



INTERNATIONAL CIVIL AVIATION ORGANIZATION

A United Nations Specialized Agency

IRTI/TF/1

Best Practices for Aeronautical VSAT Networks

Agenda Item 4

(WP/05)

Presented by the Secretariat

Introduction

Review of Best Practices

Conclusions

APIRG/18 Conclusion 18/25:

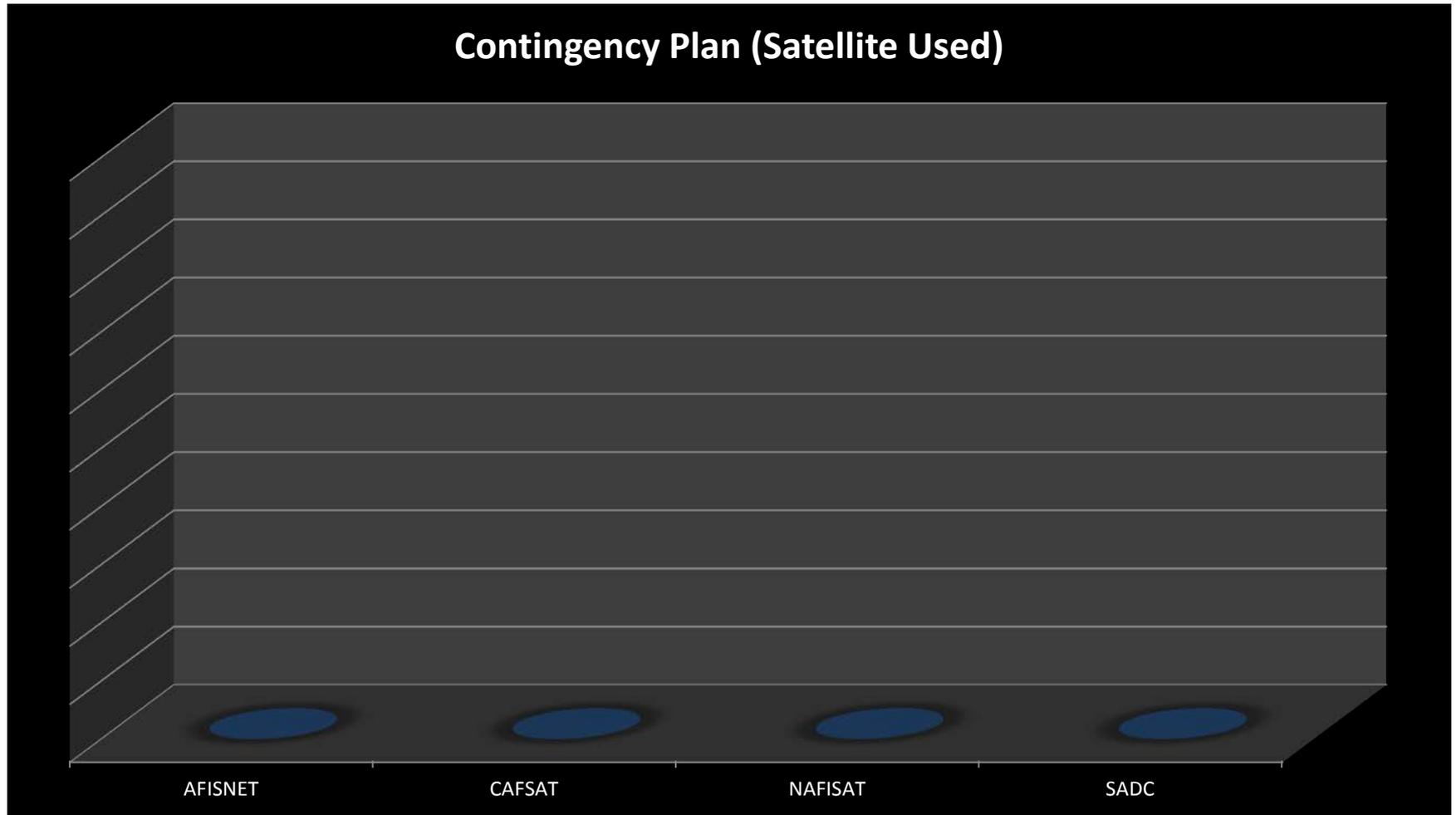
Best Practices for AFI VSAT Networks

- *That the AFI States and Air Navigation Services Providers (ANSPs) operating aeronautical VSAT Networks adopt the best practices stated at Appendix 3.4G to the report, as well as any other best practices to be developed or adopted by APIRG.*

Contingency Planning - Satellite



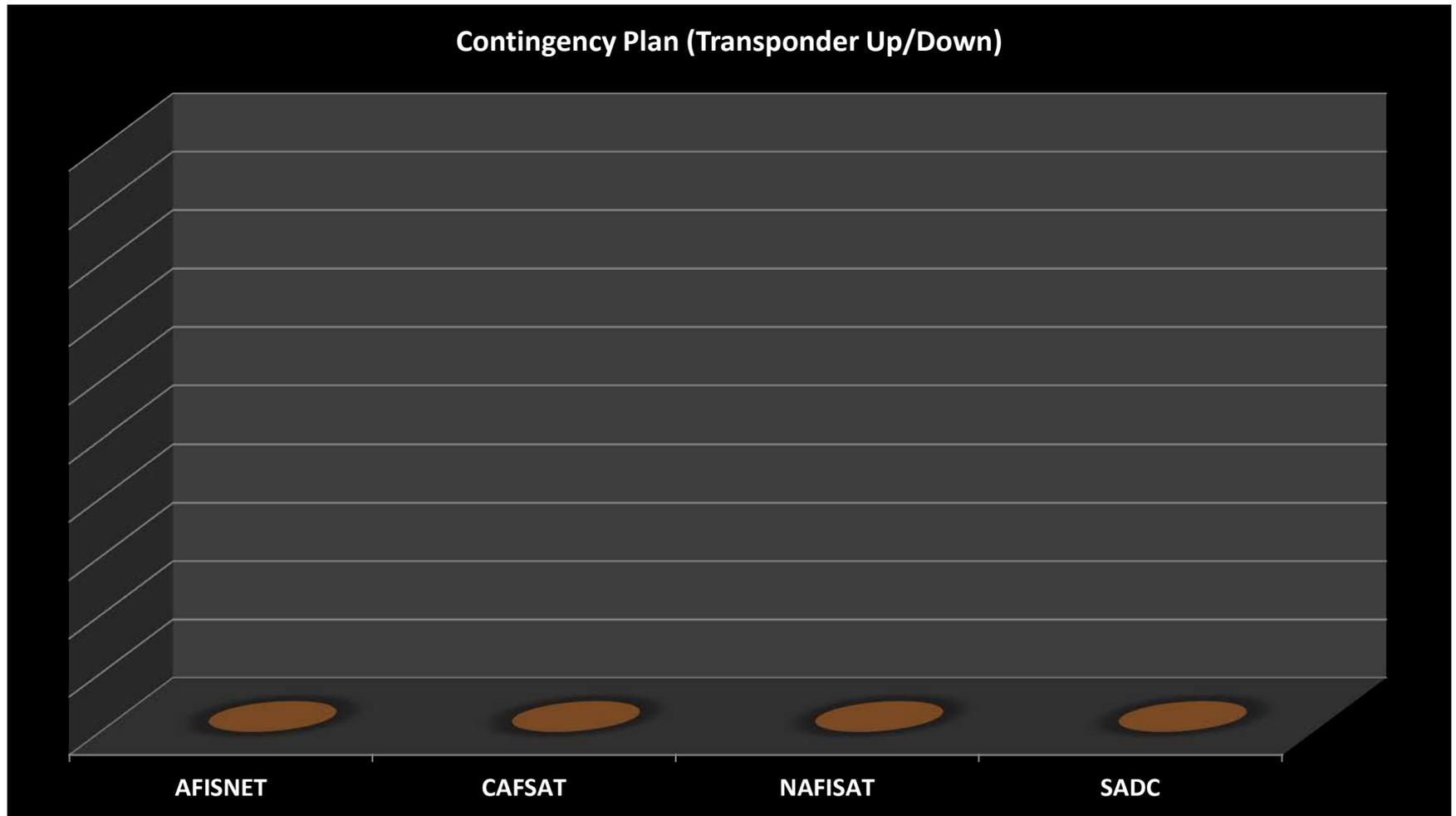
Contingency Plan (Satellite Used)



Contingency Planning - Transponder



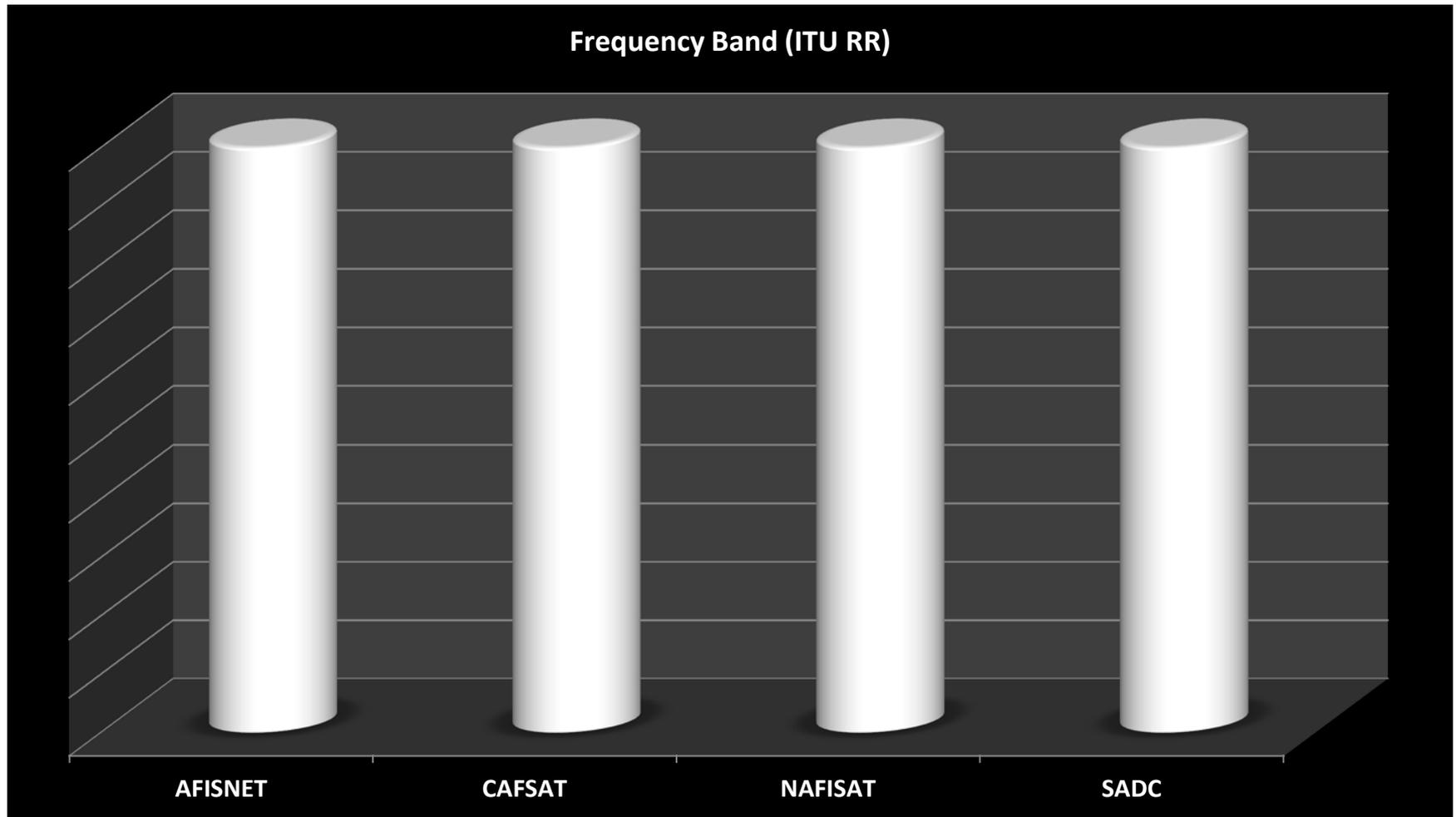
Contingency Plan (Transponder Up/Down)



Frequency Band (Radio Regulations)



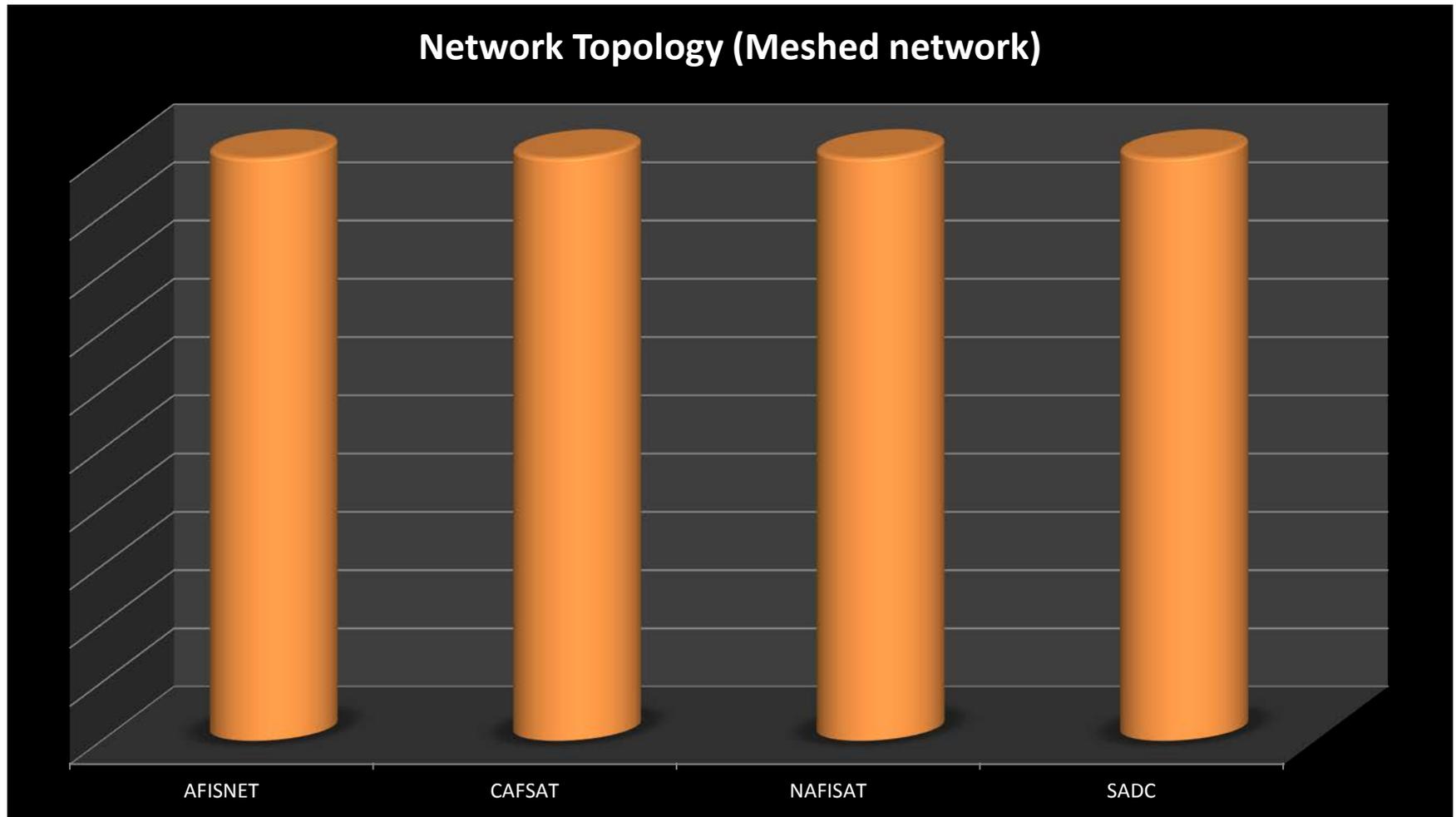
Frequency Band (ITU RR)



Network Topology



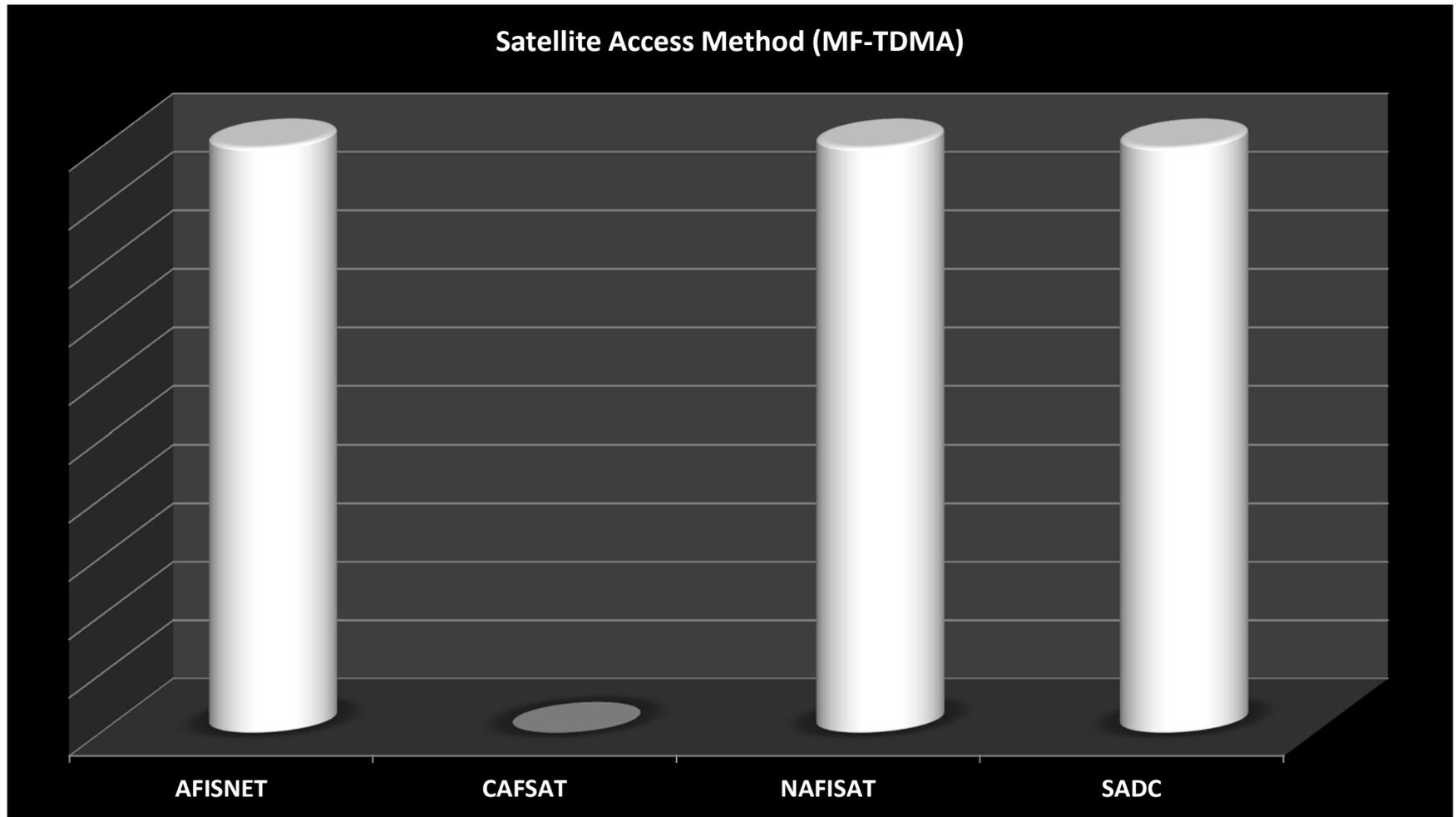
Network Topology (Meshed network)



Satellite Access (MF-TDMA)



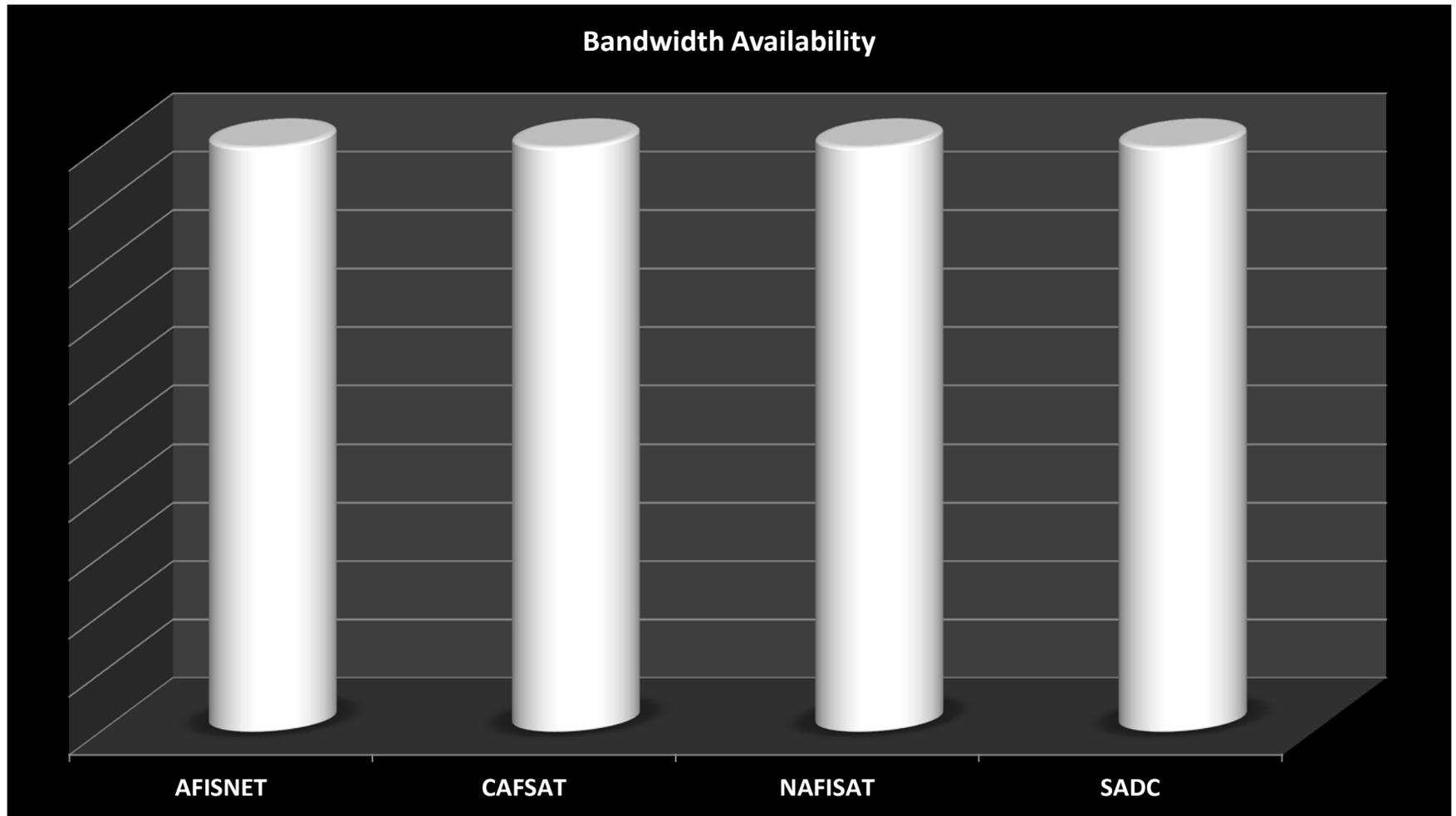
Satellite Access Method (MF-TDMA)



Bandwidth Availability



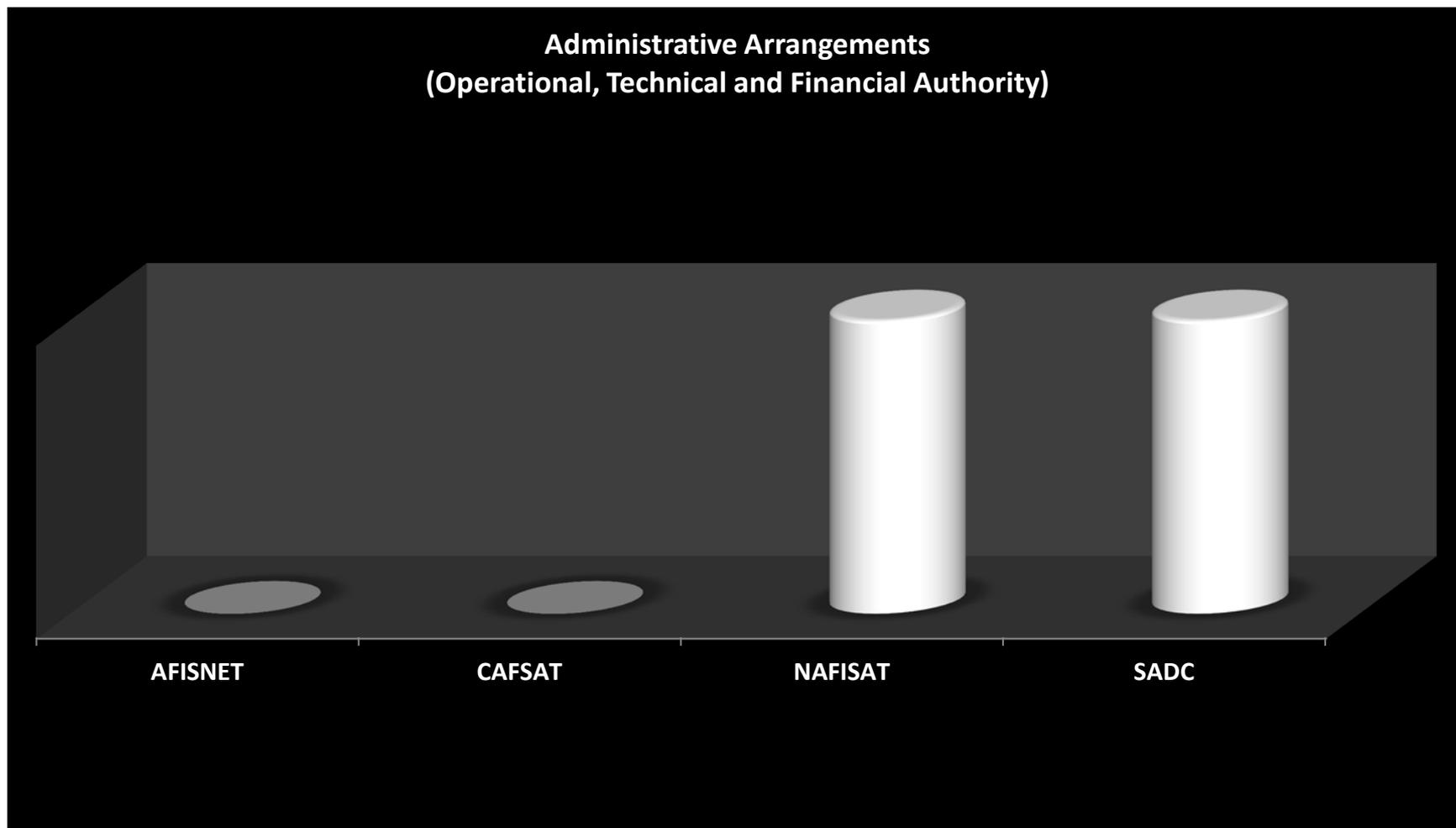
Bandwidth Availability



Administrative Arrangements



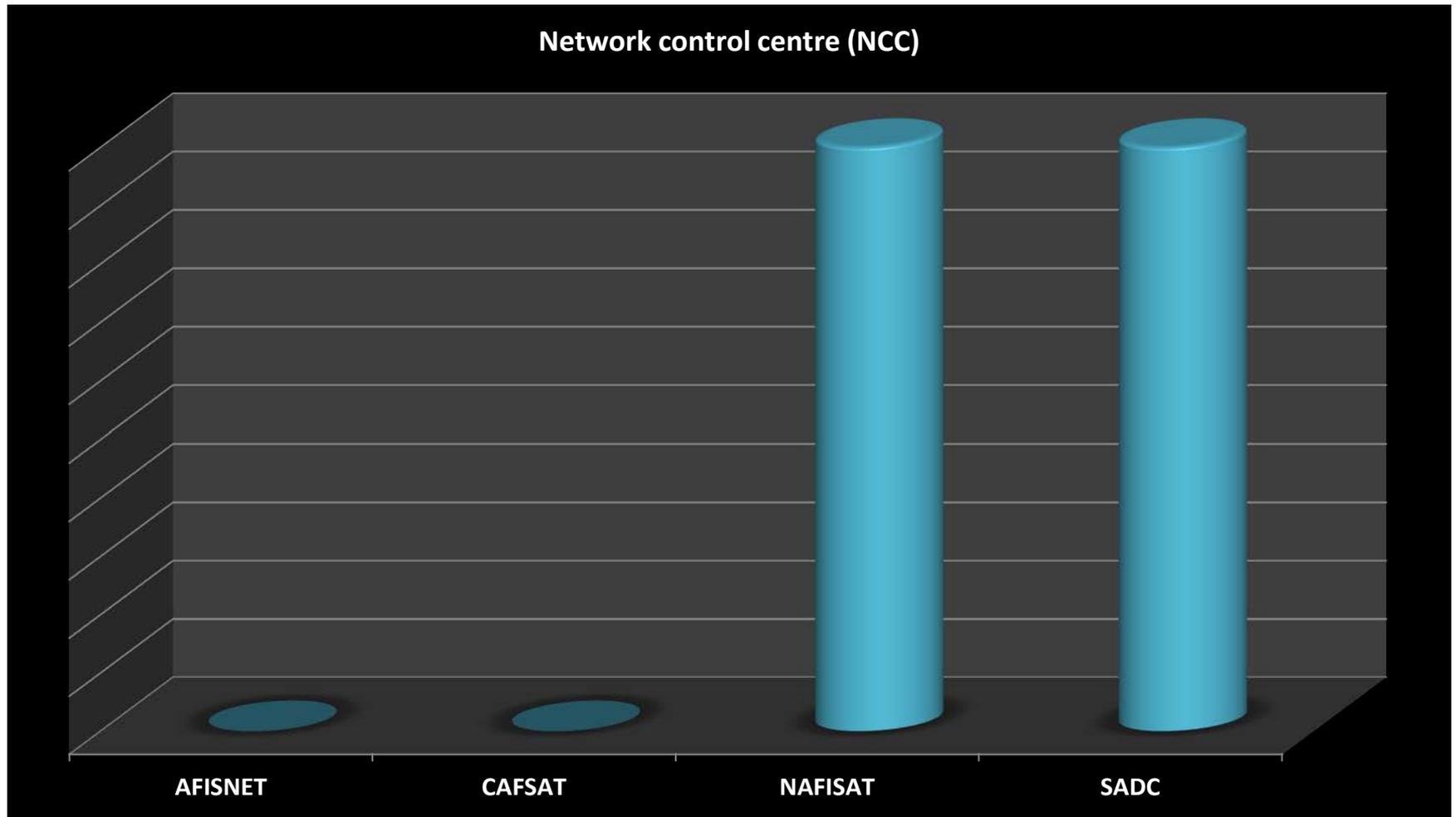
Administrative Arrangements (Operational, Technical and Financial Authority)



Technical Arrangements



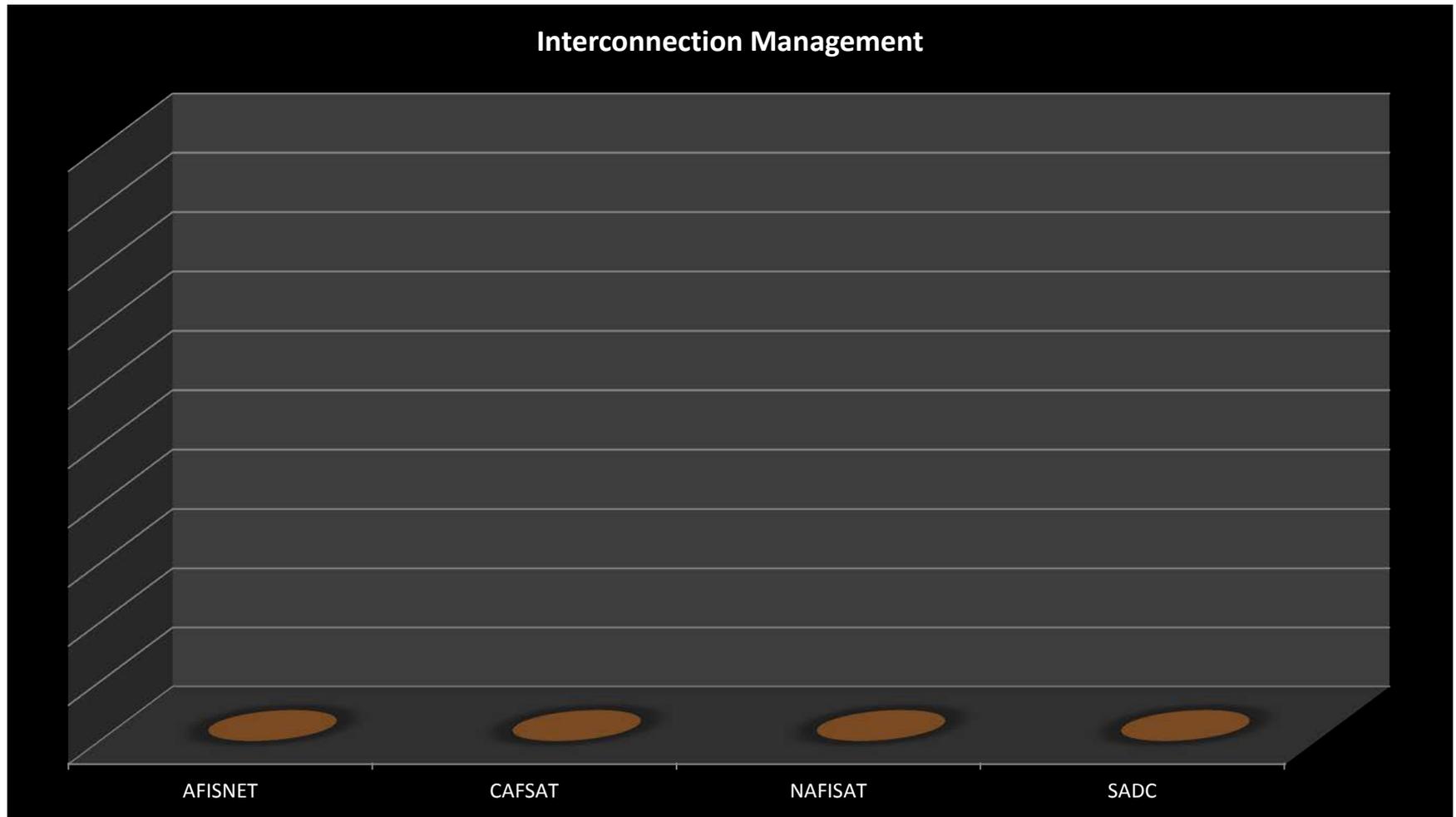
Network control centre (NCC)



Technical Arrangements



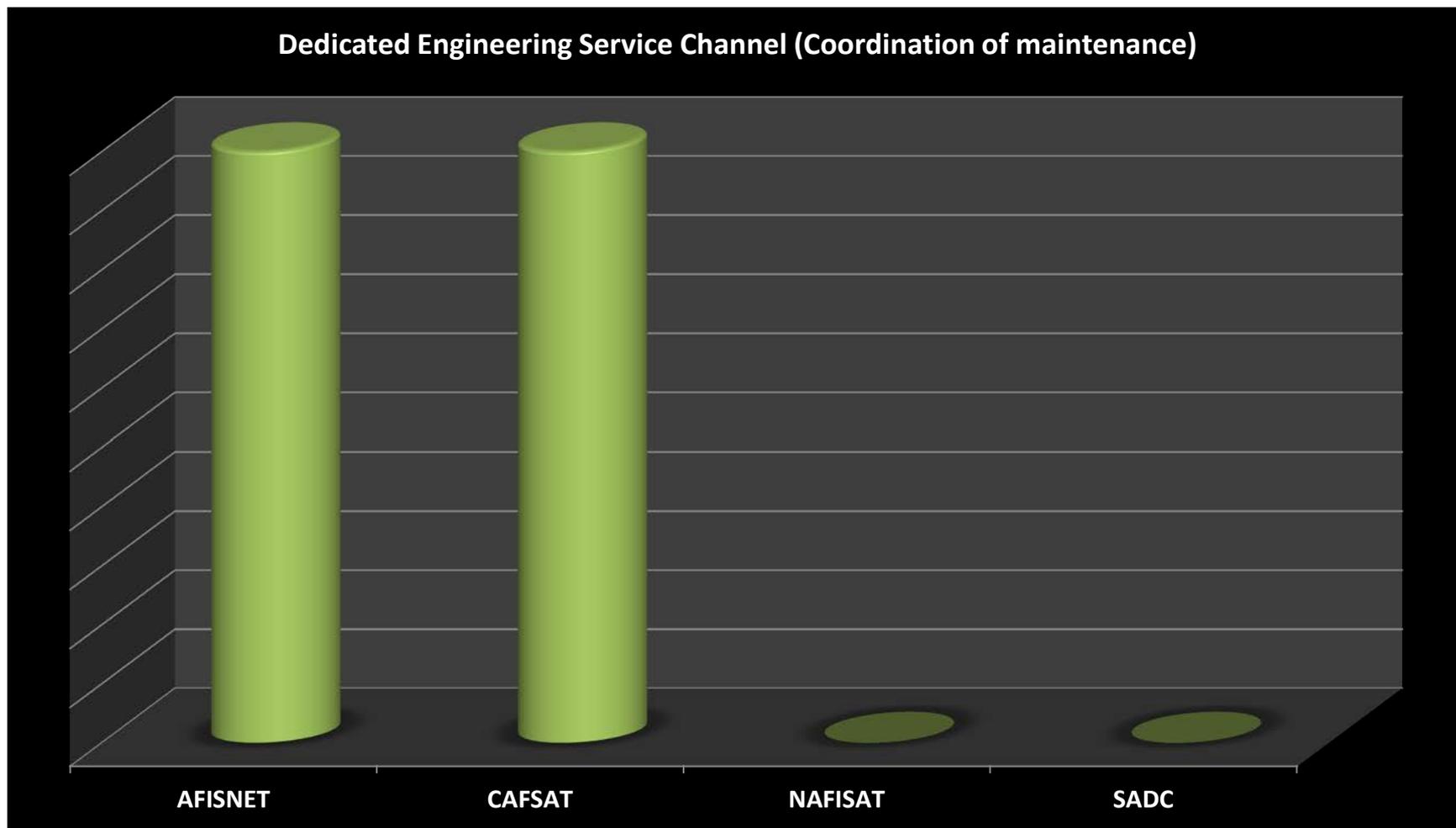
Interconnection Management



Engineering Service Channel



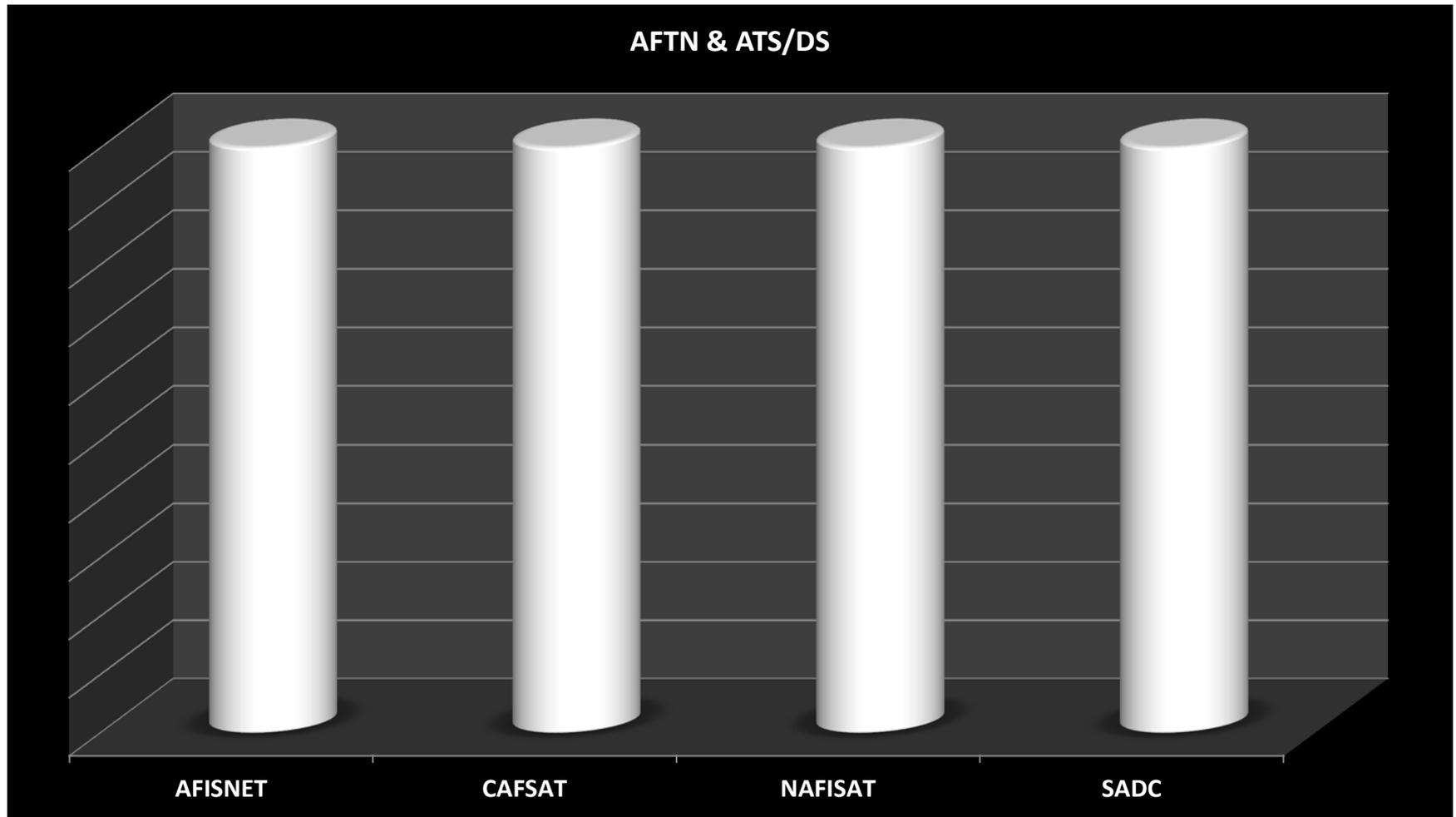
Dedicated Engineering Service Channel (Coordination of maintenance)



Supported Services – AFTN & ATS/DS



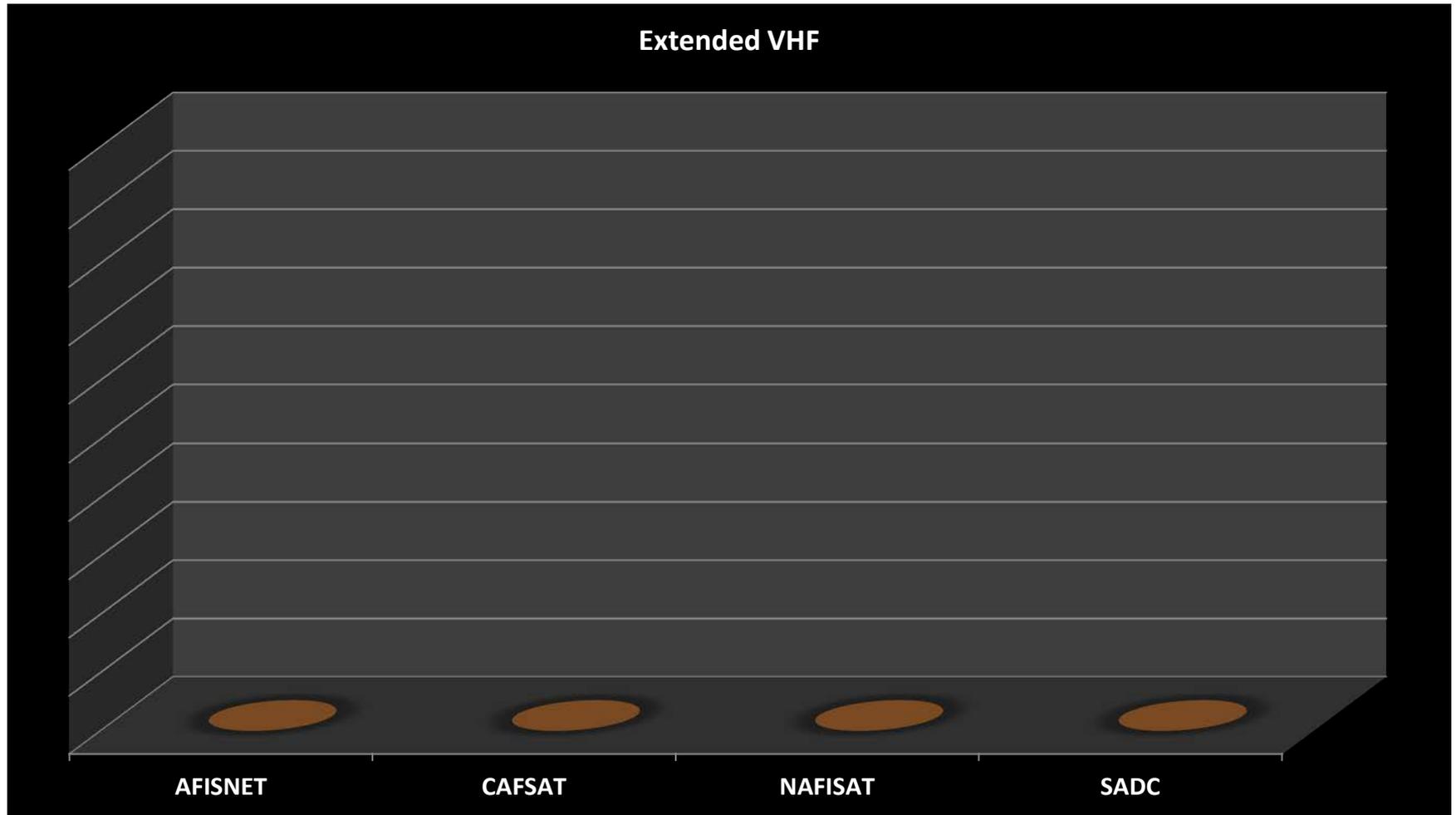
AFTN & ATS/DS



Supported Services - Extended VHF



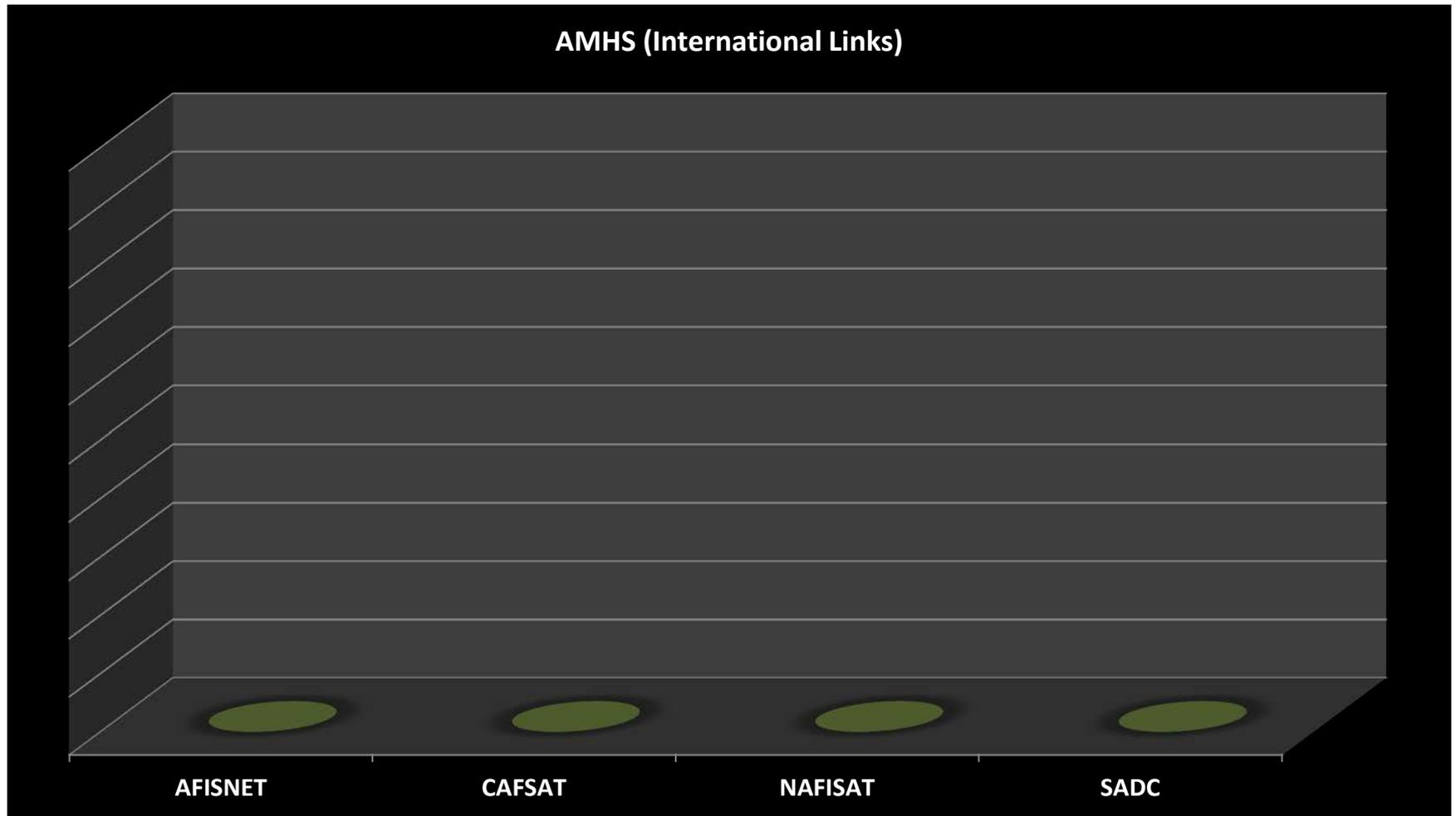
Extended VHF



Supported Services - AMHS



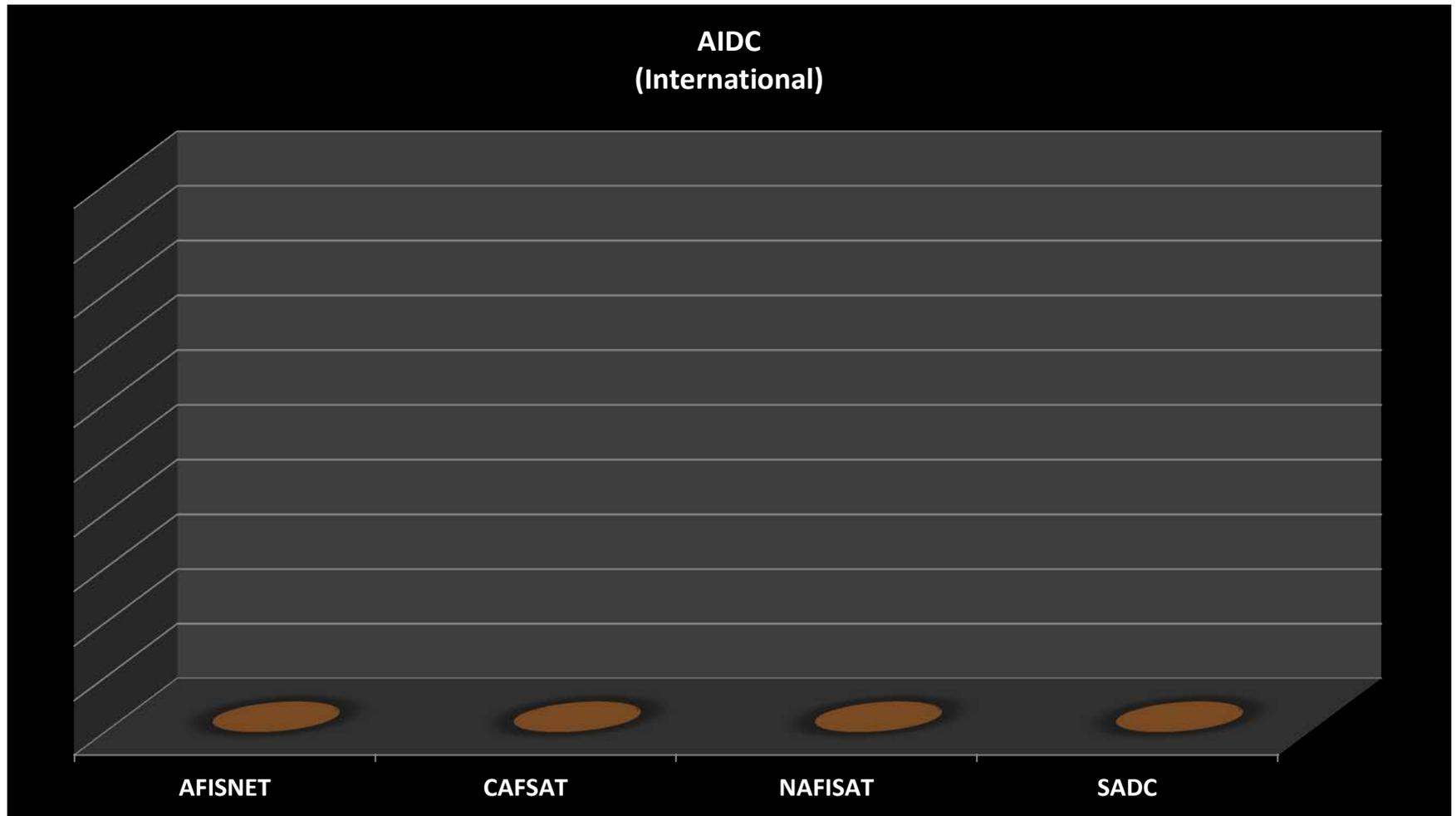
AMHS (International Links)



Supported Services - AIDC



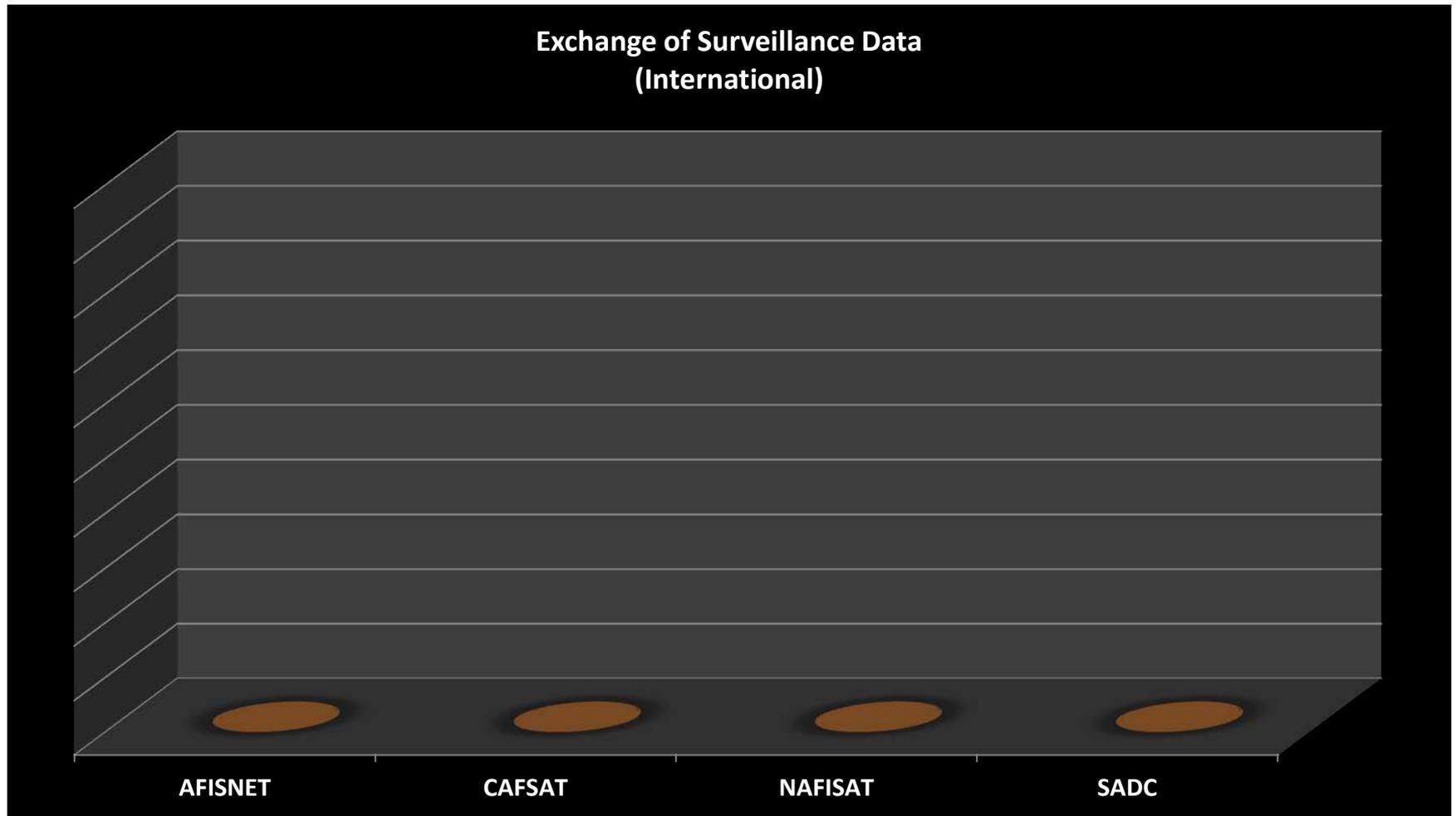
AIDC (International)



Exchange of Surveillance Data



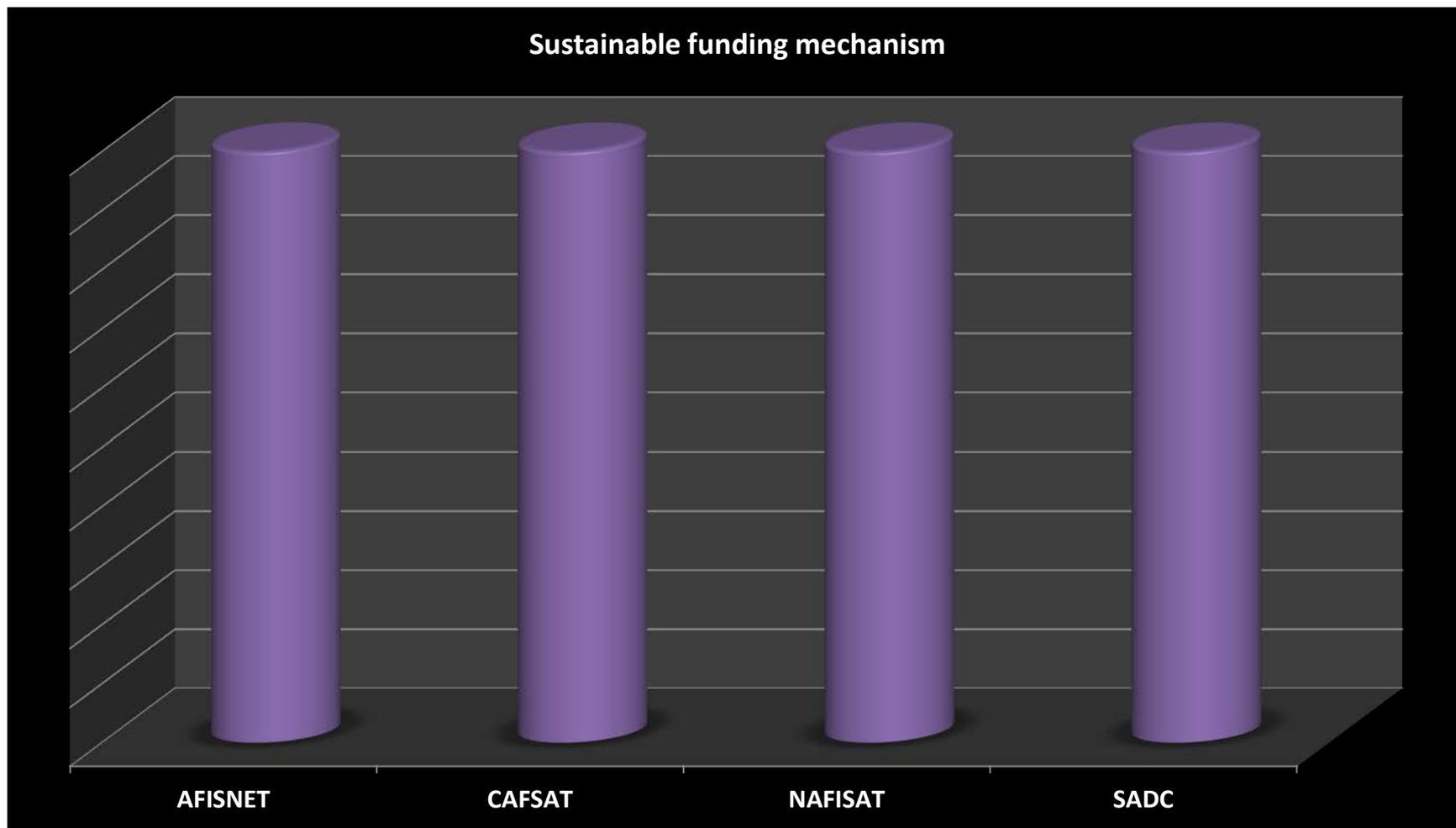
Exchange of Surveillance Data (International)



Funding Mechanisms



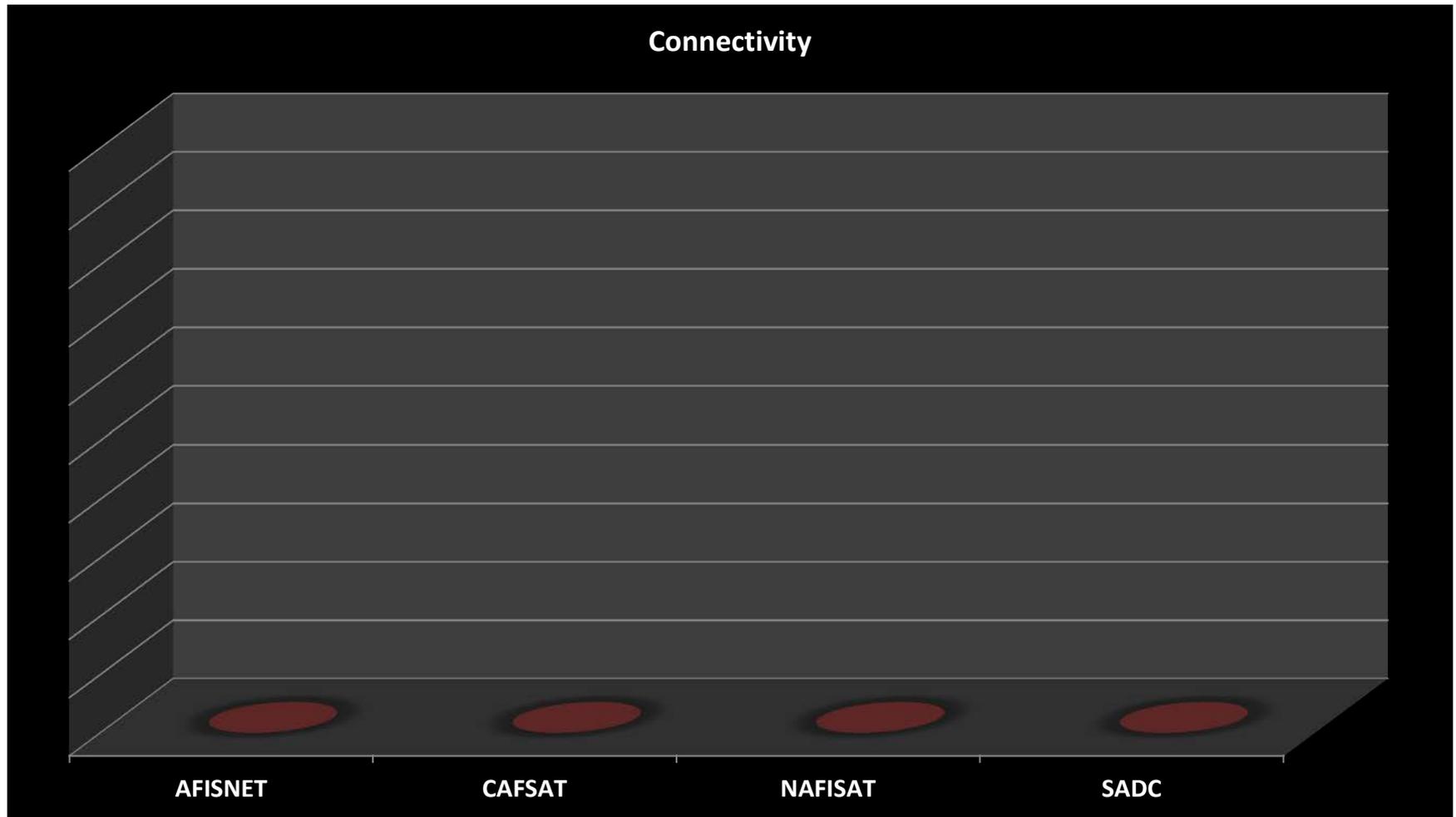
Sustainable funding mechanism



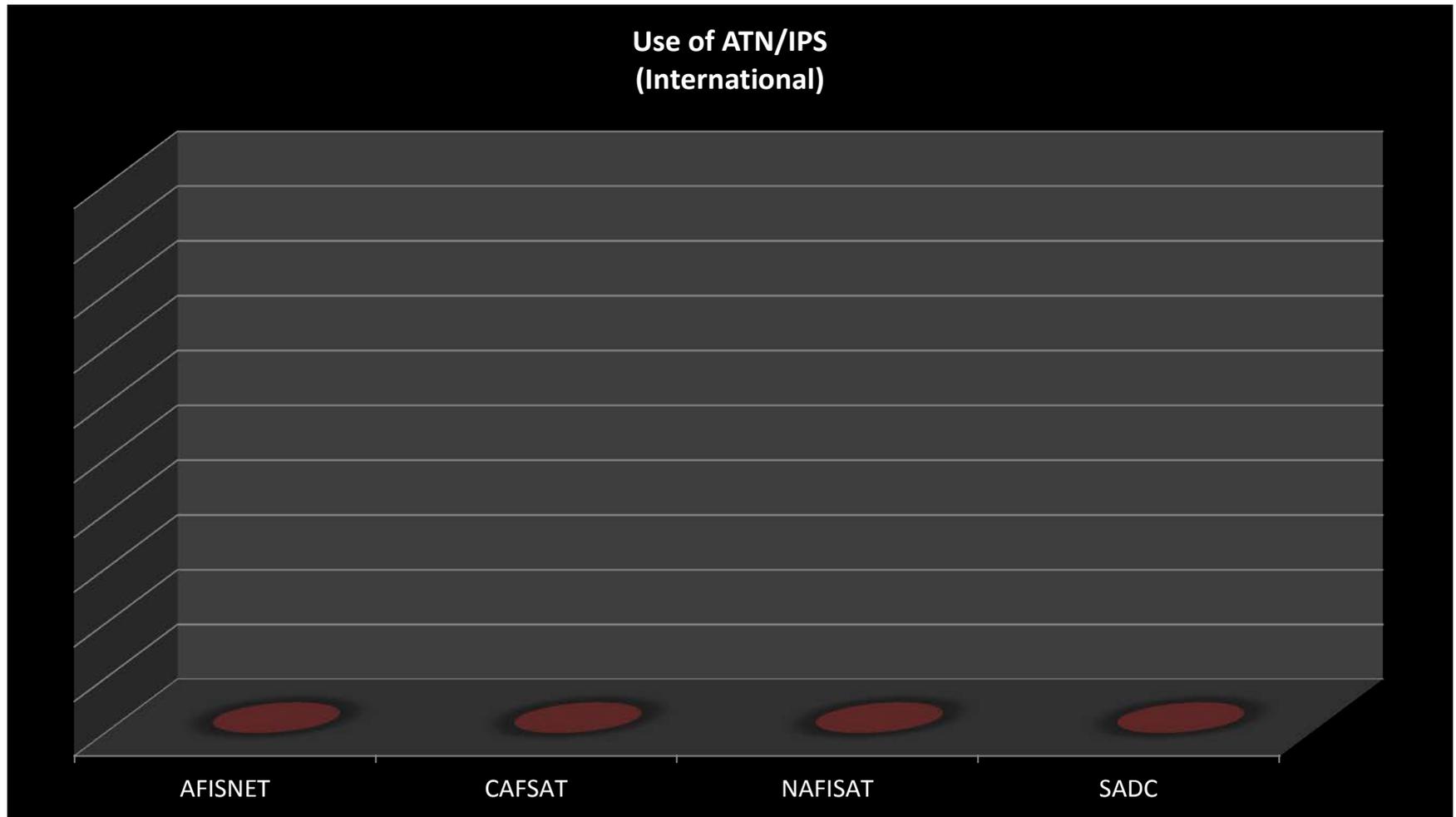
Full Connectivity



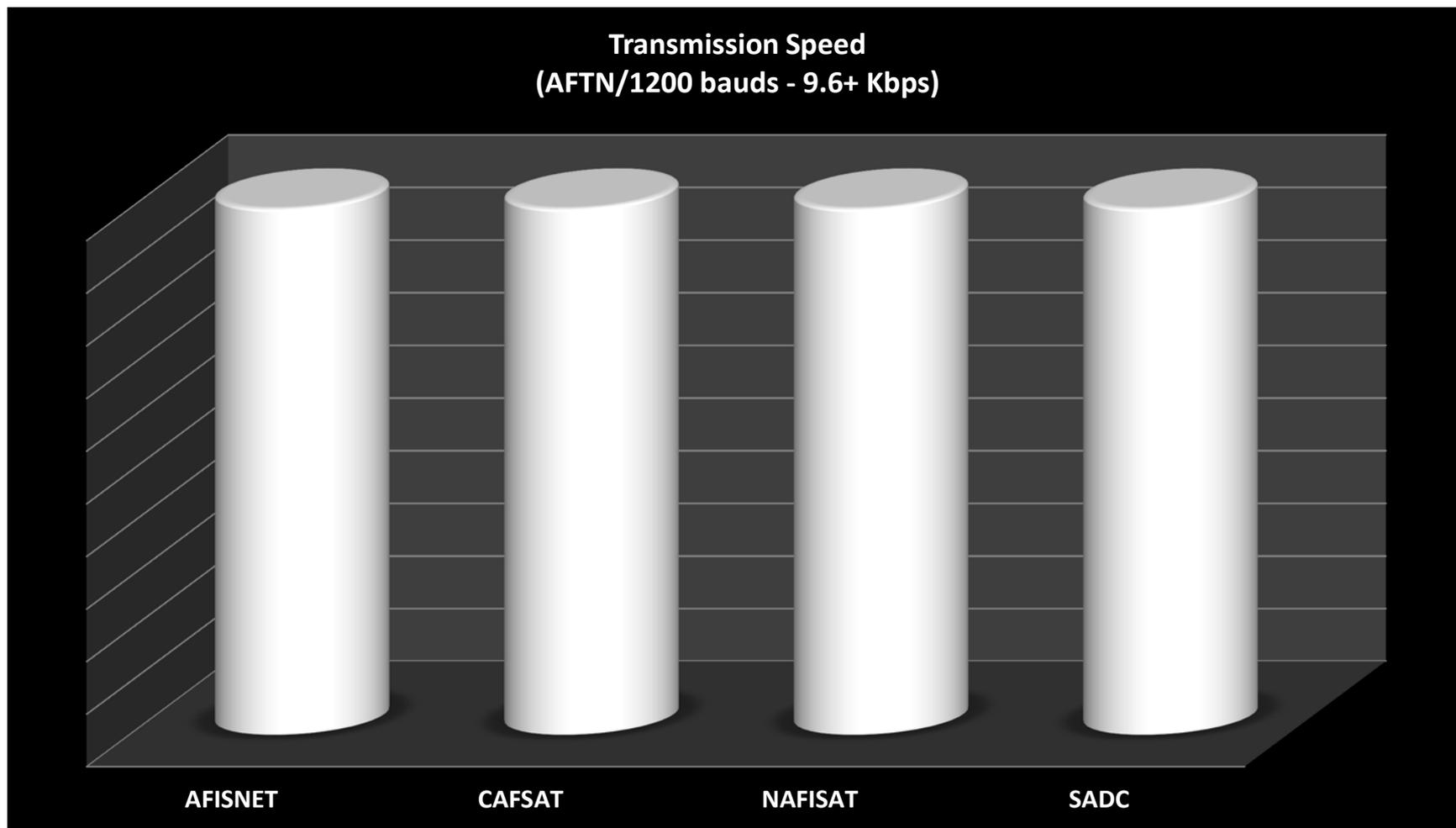
Connectivity



Use of ATN/IPS (International)



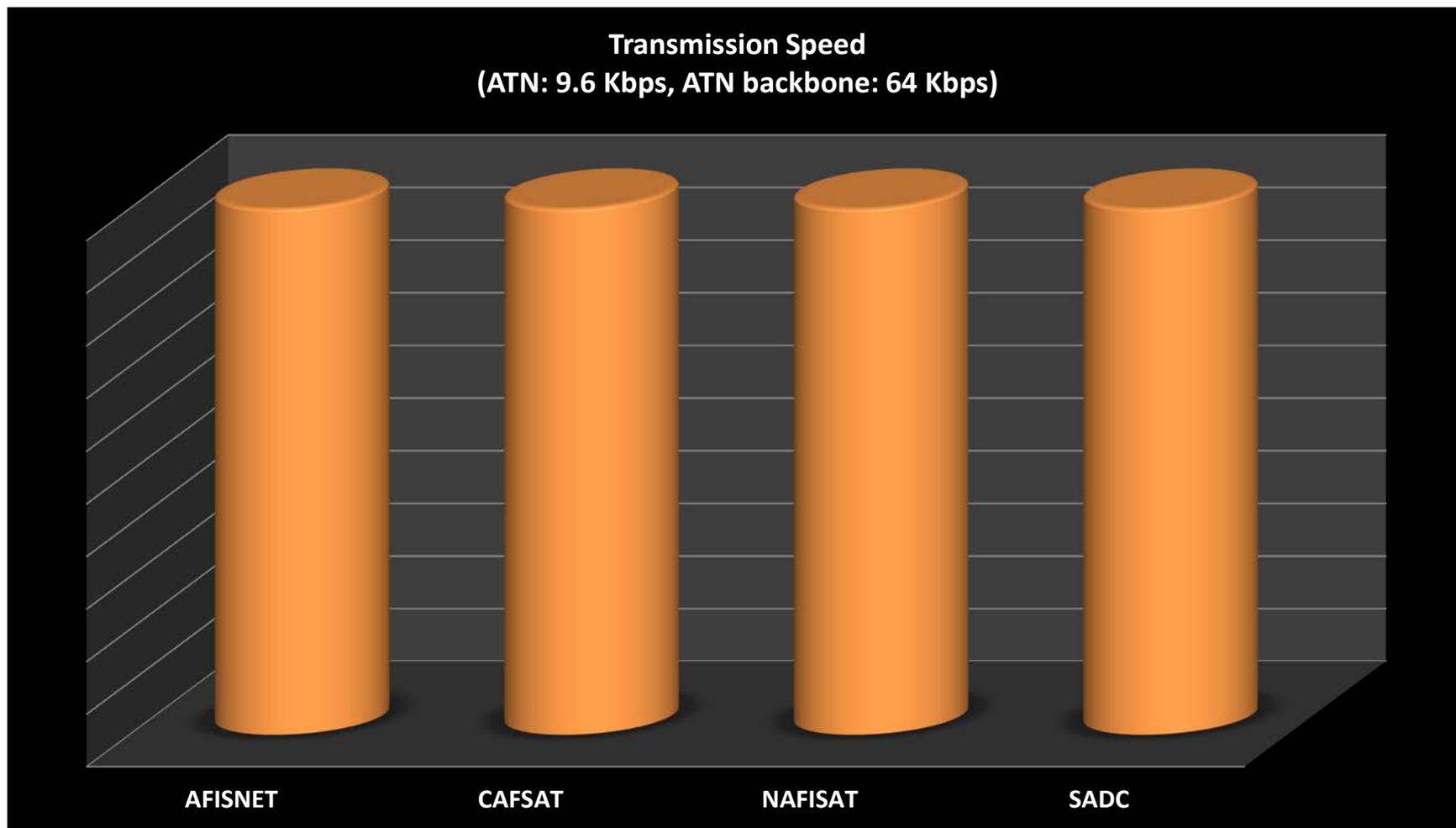
Transmission Speed - AFTN



Transmission Speed - ATN



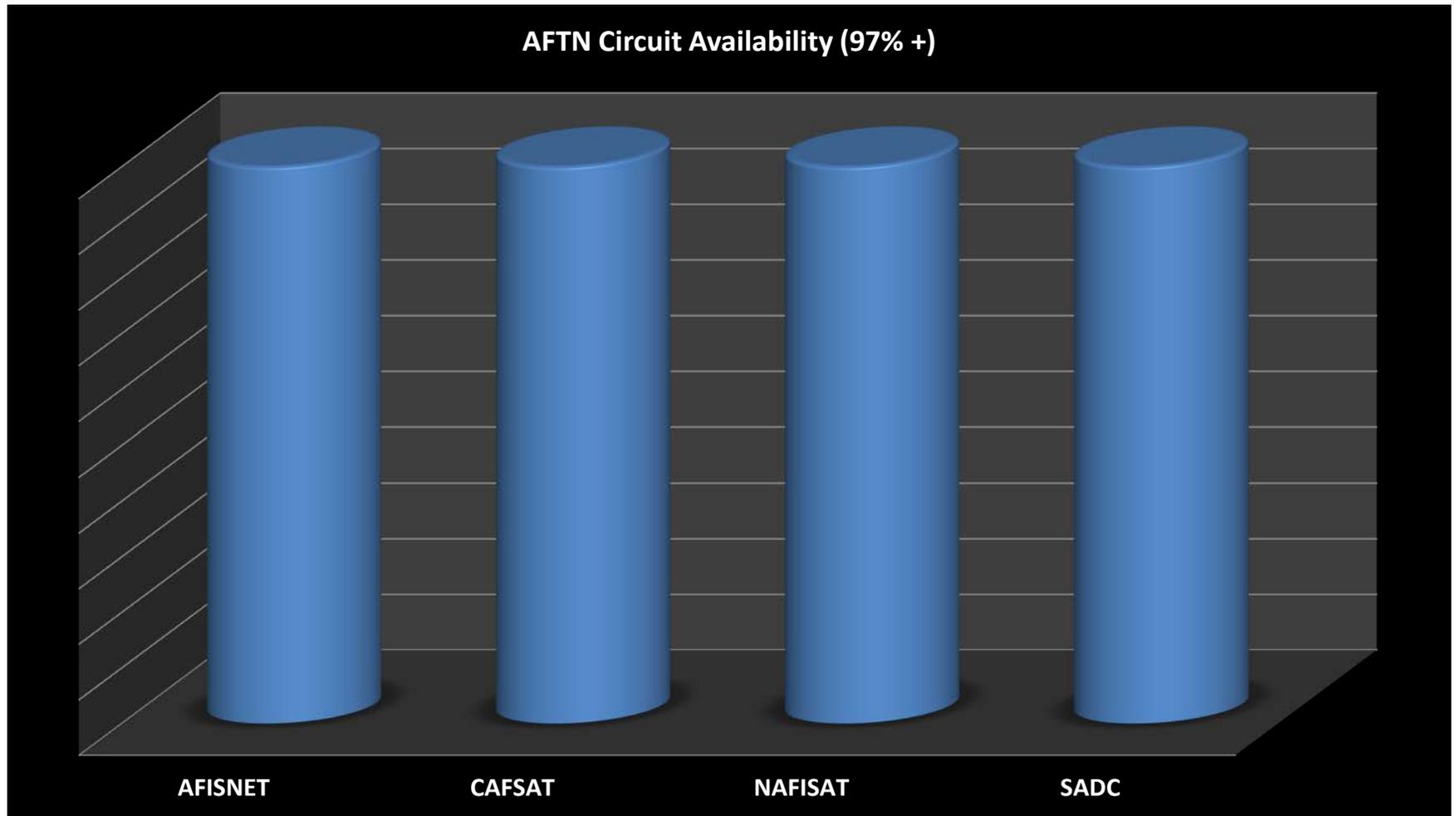
Transmission Speed
(ATN: 9.6 Kbps, ATN backbone: 64 Kbps)



AFTN Circuit Availability Rate



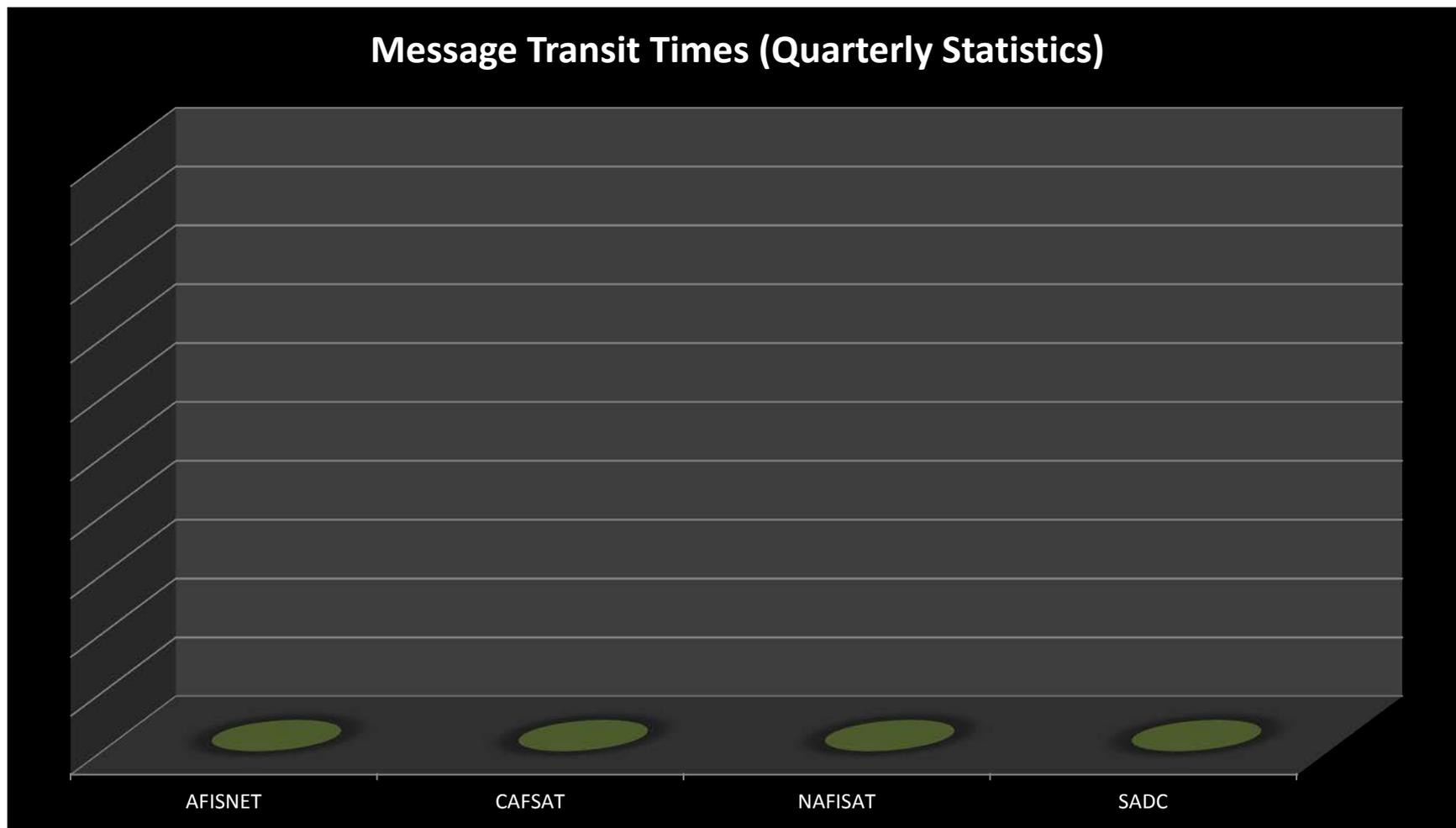
AFTN Circuit Availability (97% +)



AFTN Transit Time



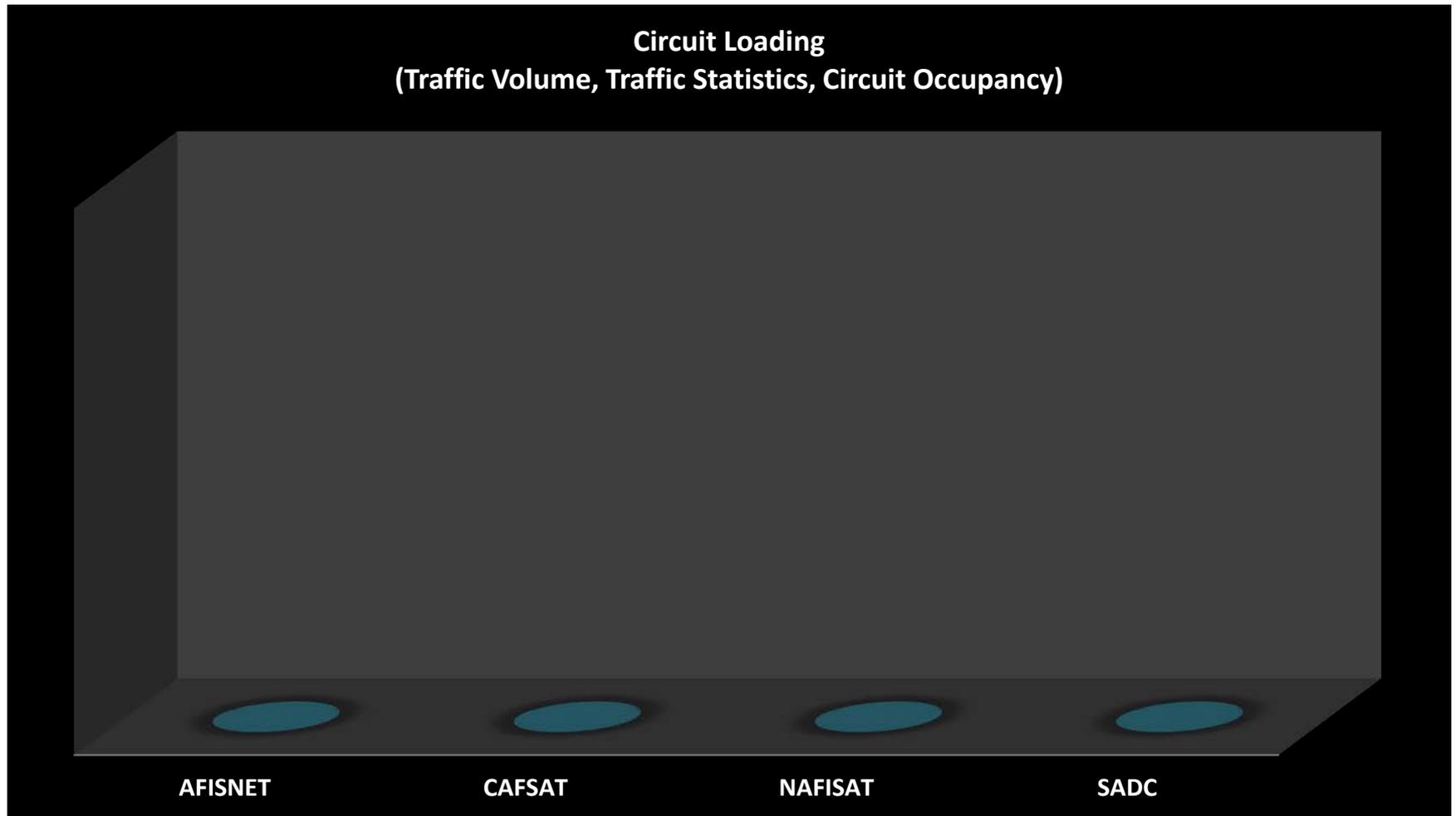
Message Transit Times (Quarterly Statistics)



AFTN Circuit Loading



Circuit Loading
(Traffic Volume, Traffic Statistics, Circuit Occupancy)



Conclusions



The Task Force is invited to

- 1) Review and update the status of implementation of the best practices for aeronautical VSAT networks, as adopted by APIRG/18 Meeting.
- 2) Conduct a gap analysis against agreed best practices for AFISNET, CAFSAT, NAFISAT and SADC/VSAT networks.
- 3) Develop a convergence plan with priorities and timelines to close identified gaps .



North American
Central American
and Caribbean
(NACC) Office
Mexico City

South American
(SAM) Office
Lima

ICAO
Headquarters
Montreal

Western and
Central African
(WACAF) Office
Dakar

European and
North Atlantic
(EUR/NAT) Office
Paris

Middle East
(MID) Office
Cairo

Eastern and
Southern African
(ESAF) Office
Nairobi

Asia and Pacific
(APAC) Office
Bangkok

Thank You

A world map is shown in a light blue color. Eight colored dots (one orange for Montreal, seven blue for other offices) are placed on the map. Lines connect these dots to their respective office names listed above. A large, rounded rectangular box with a grey-to-white gradient background and a dark blue border is centered over the map, containing the text "Thank You" in a bold, dark blue font.