving missed opportunities on the table

- Observation: Statewide has difficulty getting local needs articulated, struggles to understand local MAU program direction, and to obtain quantitative statements of requirements for MAU WAN interconnectivity. The MAUs have expressed a strong desire to be more articulate in expressing their needs, and more quantitative in expressing requirements.
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Finding Two: Communications between UA Statewide and campus MAUs is ad-hoc, leaving missed opportunities on the table

- Observation: In such situations, it is easy to fall into ‘the problem is communication vs. problem is process’ framework. This is a false choice. Organizational best practice solutions point toward simultaneous changes in both process and dedication to communications as a productive focus of management. Nonetheless, it remains a fundamentally difficult, but important on-going challenge for any large diverse and dispersed organization like the University of Alaska.
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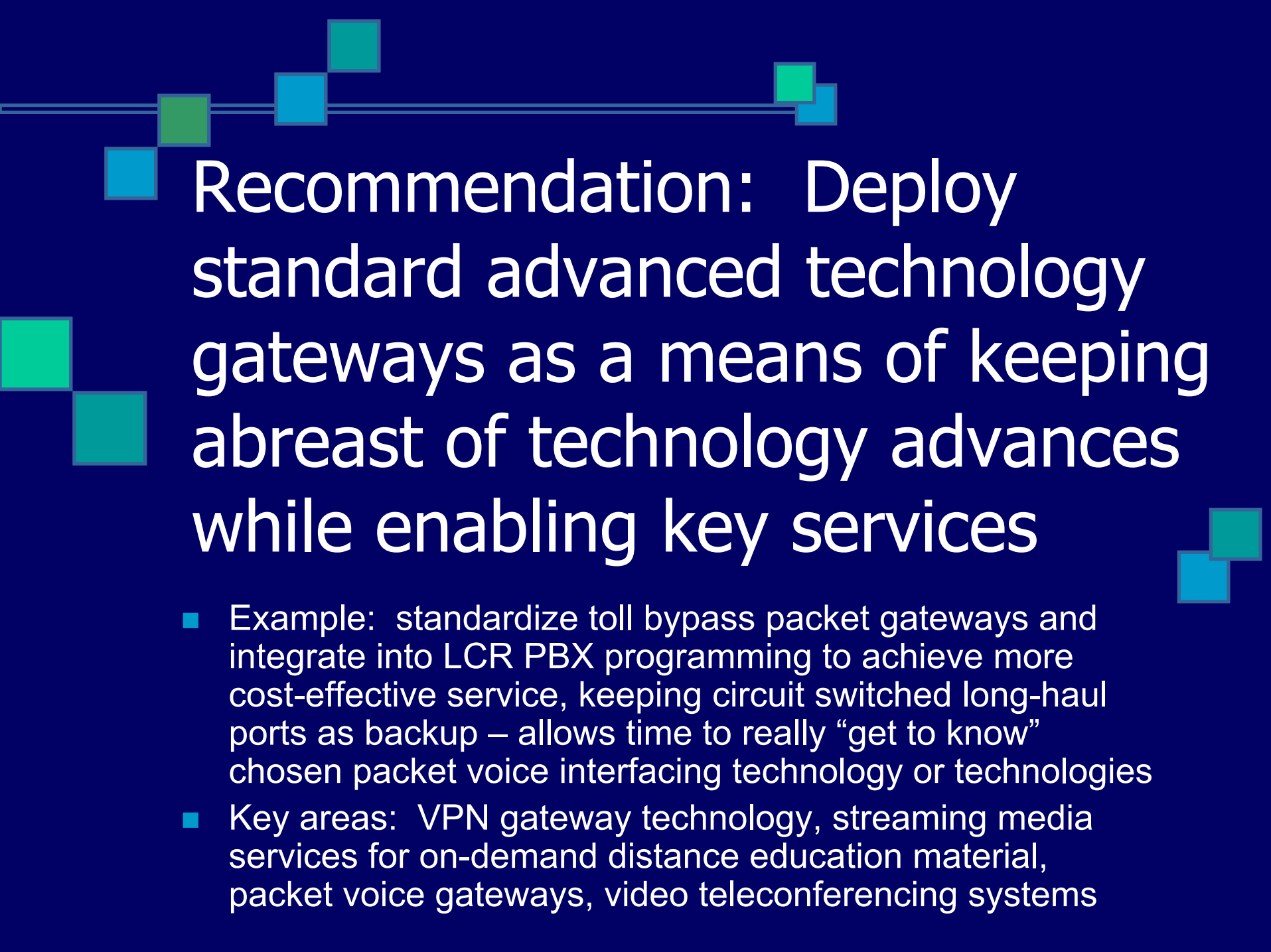
Recommendation: Revitalize the inter-campus working group for network planning.

- Hold quarterly face to face meetings and rotate physical location where meeting is hosted across MAUs
 - Hold the more frequent meetings via video teleconference/audioconference to accomplish the interstitial work
 - Concentrate on clear definition of boundaries and domains of authority
 - Make meeting results/minutes easily accessible to a wider audience via the web
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Finding Three: Advanced technology gateways are not always standardized and some are under-developed

- Observation: VPN concentration systems linked to commercial broadband services are non-existent, non-standard across the network or underdeveloped
 - Observation: Real-time media streaming servers are non-existent, non-standard across the network or underdeveloped
 - Observation: Packet toll bypass is underutilized and non-integrated with PBX circuit switching systems
 - Observation: Intranet security technology is underdeveloped, non-standard across the network and underutilized
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Recommendation: Deploy standard advanced technology gateways as a means of keeping abreast of technology advances while enabling key services

- Example: standardize toll bypass packet gateways and integrate into LCR PBX programming to achieve more cost-effective service, keeping circuit switched long-haul ports as backup – allows time to really “get to know” chosen packet voice interfacing technology or technologies
- Key areas: VPN gateway technology, streaming media services for on-demand distance education material, packet voice gateways, video teleconferencing systems




Finding Four: UA might be paying above market rate for many ICT services

- Observation: UA participation in the State of Alaska Comprehensive Telecommunications Service Agreement (SOA CTSA) exposes it to potential *bundled MAN/WAN* bandwidth charges that are roughly *\$4 million* more expensive over four years compared to other vendor quotes from 2001 for similar volume and term
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Finding Four: UA might be paying above market rate for many ICT services

- Observation: UA participation in the SOA CTSA exposes it to potential *incremental* bandwidth charges approaching \$5000 per Mbps per month while the market rate is on the order of \$2000 for an equivalent MAN/WAN bundled service
- Observation: Outside of the SOA CTSA, terrestrial bandwidth pricing (lease or IRU purchase) remains relatively sticky compared to lower 49 and international markets due in part to the loss of WCI competitive pressure. Long-term pricing appears sensitive to when additional fiber capacity is effectively brought into play by WCI's successor on medium to large contracts.



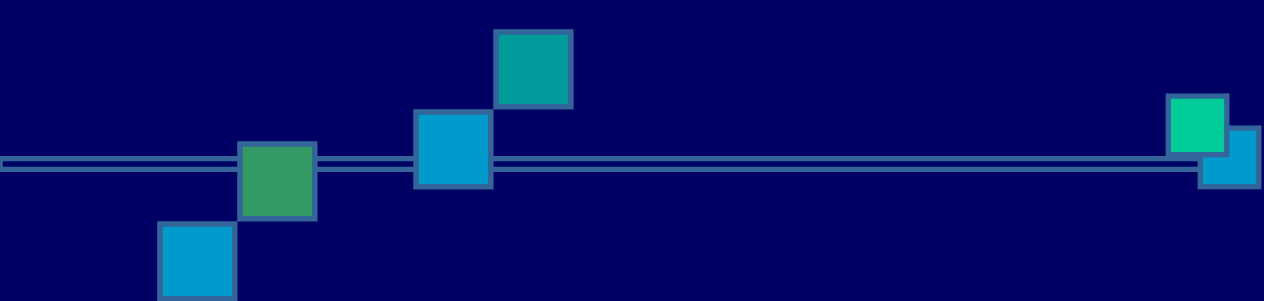
Recommendation: Escalate price and performance issues on the State of Alaska sole-source contract

- Develop a "two-page memo" (one page on price/one page on performance) on UA's mission critical information and communications technology issues, their relation to ITG (if any) and escalate with SOA Contractor
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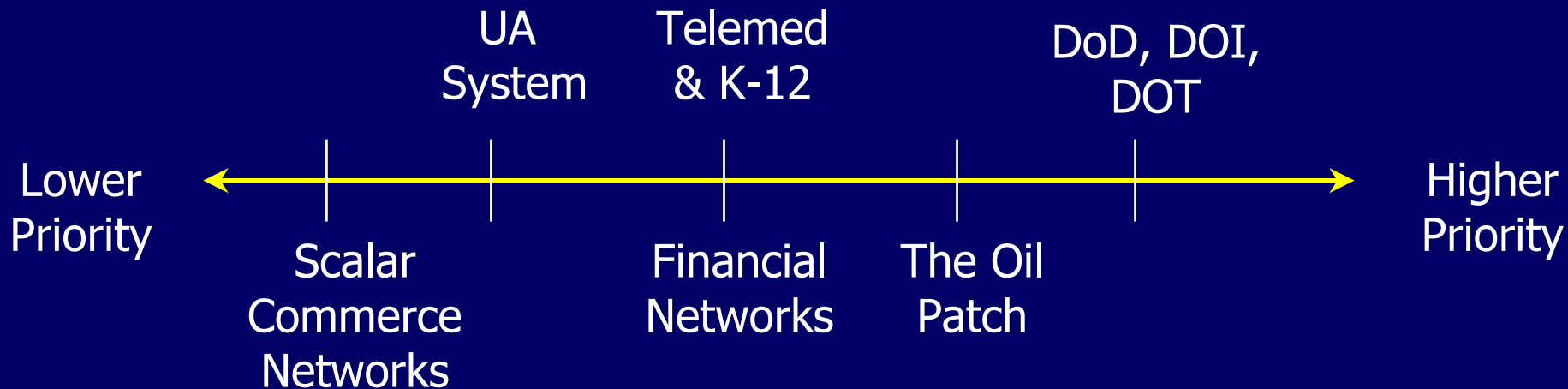
Recommendation: Develop RFP for ICT service sets for mission critical price and performance issues – both in and out of the SOA contract scope.


- If the SOA contract is getting the best deal, the developed RFP(s) should not threaten the SOA scope services
- If the SOA contract is not the best deal, it may be useful to document the SOA premium




Finding Five: The UA system is an anchor tenant customer.


“A Telco Market Viewpoint: Alaska”







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- Observation: In terms of raw bandwidth demand/consumption the UA system is not considered a “large customer” by the Alaska market. As a result, the Alaska market views the UA system as an important anchor tenant due to its profile in higher education and state policy, but only of moderate importance in terms of revenue.
 - Observation: While the UA System is a large rapidly growing telecommunications customer that has been able to attract strategic investments (a.k.a. “freebies”) during the telecommunications “bubble,” capital markets will continue to punish carriers who bet on loss leaders
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Finding Five: The UA system is an anchor tenant customer.

- Observation: Keep getting freebies *as long as* they do not tie to a proprietary standard
 - Observation: Prepare for the transition to being a paying customer -- aggressively look for opportunities to serve UA system needs
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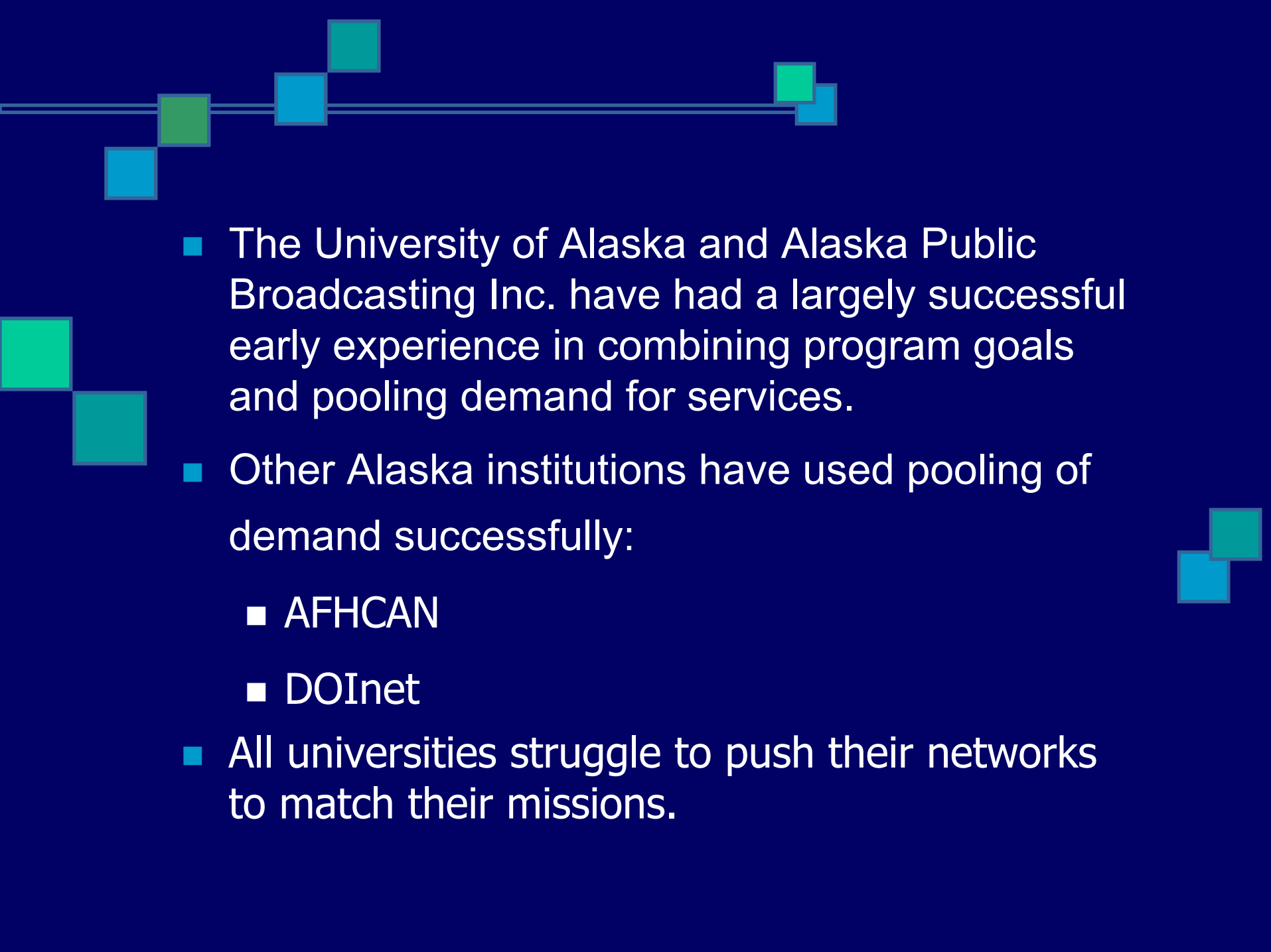
Recommendation: Begin systematic procurement process through RFQs and RFPs for service sets.

- Fully emerge as an Alaska anchor tenant
- Consistently track market intelligence, exploring when additional bandwidth pricing opportunities are likely to arise (e.g. the WCI proceedings; exploration of other carriers beyond Alaska's "big three")
- Archive RFQ and RFP responses
- Research demand pooling with other WAN service customers or customer associations working within the public sector



Finding Six: Many State University Systems have driven costs down and experienced improved reliability and vendor responsiveness by pooling demand with other public, non-profit customers


- Observation: the MERIT network (Michigan), 4CNet (California), WiscNet (Wisconsin) etc.

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- The University of Alaska and Alaska Public Broadcasting Inc. have had a largely successful early experience in combining program goals and pooling demand for services.
 - Other Alaska institutions have used pooling of demand successfully:
 - AFHCAN
 - DOIInet
 - All universities struggle to push their networks to match their missions.



Recommendation:

Aggressively pursue partnerships to pool demand and position UA as a "leading" customer who is pooling demand

- Engage in diplomatic outreach to other public service market subscribers in an effort to explore possibilities of pooled service purchase
 - Actively explore network technologies, topologies and service architectures which lend themselves to pooled demand purchasing
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THE END

