2023 State of Broadband SCKLS Public Libraries

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"The library is like a candy store where everything is free."

~ Jamie Ford, American author – from the novel, *Songs of Willow Frost*

FCC Broadband Definition Over the Years

1996, 200 Kbps downstream, 200 Kbps upstream

2010, changed to: 4 Mbps downstream, 1 Mbps upstream

2015, changed to 25 Mbps downstream, 3 Mbps upstream (Remains definition today)

HTTPS://BROADBANDNOW.COM/REPORT/FCC-BROADBAND-DEFINITION

The FCC is Considering 100 Mbps downstream, 20 Mbps upstream

FCC recent Notice of Inquiry (NOI) October 25, 2023 indicates considering 100 Mbps downstream, and 20 Mbps upstream as the new standard: *"we seek comment on the appropriate standards for evaluating the physical deployment of fixed and mobile broadband service, including proposing to increase our benchmark for fixed broadband download speed to 100 megabits per second (Mbps) and the upload speed to 20 Mbps."*

HTTPS://DOCS.FCC.GOV/PUBLIC/ATTACHMENTS/FCC-23-89A1.PDF

PAGE 4, 1. FIXED BROADBAND SERVICE – 10. *SPEED*

What We Have Seen

The Coronavirus closed many libraries for a time, but digital service needs (connectivity speeds) increased.

Increased need for WiFi access outside of the library building.

Increased need for videoconferencing use by staff for services and training.

A need for higher speeds has remained and the current trend at member sites has been migration to fiber and increased speeds.

"UNLESS WE ADDRESS OUR UNSERVED BROADBAND CHALLENGES IN OUR URBAN, SUBURBAN, AND RURAL AREAS, WE WILL NOT HAVE EQUITABLE ACCESS FOR ALL AND ACHIEVE THE ECONOMIC RECOVERY THAT WE NEED."

~ NED LAMONT - AMERICAN BUSINESSMAN AND POLITICIAN SERVING SINCE JANUARY 2019 AS THE 89TH GOVERNOR OF CONNECTICUT

Fiber Broadband Projects

Multiple ISP's (Internet Service Providers) began installing fiber as part of various broadband grants, such as FCC's Rural Broadband (Rural Digital Opportunity Fund), USDA's ReConnect Program, KDOT's Broadband Acceleration Grant Program (BAG) and other broadband funding programs.

"RURAL COMMUNITIES AND OUR NATION'S ECONOMY ALSO STAND TO BENEFIT FROM BROADBAND EXPANSION. RURAL SCHOOLS CAN EXPAND THE QUANTITY AND QUALITY OF EDUCATIONAL PROGRAMMING. RURAL COMMUNITIES CAN ATTRACT BUSINESSES AND INVESTMENT."

~ ABIGAIL SPANBERGER – U.S. REPRESENTATIVE FROM VIRGINIA'S 7TH CONGRESSIONAL DISTRICT

A Snapshot of Broadband at SCKLS Public Libraries in 2023

12 Counties with 72 Public Libraries + 6 Branches (Wichita Public Library)
13 Gateway | 17 Linking | 19 Service Center I | 13 Service Center II
7 Major Service Center I | 2 Major Service Center II | 1 Major Resource Center with six branches

19 ISP's (Internet Service Providers)
4 Connection Types (cable, DSL, fiber, wireless)

Average Downstream Speed of 78 sites = 233 Mbps
Average Upstream Speed of 78 sites = 145 Mbps

"THE RISE OF BROADBAND AND GROWING UBIQUITY OF INTERNET ACCESS EXCITES ME THE MOST. THE WORLD CHANGES A LOT WHEN, NO MATTER WHERE YOU ARE - IN THE MIDDLE OF A DESERTED HIGHWAY OR IN A BUSTLING CITY - YOU CAN GET HIGH SPEED BROADBAND ACCESS."

~ MATT MULLENWEG - AMERICAN ENTREPRENEUR AND WEB DEVELOPER; FOUNDING DEVELOPER OF WORDPRESS

Definitions

ISP = Internet Service Provider (a vendor/provider of your internet service)
The type of connection (i.e. cable, DSL, fiber, wireless) plays a role in determining how reliable and fast your speeds can be.

Downstream Speed = refers to data sent from a network service provider to a customer
Upstream Speed = refers to direction which data can be transferred from a client to a server
**Advertised speeds are typically in ranges, not guaranteed*

Asymmetric = Upstream data rate is slower than downstream rate
Symmetric = Identical upstream and downstream speeds

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SCKLS Public Libraries Internet Connections and Speeds

This is our first comprehensive SCKLS region broadband study and we will continue to provide an annual update in January. While the first study is aimed at public libraries in our region we are considering adding academic, school and special libraries to next years study.

"To build up a library is to create a life. It's never just a random collection of books."

~ Carlos María Domínguez, Argentine writer and journalist – from the book, *The House of Paper*

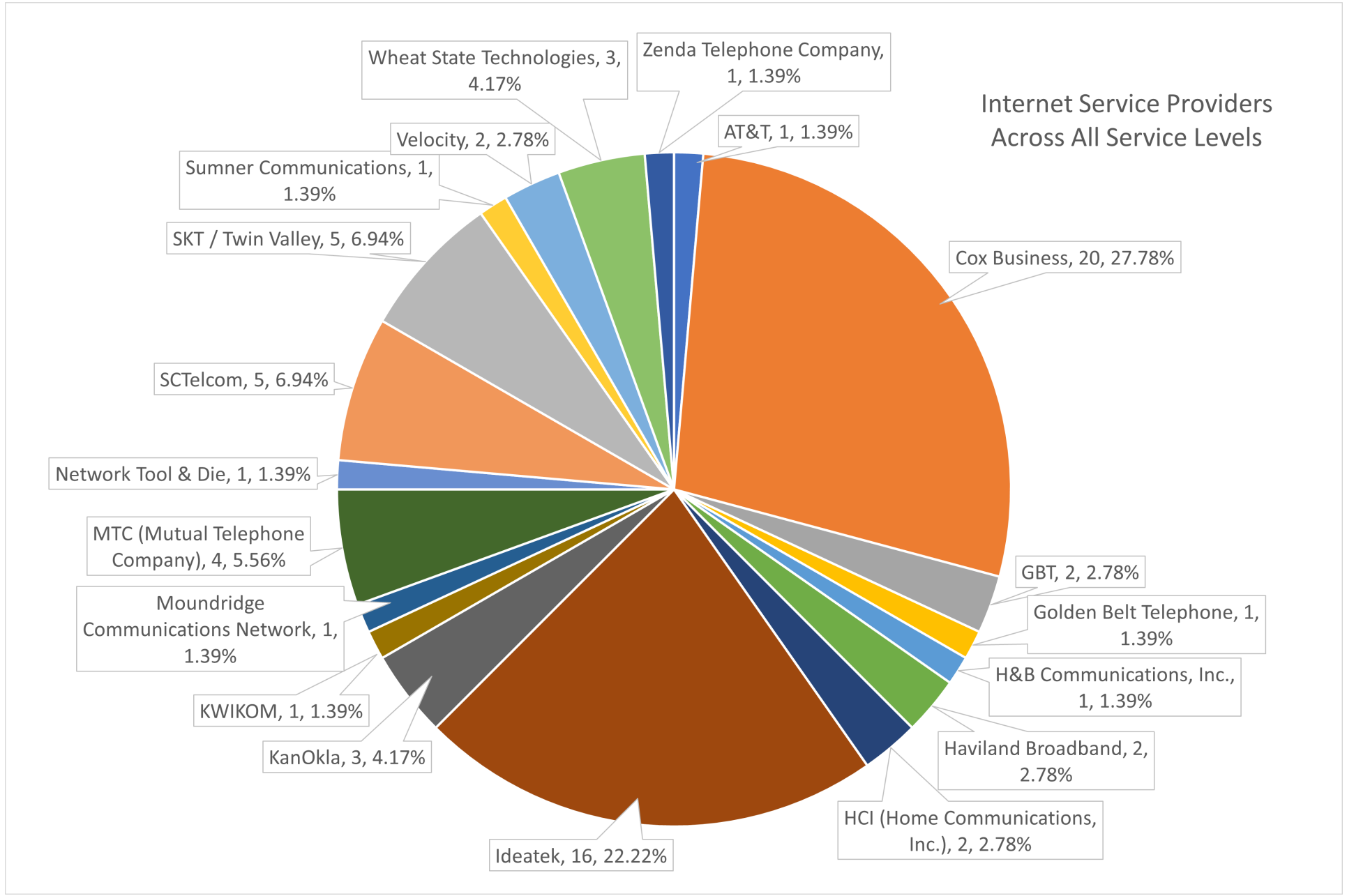
Before we continue, I'd like to thank all of our member librarians who provided data for this report and Stefanie Gostautas, Technology Projects Specialist for all of her work on designing the following web page layout.

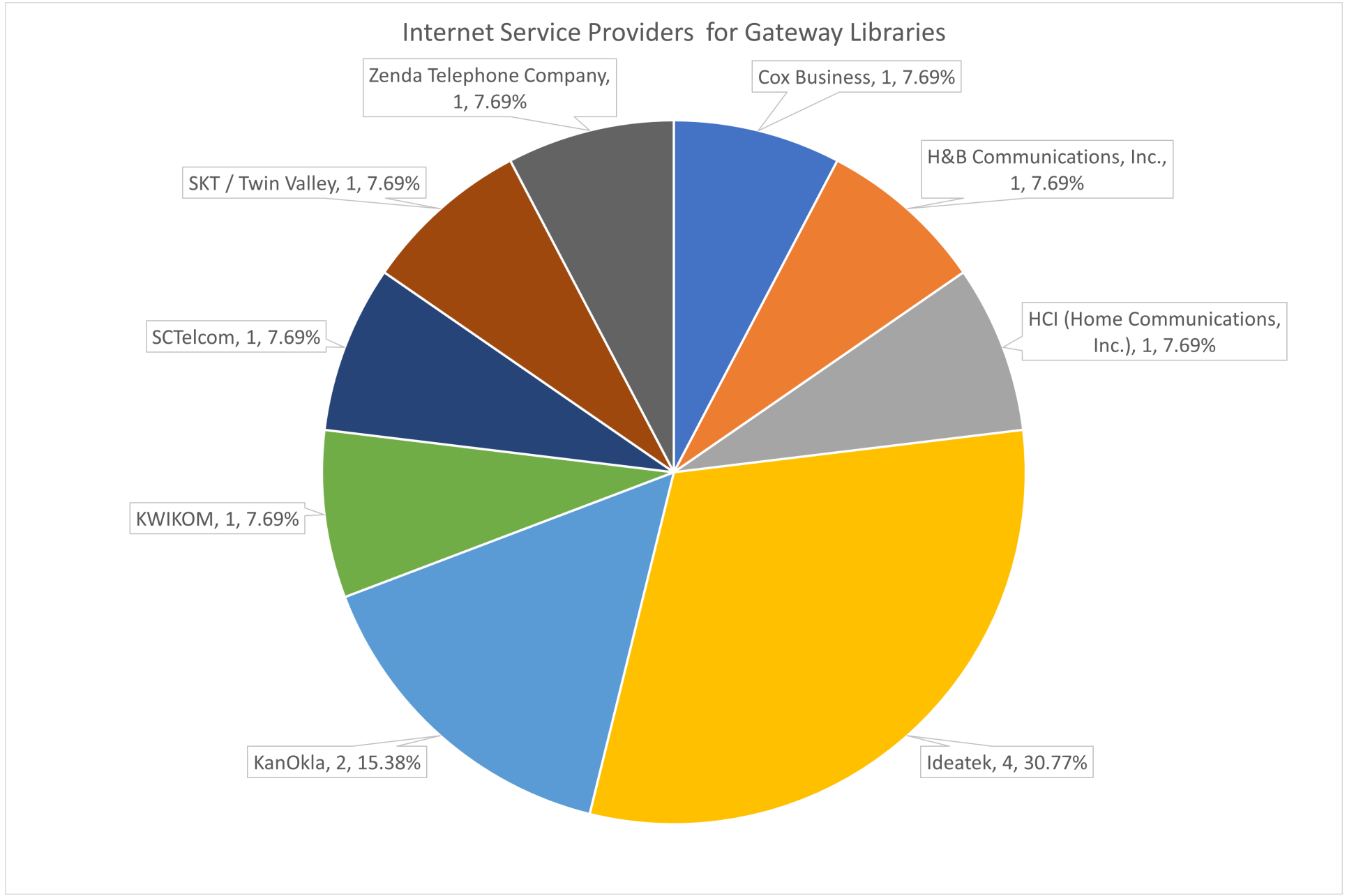
Now, let's take a look at our findings in more detail.

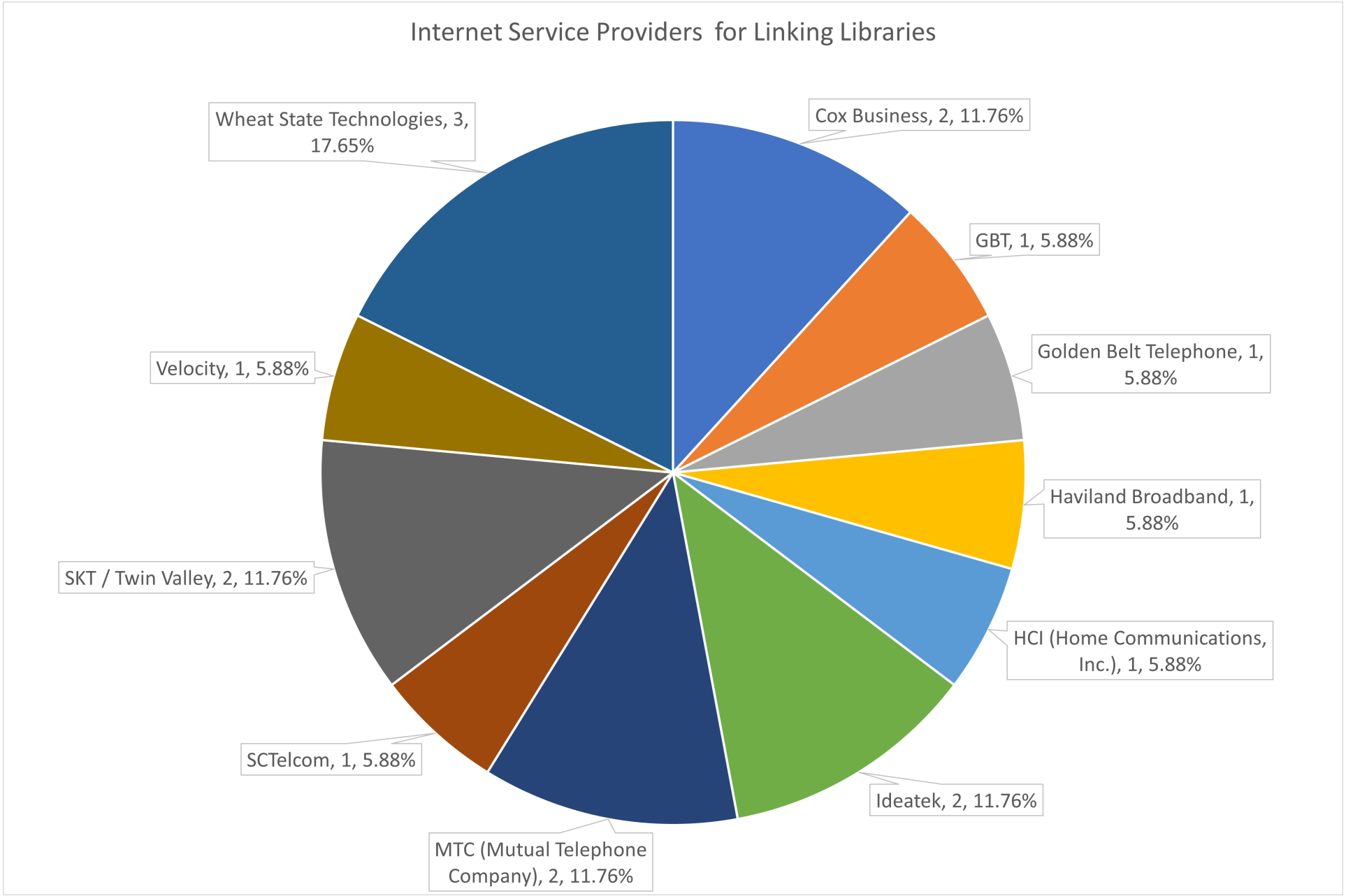
https://www.sckls.info/isp

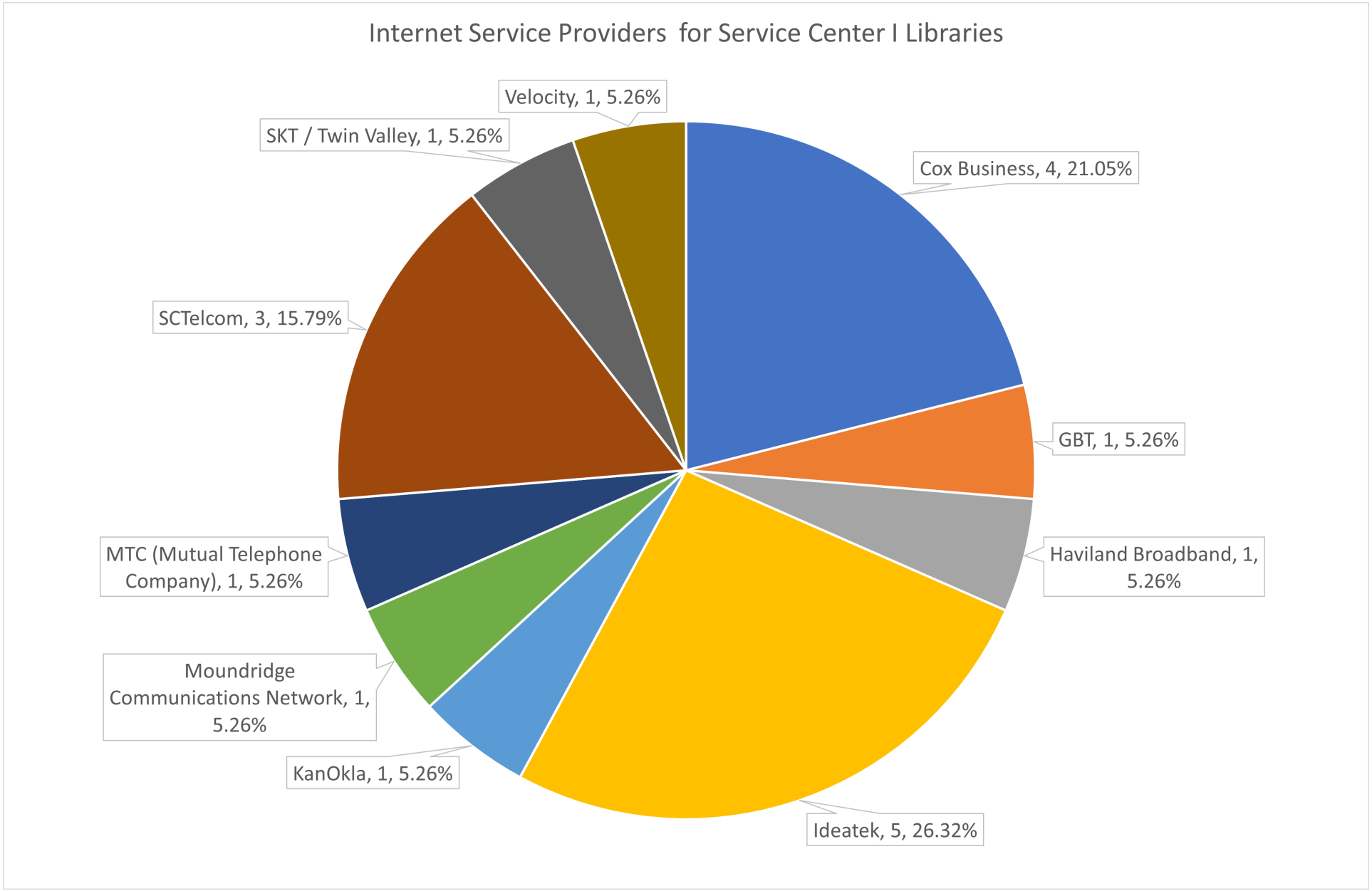
"WE ARE SEEING THE BEGINNING OF THINGS. WEB 2.0 IS BROADBAND. WEB 3.0 IS 10 GIGABITS A SECOND."

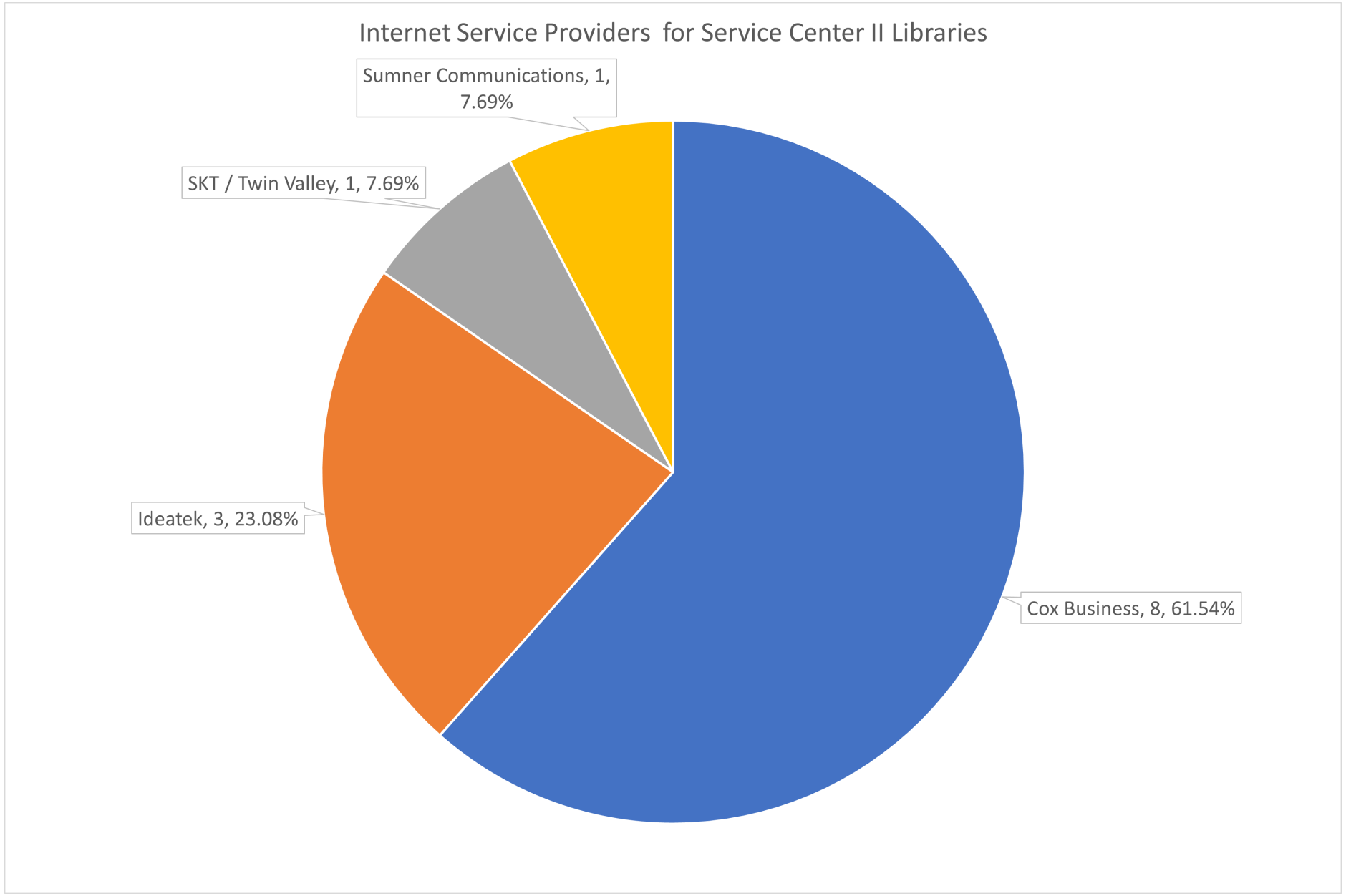
~ REED HASTINGS - CO-FOUNDER, AND EXECUTIVE CHAIRMAN OF NETFLIX, INC.

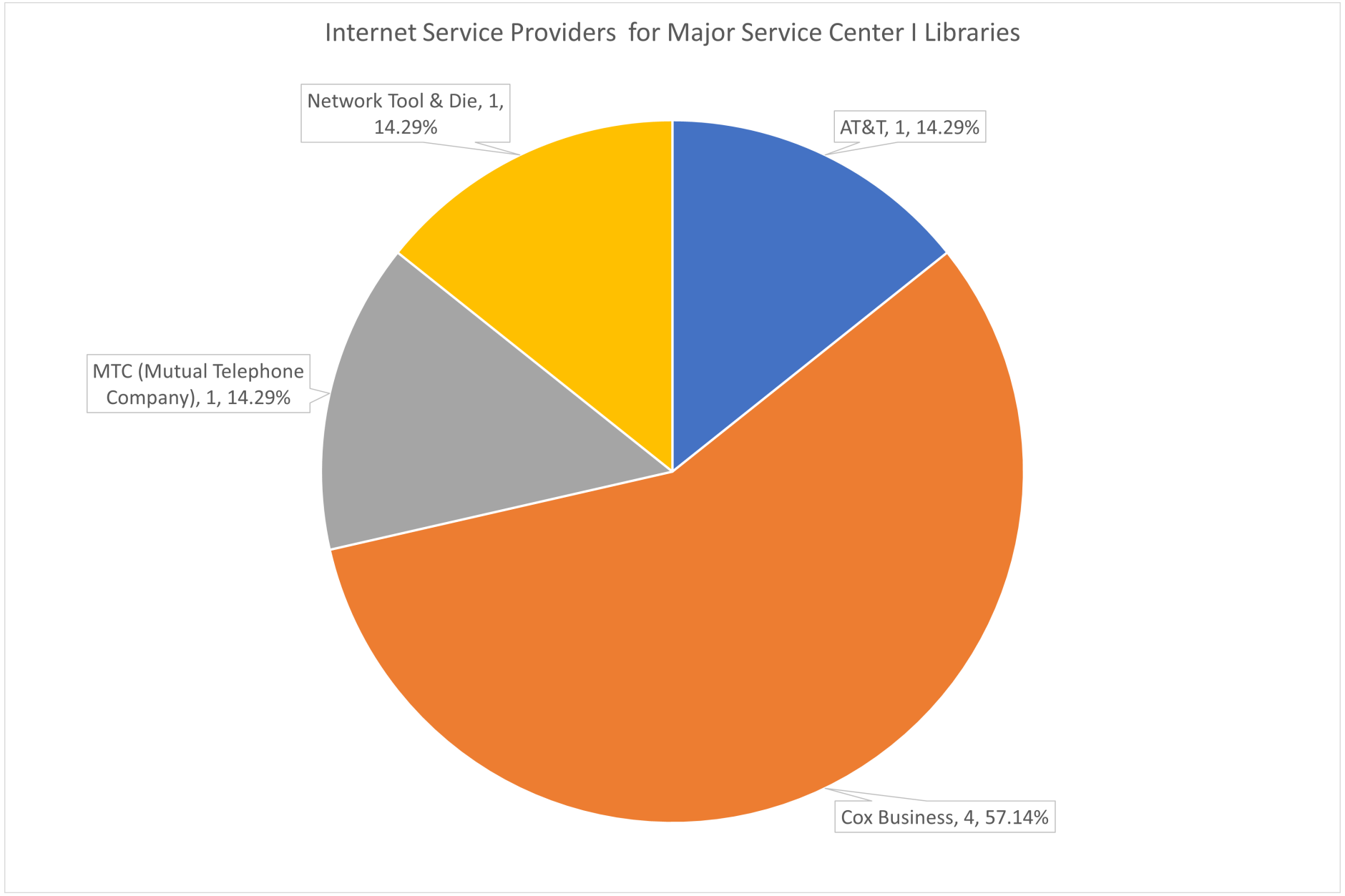

Internet Service Providers Across All Service Levels
Wheat State Technologies, 3, 4.17%
Zenda Telephone Company, 1, 1.39%
AT&T, 1, 1.39%
Velocity, 2, 2.78%
Sumner Communications, 1, 1.39%
SKT / Twin Valley, 5, 6.94%
Cox Business, 20, 27.78%
SCTelcom, 5, 6.94%
Network Tool & Die, 1, 1.39%
MTC (Mutual Telephone Company), 4, 5.56%
Moundridge Communications Network, 1, 1.39%
KWIKOM, 1, 1.39%
KanOkla, 3, 4.17%
Ideatek, 16, 22.22%
HCI (Home Communications, Inc.), 2, 2.78%
Haviland Broadband, 2, 2.78%
H&B Communications, Inc., 1, 1.39%
Golden Belt Telephone, 1, 1.39%
GBT, 2, 2.78%

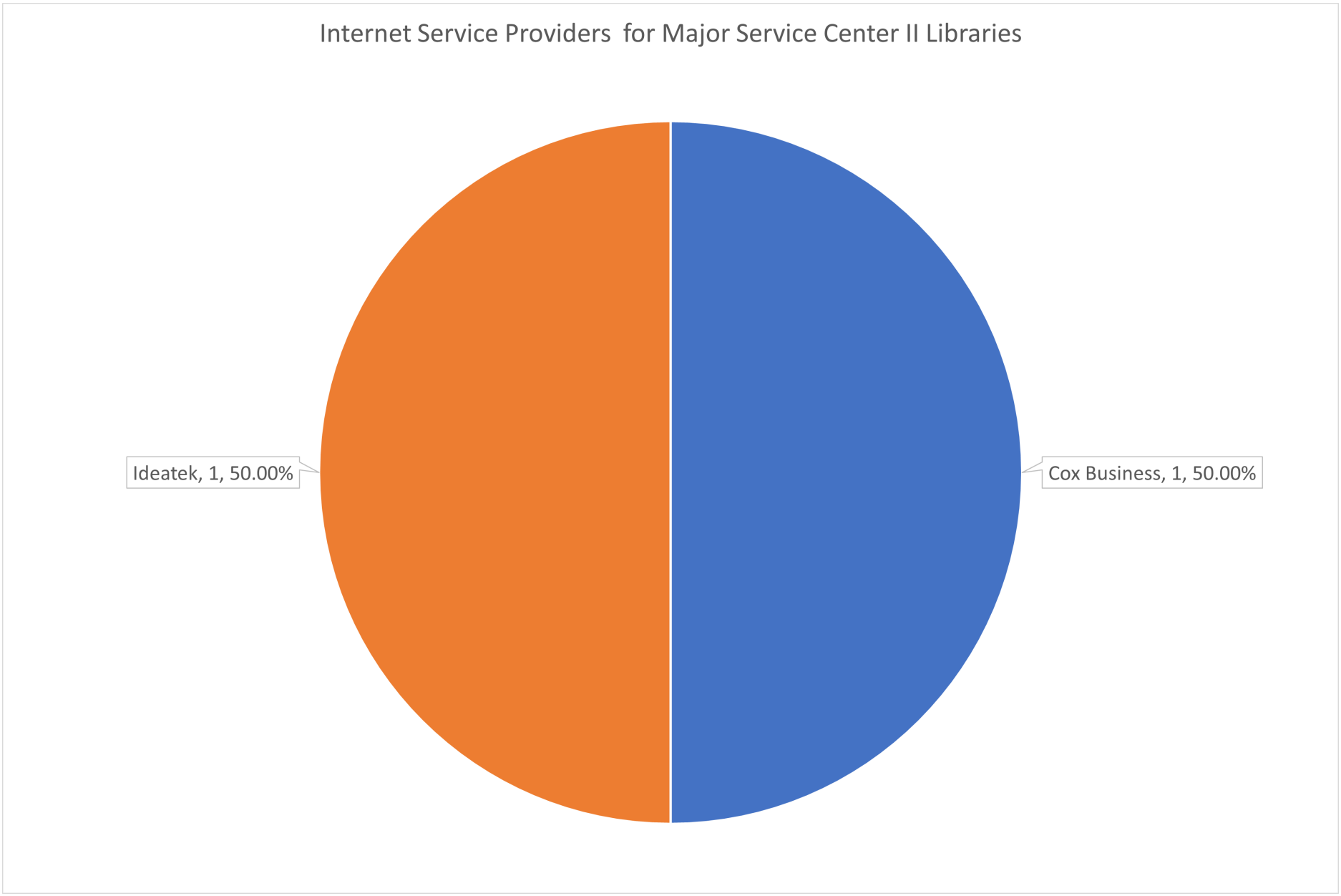

Internet Service Providers for Gateway Libraries
Zenda Telephone Company, 1, 7.69%
Cox Business, 1, 7.69%
H&B Communications, Inc., 1, 7.69%
SKT / Twin Valley, 1, 7.69%
HCI (Home Communications, Inc.), 1, 7.69%
SCTelcom, 1, 7.69%
KWIKOM, 1, 7.69%
KanOkla, 2, 15.38%
Ideatek, 4, 30.77%

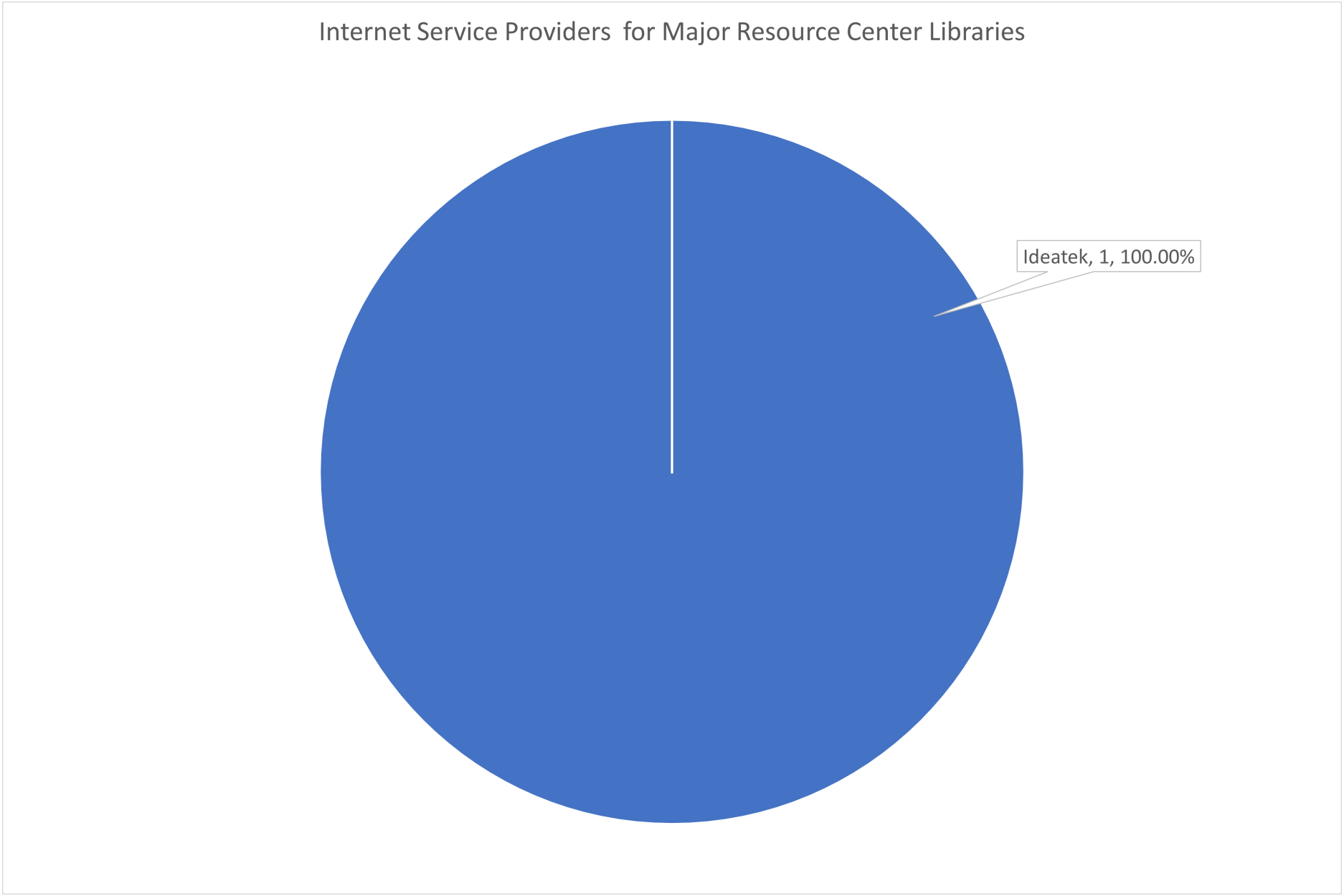

Internet Service Providers for Linking Libraries
Cox Business, 2, 11.76%
GBT, 1, 5.88%
Golden Belt Telephone, 1, 5.88%
Haviland Broadband, 1, 5.88%
HCI (Home Communications, Inc.), 1, 5.88%
Ideatek, 2, 11.76%
MTC (Mutual Telephone Company), 2, 11.76%
SCTelcom, 1, 5.88%
SKT / Twin Valley, 2, 11.76%
Velocity, 1, 5.88%
Wheat State Technologies, 3, 17.65%

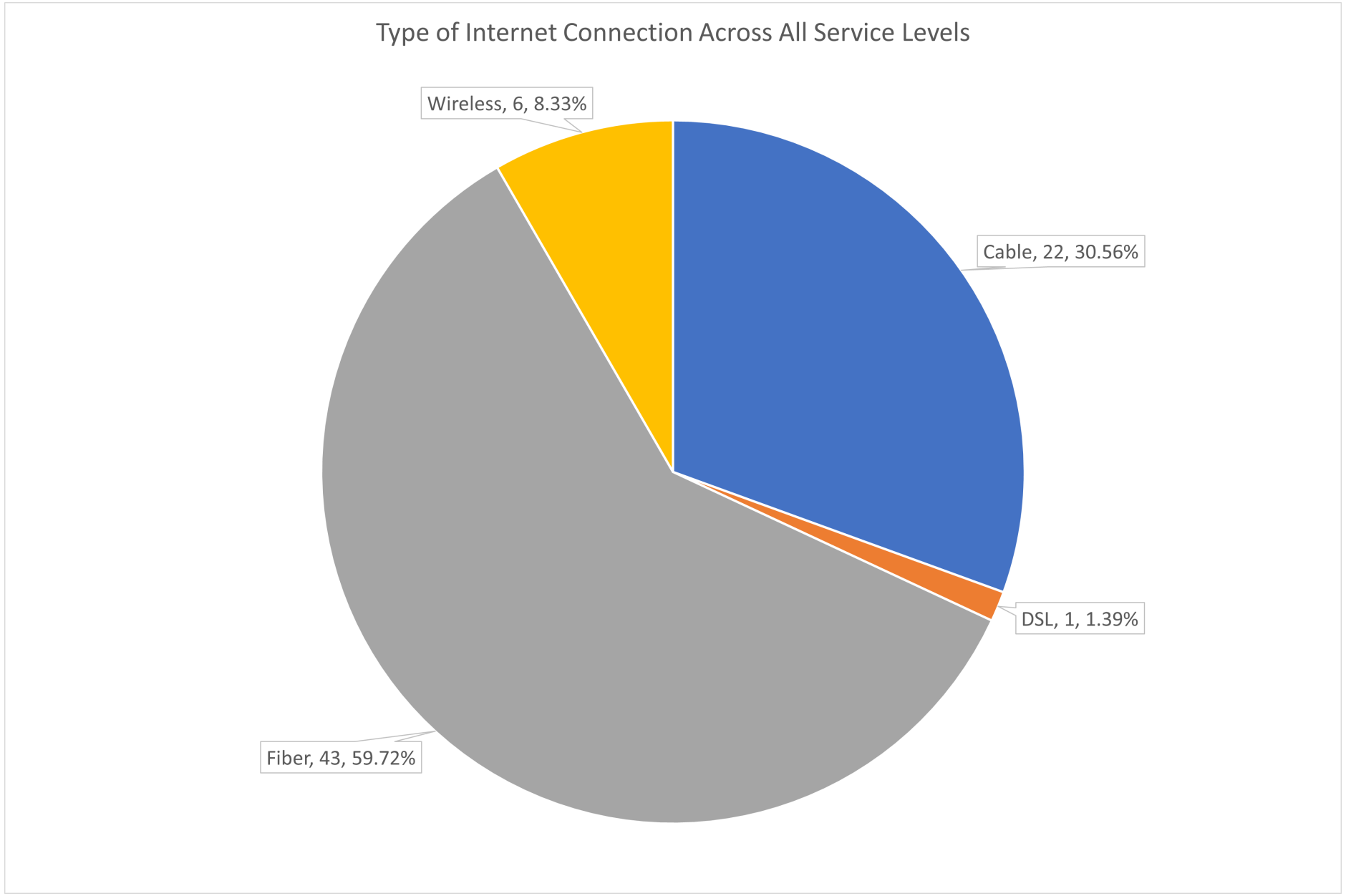

Internet Service Providers for Service Center I Libraries
Velocity, 1, 5.26%
SKT / Twin Valley, 1, 5.26%
Cox Business, 4, 21.05%
SCTelcom, 3, 15.79%
GBT, 1, 5.26%
MTC (Mutual Telephone Company), 1, 5.26%
Haviland Broadband, 1, 5.26%
Moundridge Communications Network, 1, 5.26%
KanOkla, 1, 5.26%
Ideatek, 5, 26.32%

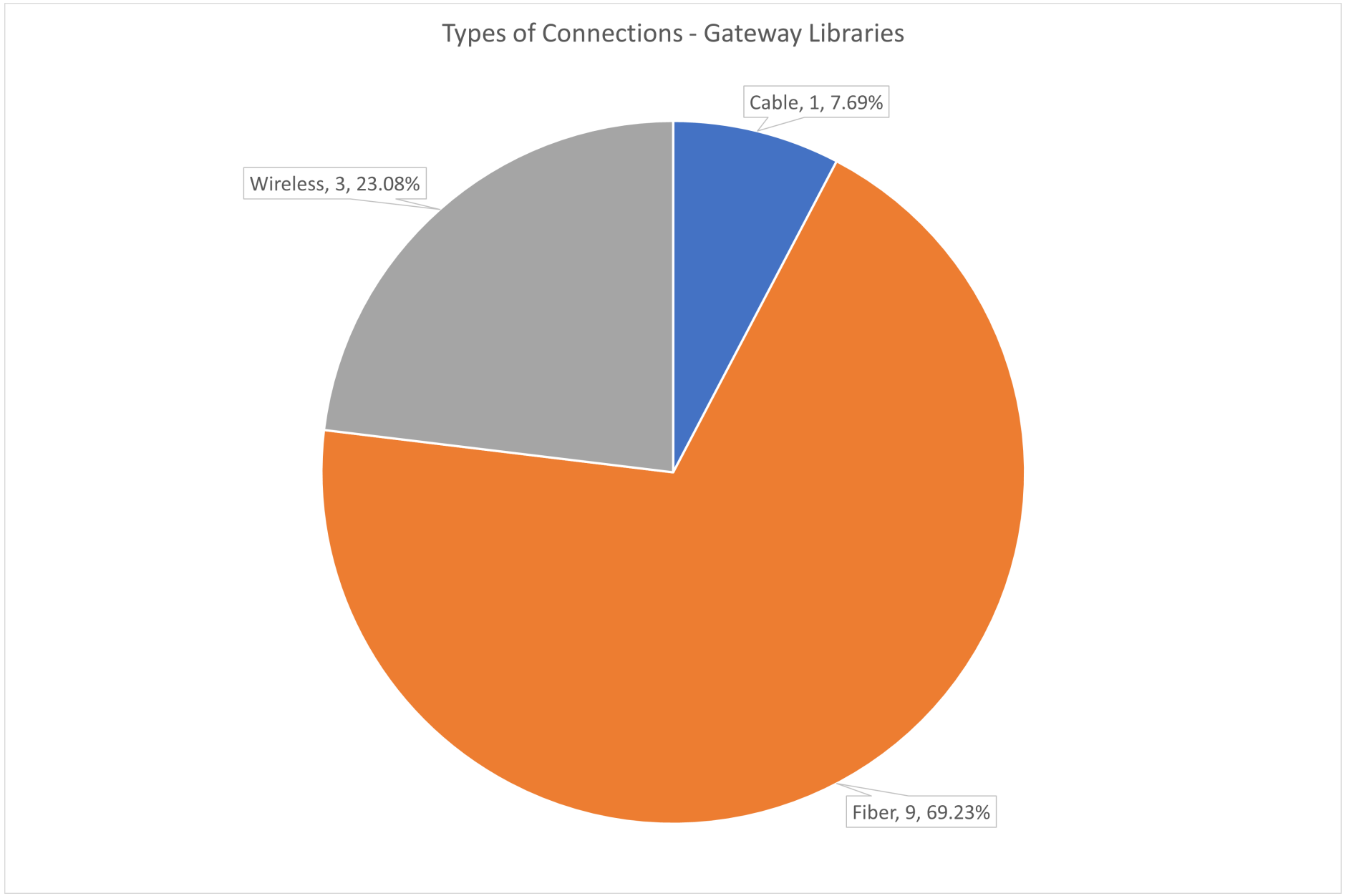

Internet Service Providers for Service Center II Libraries
Sumner Communications, 1, 7.69%
SKT / Twin Valley, 1, 7.69%
Ideatek, 3, 23.08%
Cox Business, 8, 61.54%

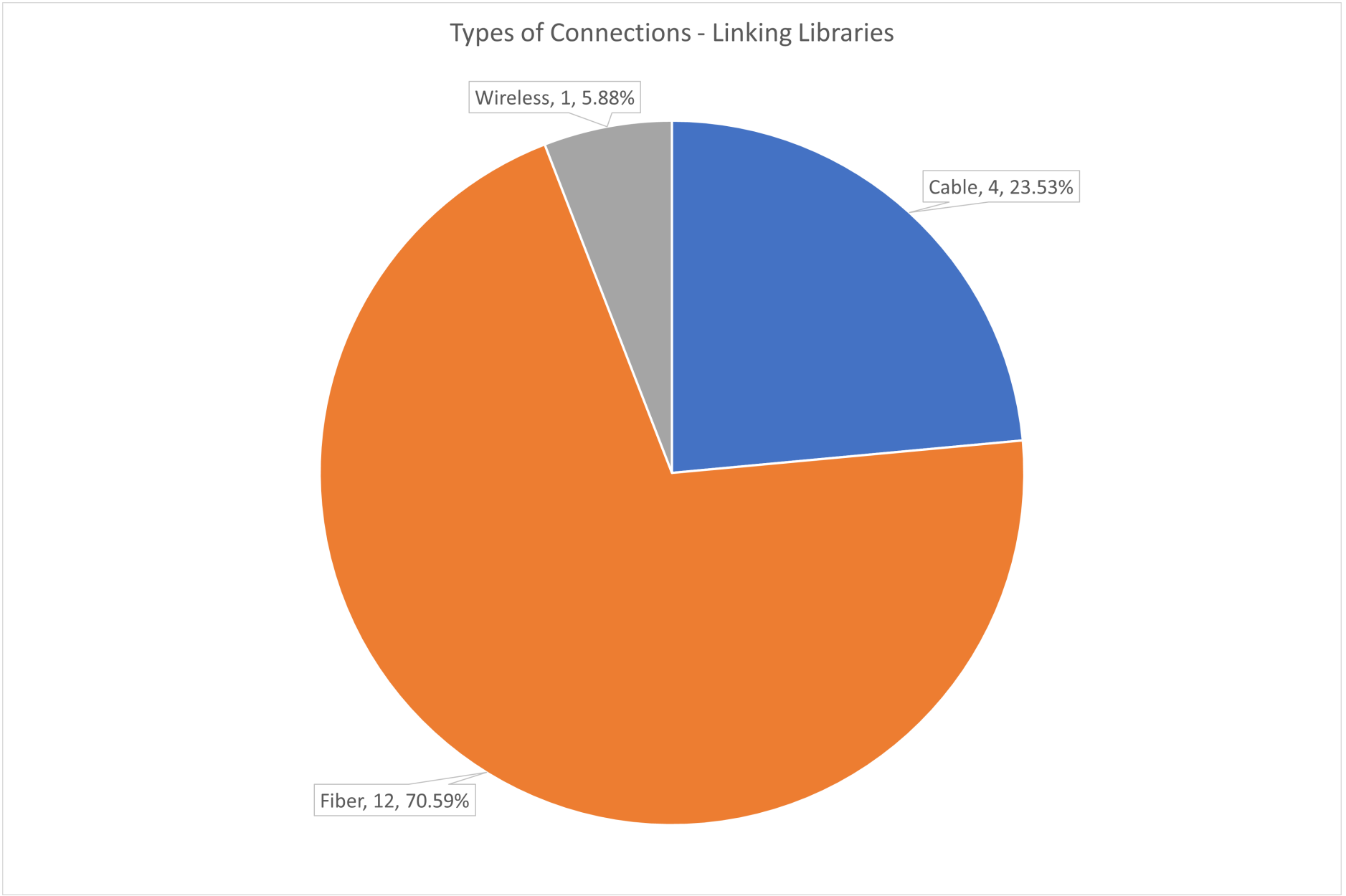

Internet Service Providers for Major Service Center I Libraries
Network Tool & Die, 1, 14.29%
AT&T, 1, 14.29%
MTC (Mutual Telephone Company), 1, 14.29%
Cox Business, 4, 57.14%

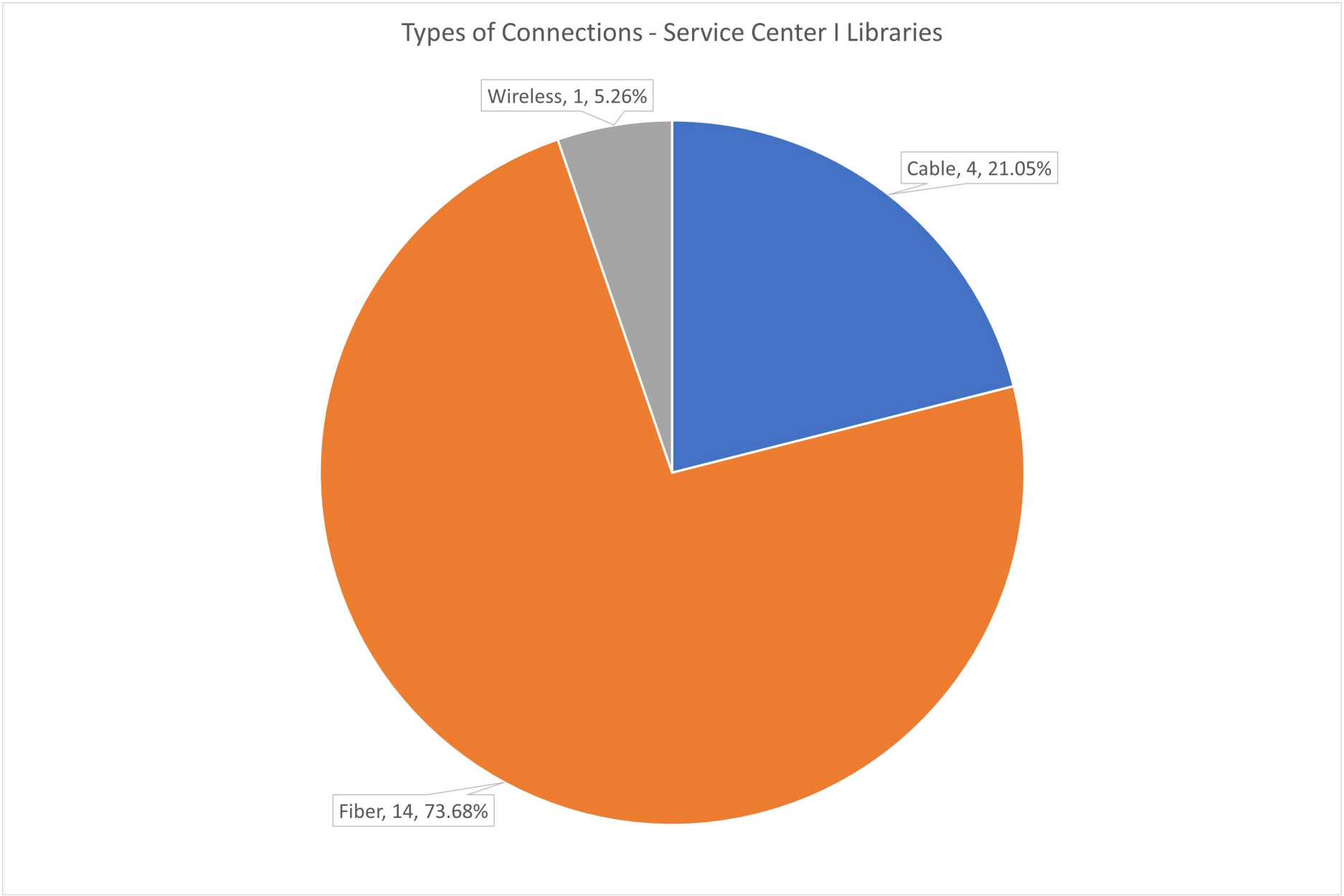

Internet Service Providers for Major Service Center II Libraries
Ideatek, 1, 50.00%
Cox Business, 1, 50.00%

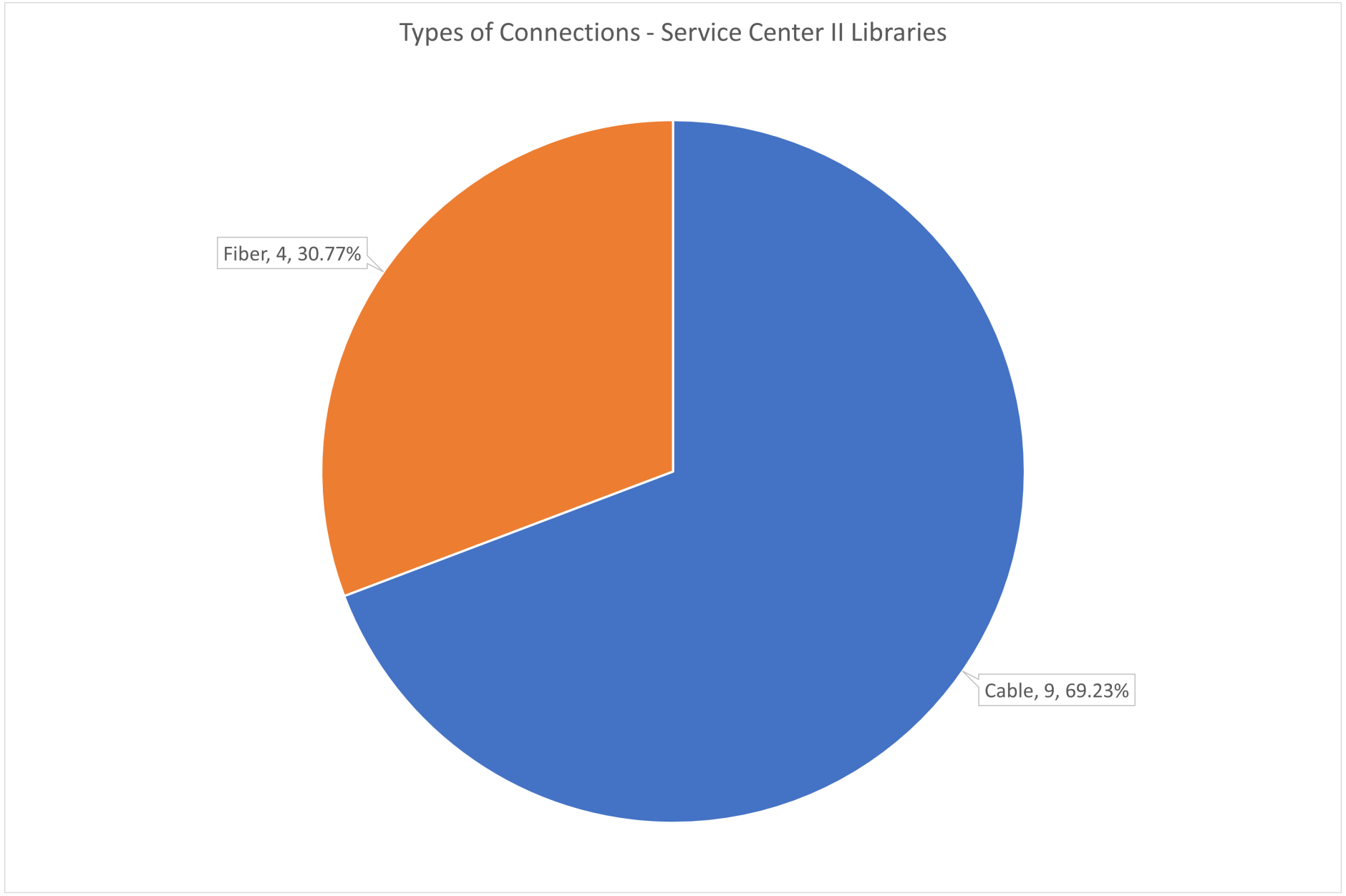

Internet Service Providers for Major Resource Center Libraries
Ideatek, 1, 100.00%

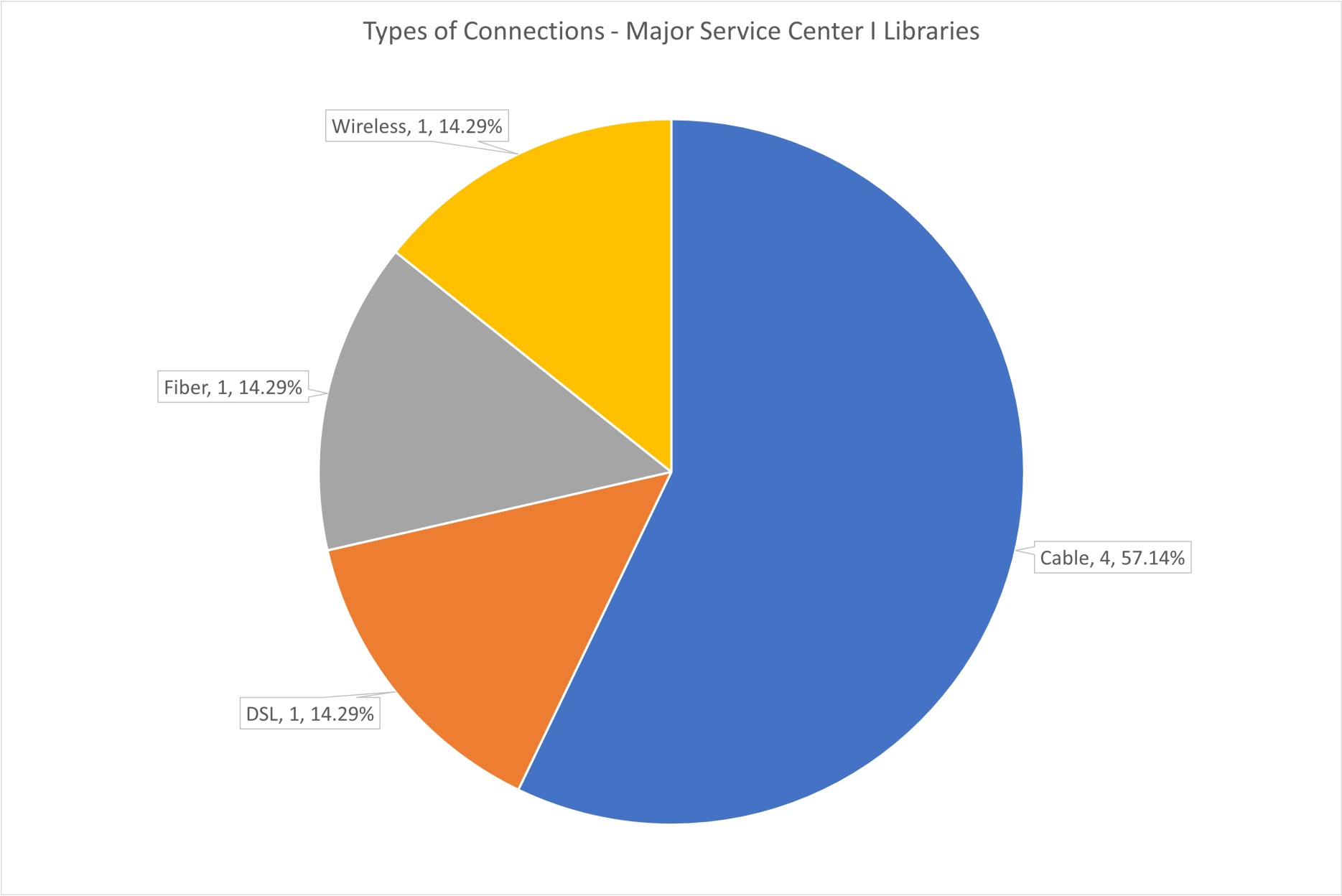

Type of Internet Connection Across All Service Levels
Wireless, 6, 8.33%
Cable, 22, 30.56%
DSL, 1, 1.39%
Fiber, 43, 59.72%

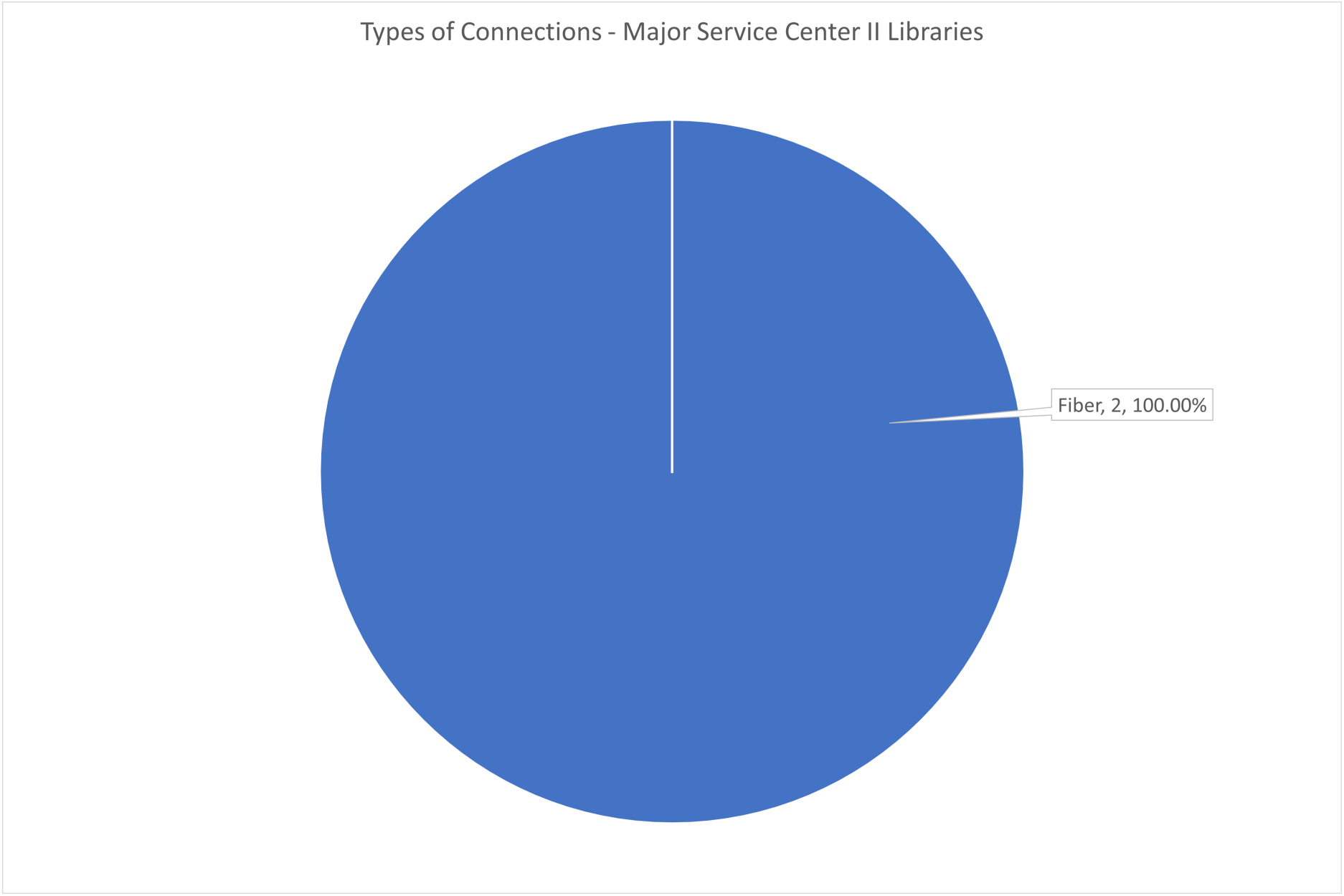

Types of Connections - Gateway Libraries
Cable, 1, 7.69%
Wireless, 3, 23.08%
Fiber, 9, 69.23%

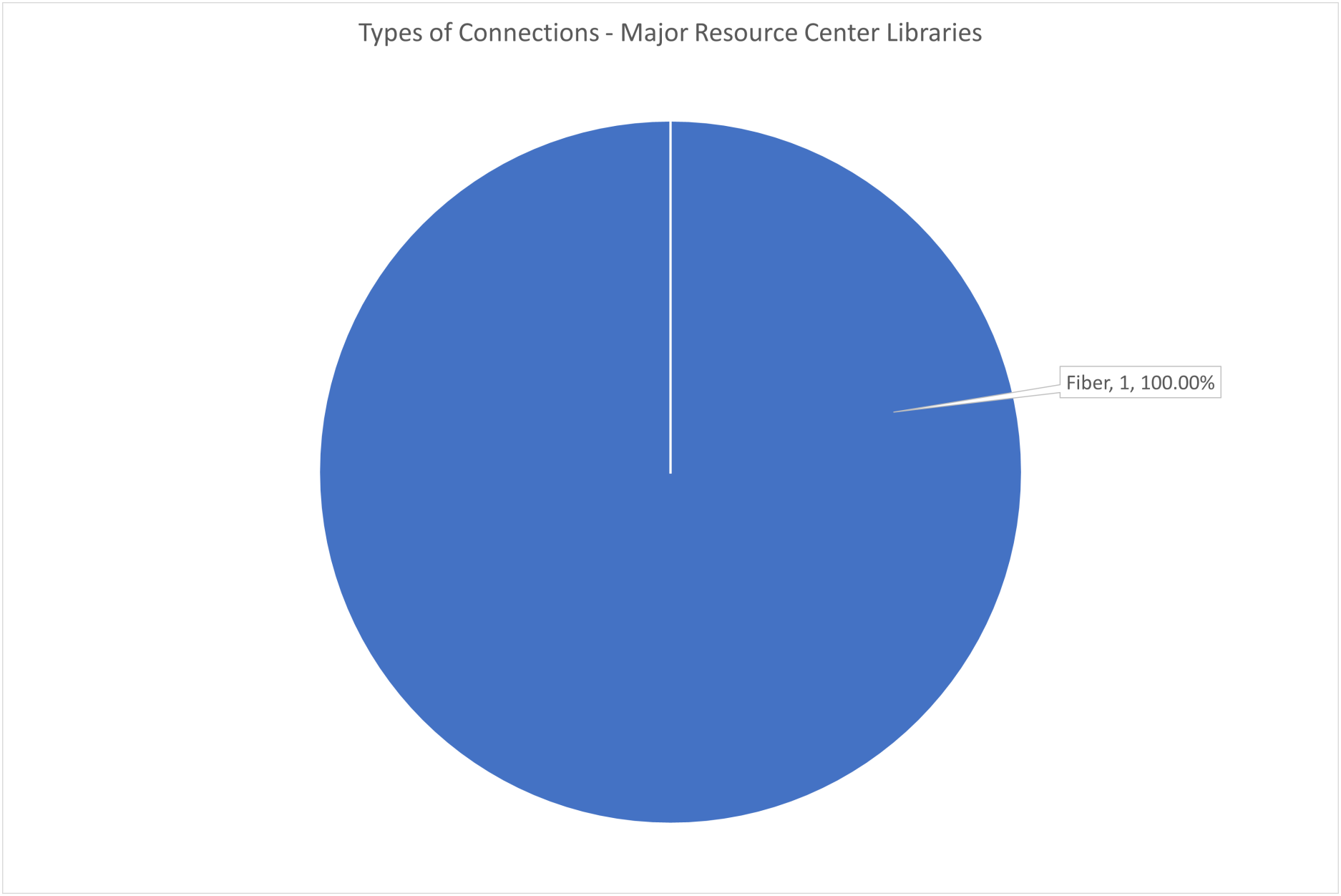

Types of Connections - Linking Libraries
Wireless, 1, 5.88%
Cable, 4, 23.53%
Fiber, 12, 70.59%


Types of Connections - Service Center I Libraries
Wireless, 1, 5.26%
Cable, 4, 21.05%
Fiber, 14, 73.68%

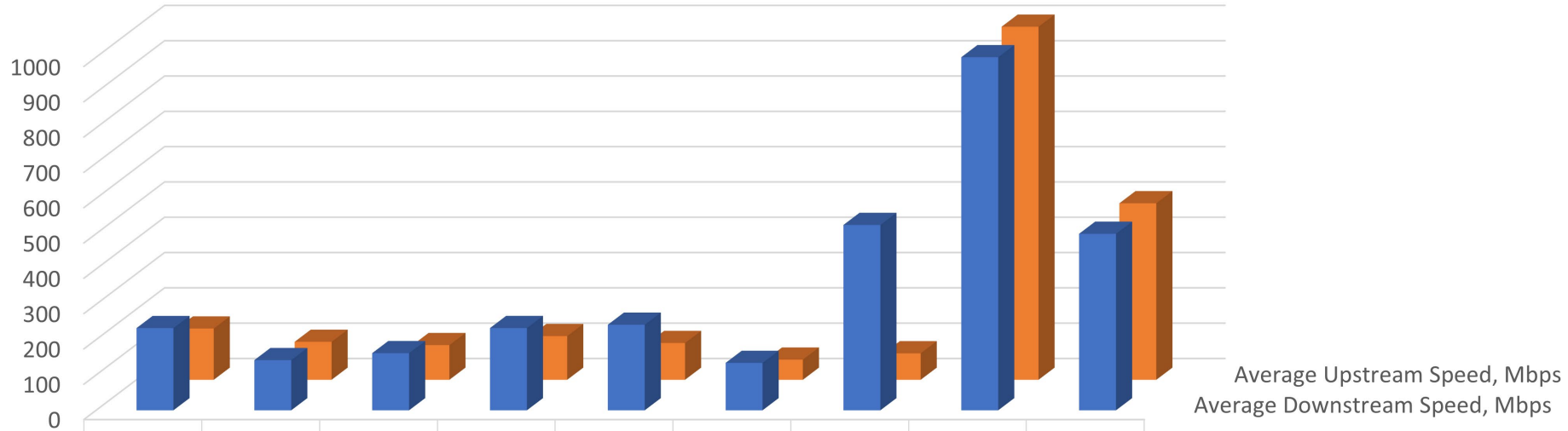

Types of Connections - Service Center II Libraries
Fiber, 4, 30.77%
Cable, 9, 69.23%


Types of Connections - Major Service Center I Libraries
Wireless, 1, 14.29%
Fiber, 1, 14.29%
DSL, 1, 14.29%
Cable, 4, 57.14%

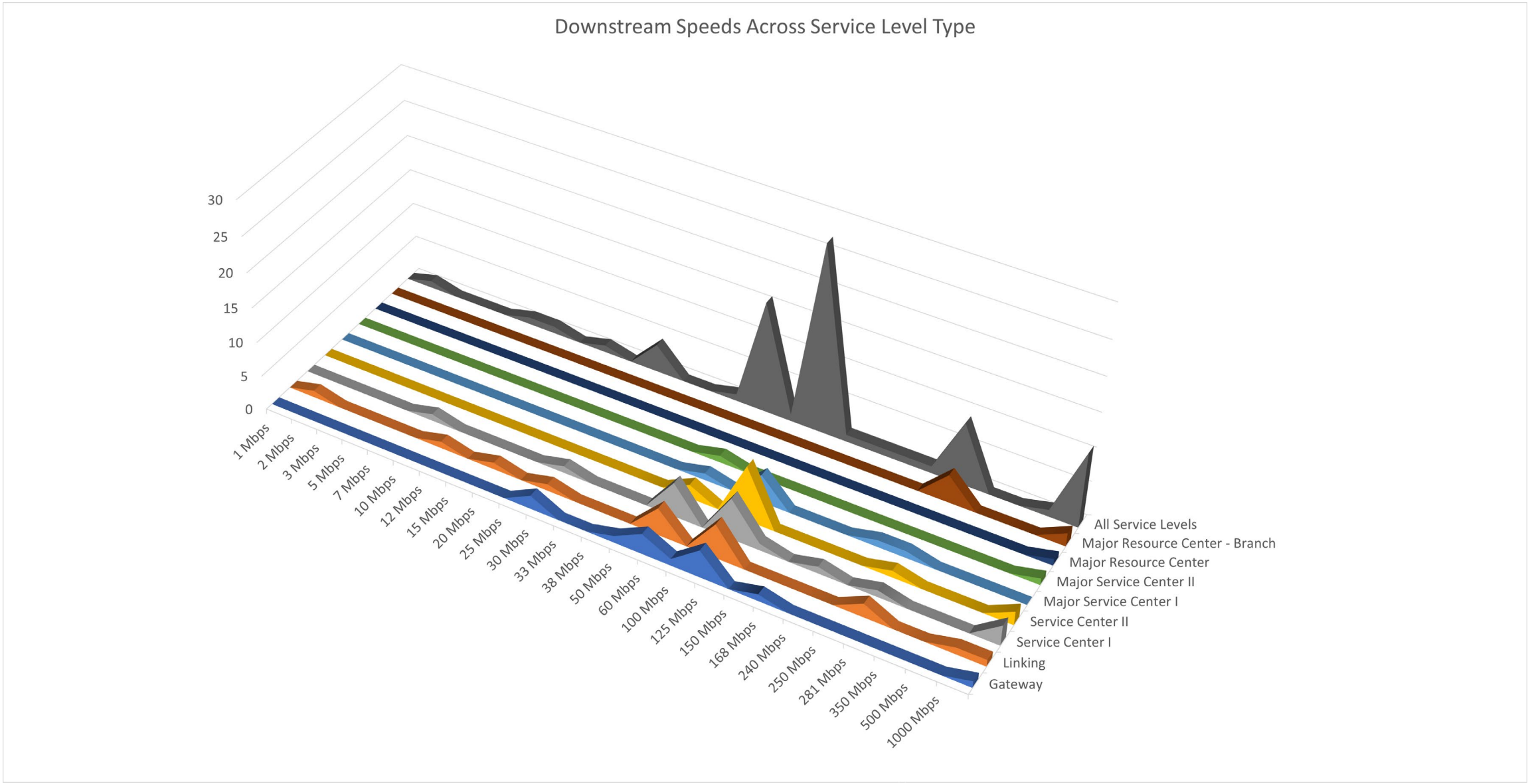

Types of Connections - Major Service Center II Libraries
Fiber, 2, 100.00%

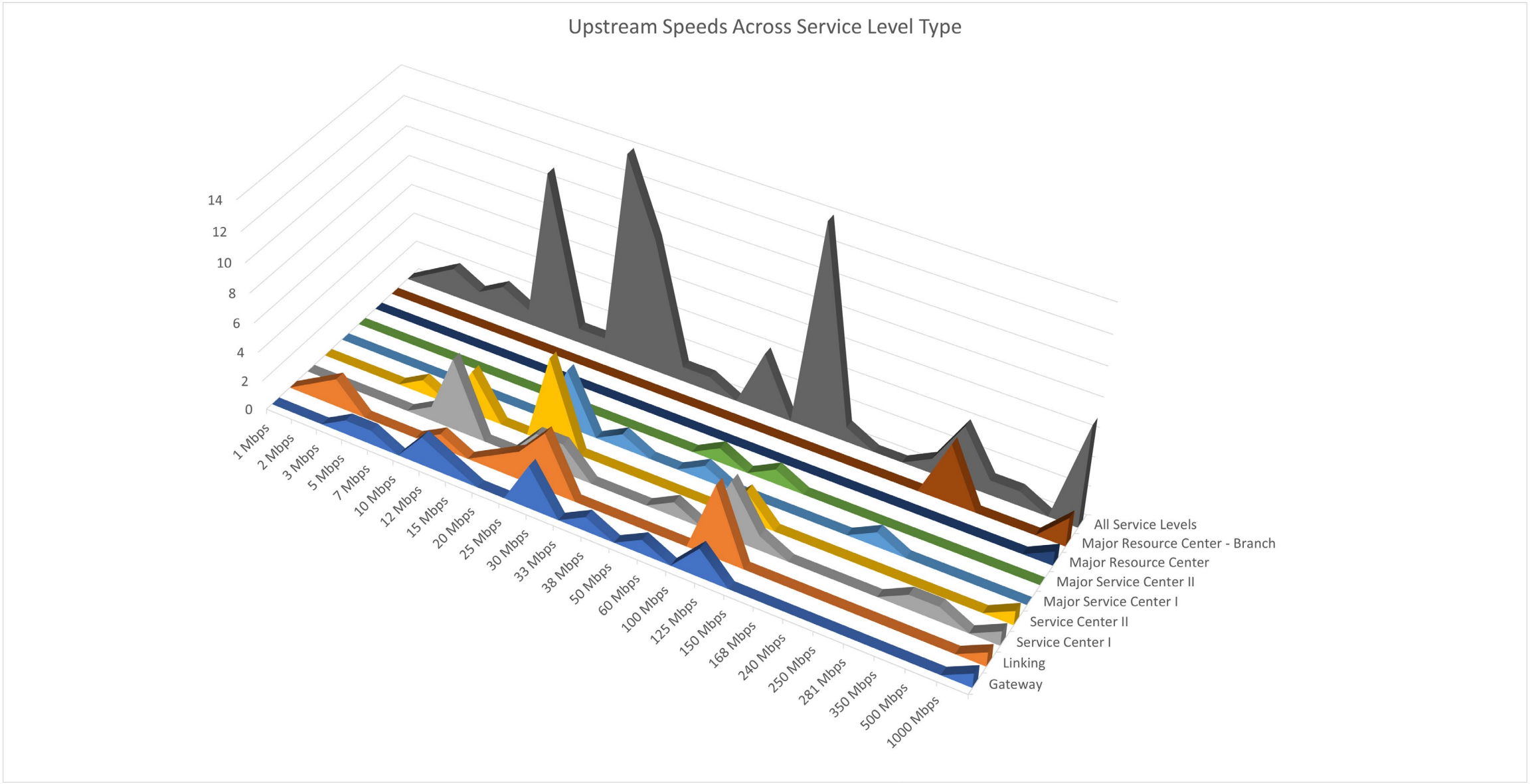

Types of Connections - Major Resource Center Libraries
Fiber, 1, 100.00%

Average Internet Speeds for SCKLS Public Libraries, Across Service Levels



	All Service Levels	Gateway	Linking	Service Center I	Service Center II	Major Service Center I	Major Service Center II	Major Resource Center	Major Resource Center - Branch
Average Downstream Speed, Mbps	233	142	162	233	242	134	525	1000	500
Average Upstream Speed, Mbps	145	108	98	124	104	57	75	1000	500


Downstream Speeds Across Service Level Type
30
25
20
15
10
5
0
1 Mbps
2 Mbps
3 Mbps
5 Mbps
7 Mbps
10 Mbps
12 Mbps
15 Mbps
20 Mbps
25 Mbps
30 Mbps
33 Mbps
38 Mbps
50 Mbps
60 Mbps
100 Mbps
125 Mbps
150 Mbps
168 Mbps
240 Mbps
250 Mbps
281 Mbps
350 Mbps
500 Mbps
1000 Mbps
All Service Levels
Major Resource Center - Branch
Major Resource Center
Major Service Center II
Major Service Center I
Service Center II
Service Center I
Linking
Gateway


Upstream Speeds Across Service Level Type
14
12
10
8
6
4
2
0
1 Mbps
2 Mbps
3 Mbps
5 Mbps
7 Mbps
10 Mbps
12 Mbps
15 Mbps
20 Mbps
25 Mbps
30 Mbps
33 Mbps
38 Mbps
50 Mbps
60 Mbps
100 Mbps
125 Mbps
150 Mbps
168 Mbps
240 Mbps
250 Mbps
281 Mbps
350 Mbps
500 Mbps
1000 Mbps
All Service Levels
Major Resource Center - Branch
Major Resource Center
Major Service Center II
Major Service Center I
Service Center II
Service Center I
Linking
Gateway