



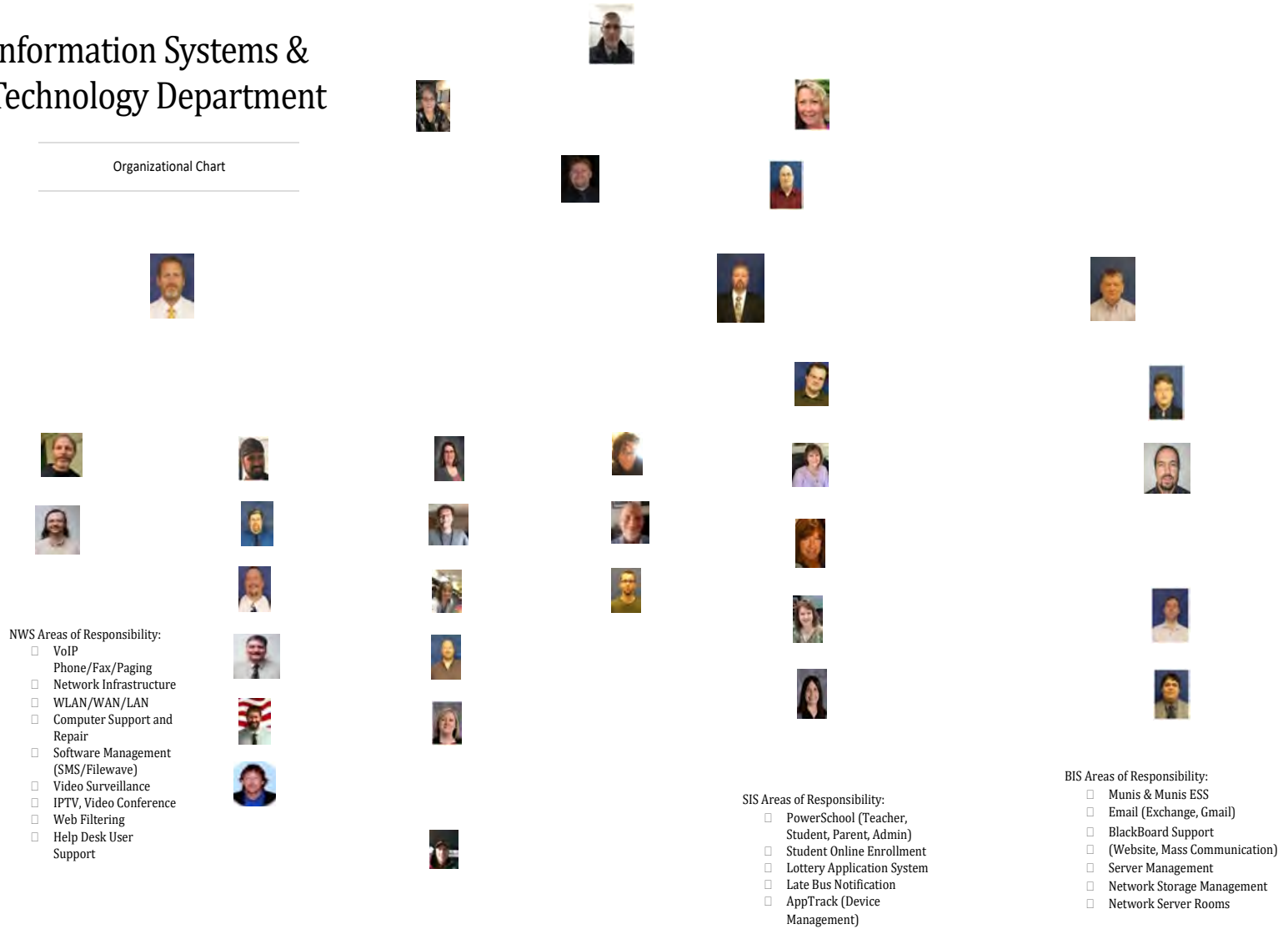
Fairbanks North Star Borough School District

Information Technology Overview

Budget Committee
October 13, 2020

Information Systems & Technology Department

Organizational Chart



- NWS Areas of Responsibility:
- VoIP
 - Phone/Fax/Paging
 - Network Infrastructure
 - WLAN/WAN/LAN
 - Computer Support and Repair
 - Software Management (SMS/Filewave)
 - Video Surveillance
 - IPTV, Video Conference
 - Web Filtering
 - Help Desk User Support

- SIS Areas of Responsibility:
- PowerSchool (Teacher, Student, Parent, Admin)
 - Student Online Enrollment
 - Lottery Application System
 - Late Bus Notification
 - AppTrack (Device Management)

- BIS Areas of Responsibility:
- Munis & Munis ESS
 - Email (Exchange, Gmail)
 - BlackBoard Support
 - (Website, Mass Communication)
 - Server Management
 - Network Storage Management
 - Network Server Rooms

Information Technology

At-a-Glance

Information & Technology (IT) provides all district stakeholders with proactive technology support and services for instructional and administrative purposes. IT contains three technology units (Student Information Systems, Business Information Systems, and Network Services) that participate in most all aspects of district operations.



Data Centers

- ◆ Administrative Center: 2
- ◆ Alasconnect: 1

Network

- ◆ Switches: 645 over 25,000 switch ports and associated cabling
- ◆ Wireless Access Points: 1140 and growing. (1 Schools remain to be upgraded)
- ◆ Uninterruptible Power Supply (UPS): 92
- ◆ Firewalls: 1 high availability pair
- ◆ Virtual Private Networks (VPN): 1 high availability pair
- ◆ Load Balancers: 1 high availability pair
- ◆ Web Filter: 1 Annual Subscription
- ◆ Internet: 3Gbps of total bandwidth (provided by ACS at 2Gbps and GCI at 1Gbps)

Security

- ◆ Intercom Door Buzzers: 5 (ADC-SMART, ADC-NWS, JOY, NPH, TAN)
- ◆ File Transfer: 1 (SendSecure) Allows for secure exchange of information
- ◆ Video Surveillance - Cameras: 525
- ◆ Video Surveillance - Servers: 92

Enterprise Telephone System (Self-Hosted)

As part of the Technology/Safety upgrade project, each building's legacy phone system was upgraded (completed Fall 2018) to the district's Enterprise Voice over IP (VoIP) system.

⇒ This upgrade resulted in an ongoing **annual cost savings of \$171,048.00**

- ◆ Number of phones supported across the district: 1,949
- ◆ Servers: 6
- ◆ Enterprise Fax: 1
- ◆ Intercom / 911 Recorder: 1

Department Highlight

Network & Computer Services provides technical management and support of the district's technology assets. Responsibilities include support and management of software deployment to Mac and Windows computers, as well as iPads and Chromebooks. The district's LAN and WAN networks, centralized telephone and video surveillance systems are managed by the Network & Computer Services department.

Special points of interest

- ◆ Remote Redundant Data Centers
- ◆ Wireless Access in every classroom
- ◆ 3 Gbps Commodity Internet Bandwidth
- ◆ Centralized Video Surveillance System



Superior User Support

High quality user support is a mandate for the IT department. We recently expanded help desk support hours and staffing to better accommodate user demand.

Servers & Storage

- ◆ Virtual Servers: 489
- ◆ Hardware Servers: 61
- ◆ 465 Terabytes (TB) of disk storage in use

Systems and Services (Self-Hosted)

- ◆ **PowerSchool Suite** (Student Management System)
 - ⇒ Teacher Gradebook
 - ⇒ Scheduling, transcripts, attendance, lunch counts, online enrollment, reporting
 - ⇒ Student/Guardian Portal
 - ⇒ Typical daily logins: +7000 users
- ◆ **Tyler Munis** (Enterprise Financial Management System)
 - ⇒ Human Resources
 - ⇒ Payroll
 - ⇒ Accounting
 - ⇒ Procurement
 - ⇒ Employee Self-service (ESS)
- ◆ **Microsoft Exchange** (Enterprise Email)
 - ⇒ 2359 user accounts
 - ⇒ 200,000+ emails sent/received from external addresses per week
- ◆ **Solarwinds Web Help Desk** (Centralized help desk ticketing)
 - ⇒ 8970 technology related work orders responded to over 12 months
- ◆ **Lottery System** (Schools of choice applicant management)
 - ⇒ 35 active lotteries (Includes Out-of-attendance area)
- ◆ **Late Bus Notifications**
 - ⇒ 30,000+ text messages sent out over 12 months

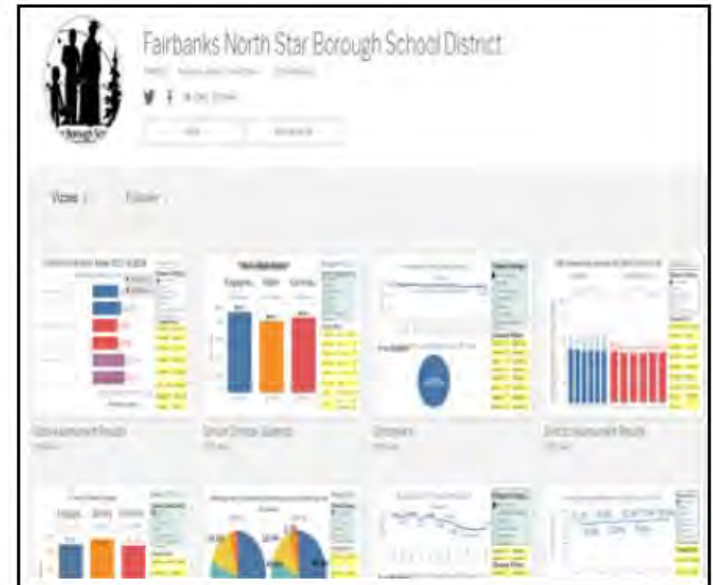
Department Highlight

Student Information Systems is responsible for maintaining, securing, provisioning and reporting on data relating to our students. The department also provides training and support to school staff in the use of PowerSchool and a host of related services.

Business Information Systems has moved its systems operating platform to a common Microsoft Server based platform. This has reduced costs associated with the variety of server hardware required and has enabled server and storage to be consolidated across all systems. Business Information Systems also leverages the use of virtual servers which provides cost saving scalability, minimal downtime, faster disaster recovery time and simplified management.

Research and Accountability

- ◆ Research and Evaluation of District programs
- ◆ District Data Dashboard on enrollment, graduation rates, school climate, discipline, and state & district assessments
- ◆ State and federal compliance reporting (fall, spring, summer oasis, school & district reports cards, etc)
- ◆ Early Warning System (identifying students at risk of dropout using attendance, GPA, assessment scores, discipline, etc)
- ◆ Performance Reports: School Climate, Assessment, SAT/ACT/AP, Class size trends, Enrollment/Ethnicity
- ◆ Enrollment Projections
- ◆ Alaska Department of Education and Early Development Technical Advisory Committee member
- ◆ NCES Forum School District representative for Alaska



Department Highlight

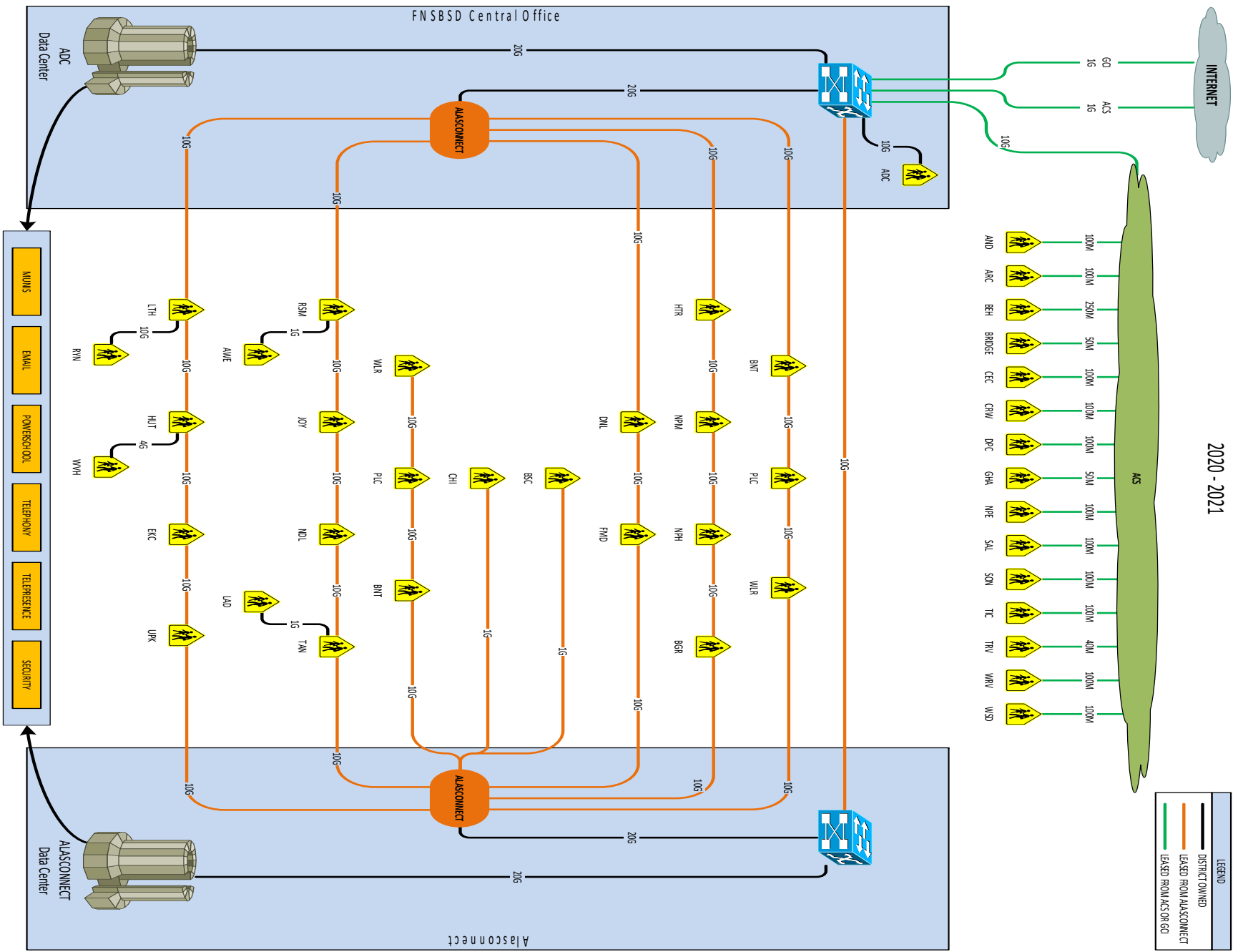
Research and Accountability has built a series of data dashboards that are accessible from the district's website. These interactive

Records Management

- ◆ Maintains the District's records retention schedule
- ◆ Maintains the records life-cycle across the district
 - ⇒ Digitizing
 - ⇒ Microfilming
 - ⇒ Purging
 - ⇒ Destruction
- ◆ Maintains archive of records dating back to **1930!**
- ◆ Administers the District's electronic records management system
- ◆ Processes student records requests—adhering to FERPA law
- ◆ Provides staff training on FERPA and records retention
- ◆ Manages offsite records storage

FNSBSD NETWORK TOPOLOGY

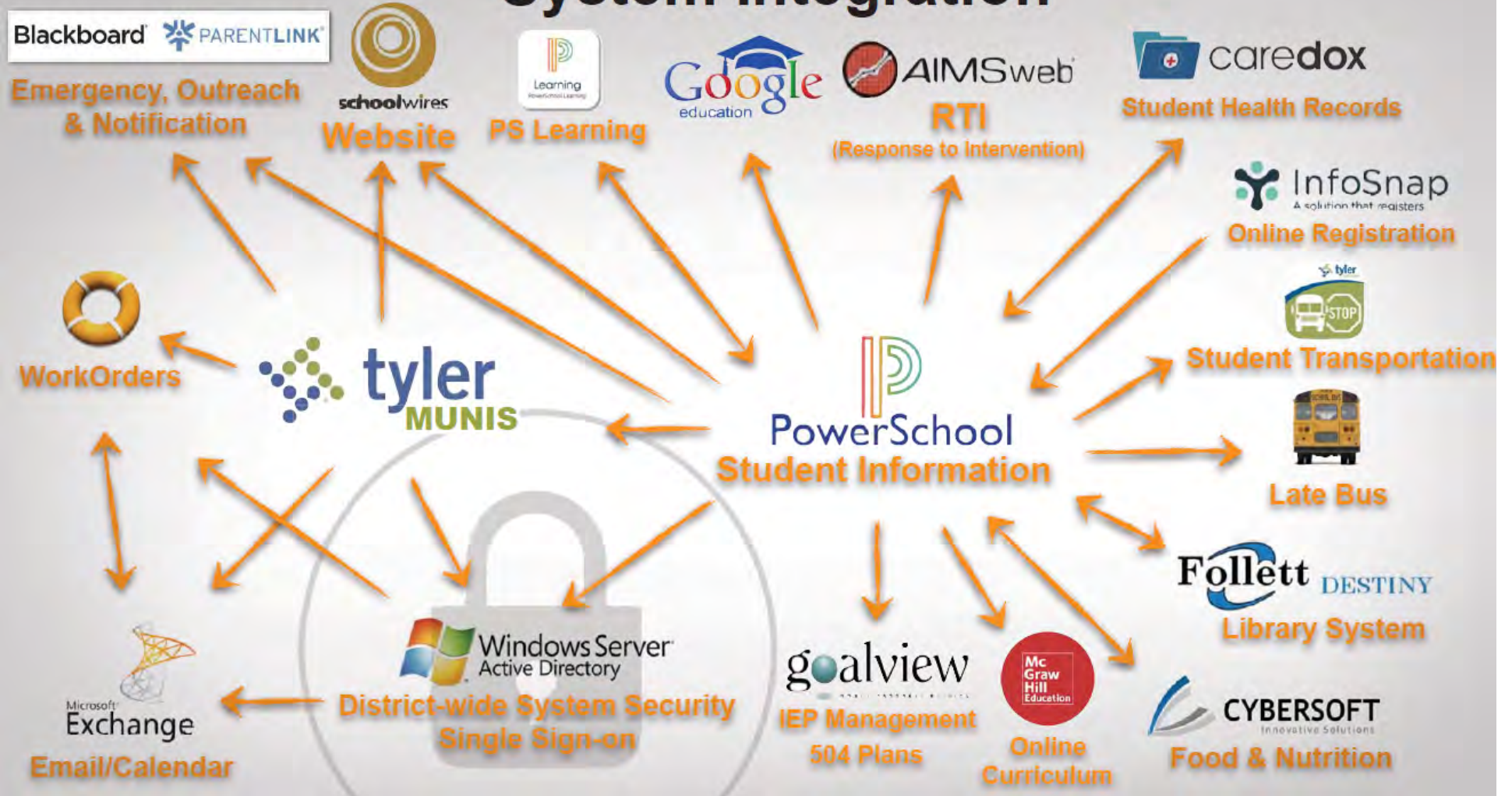
2020 - 2021



Device Summary

School	Students (excl. PK)	Devices	Ratio	Macs	PCs	Chromebooks	iPads
Anderson Elementary School	200	277	1.4	6	0	1	270
Anne Wien Elementary School	375	431	1.1	80	0	254	97
Arctic Light Elementary School	420	678	1.6	51	0	190	437
Barnette Magnet School	426	501	1.2	102	0	214	185
Ben Eielson High School	317	460	1.5	38	39	289	94
Boreal Sun Charter School	187	60	0.3	0	0	60	0
Chinook Charter School	151	105	0.7	91	0	0	14
Crawford Elementary School	297	320	1.1	30	0	209	81
Denali Elementary School	328	367	1.1	78	0	187	102
Effie Kokrine Charter School	138	283	2.1	50	0	189	44
Hunter Elementary School	355	402	1.1	71	0	221	110
Hutchison High School	400	478	1.2	0	10	430	38
Joy Elementary School	397	655	1.6	48	0	458	149
Ladd Elementary School	438	541	1.2	61	0	113	367
Lathrop High School	935	1037	1.1	74	35	833	95
Midnight Sun Elementary School	447	488	1.1	4	0	125	359
Nordale Elementary School	305	333	1.1	0	0	268	65
North Pole Elementary School	416	450	1.1	0	0	343	107
North Pole High School	618	802	1.3	12	158	551	81
North Pole Middle School	574	697	1.2	119	0	375	203
Pearl Creek Elementary School	466	518	1.1	14	0	295	209
Randy Smith Middle School	294	474	1.6	78	0	291	105
Ryan Middle School	358	394	1.1	48	0	322	24
Salcha Elementary School	80	115	1.4	20	0	60	35
Star of the North	196	134	0.7	72	2	35	25
Tanana Middle School	376	658	1.8	84	8	422	144
Ticasuk Brown Elementary School	444	592	1.3	1	0	405	186
Two Rivers Elementary School	68	211	3.1	8	0	108	95
University Park Elementary School	473	630	1.3	85	1	429	115
Watershed Charter School	199	124	0.6	120	0	0	4
Weller Elementary School	452	475	1.1	35	0	288	152
West Valley High School	967	1123	1.2	83	61	787	192
Woodriver Elementary School	477	549	1.2	29	0	363	157
Totals	12574	15362		1592	314	9115	4341

System Integration



Technology will never replace great teachers, but technology in the hands of a great teacher is transformational.

- George Couros

Questions?