



Warren County - Ohio
TELECOM

Annual Report | 2020

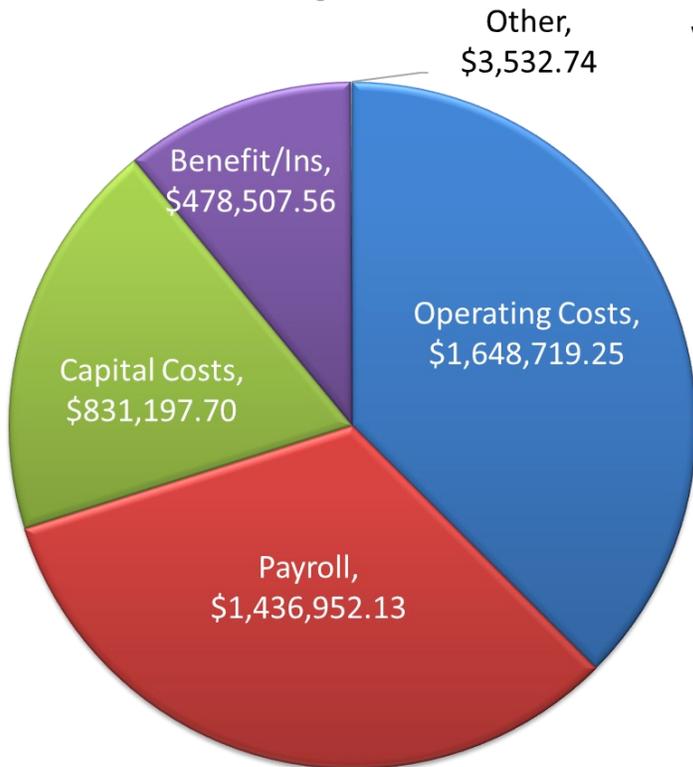


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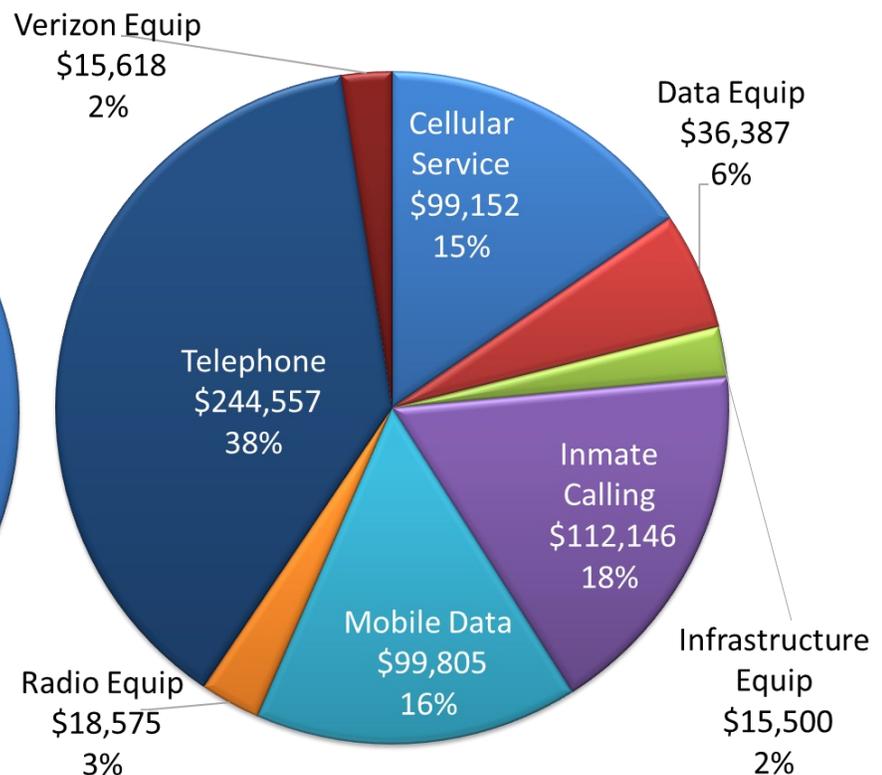
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2020 Expenditures



2020 Cost Recovery



From Director Kindell



Most people will tell you 2020 was a terrible year... and I won't disagree... but it was also a good year for Telecom. When everyone was scrambling to work from remote, Telecom already had the needed equipment and a plan to use it. We were ready with a Business Continuity Plan for other County Departments to take their phones home and function as if they were in the office. We stood up conference bridges to support virtual meetings. We welcomed dispatchers to our Technology Integration Centers (TICs), aiding in social distancing within the Warren County Emergency Communications Center to help reduce the risk of COVID-19 spread.

Most importantly, Telecom was able to continue its mission and move forward on projects, all while assisting other departments with their unexpected needs.

I am happy to report that #ProjectTriTech went live (Central Square), replacing Computer Aided Dispatch, Law Reporting, Mobile Computing, and Jail management systems with the flip of a switch. The hard work performed by Telecom Team Members and our agency partners made it look easy. It would not have happened without all of their efforts. Hundreds, if not thousands, of hours put into #ProjectTriTech made the project successful.

No one else does it as well as Telecom!

serving Warren County Since 1989



THE *Warren County - Ohio* TELECOM CREED

OUR MISSION

Established in 1985, Warren County Telecommunications has evolved into a 24/7 technology support provider for our customers in the public safety and government communities. With expertise in secure Data and Radio Systems, Public Safety Applications, Telephone, Training, and Administrative Support, we strive to provide reliable solutions that are in alignment with Warren County initiatives and leadership goals.

In support of this mission, we will:

- Partner with our customers to understand their needs.
- Provide leadership, planning, and training for the effective use of emerging technologies.
- Demonstrate technical and operational excellence through a commitment to professionalism and continuous improvement.

OUR VISION

Warren County Telecommunications will be recognized as a high-performance team providing technical excellence that advances our customers in alignment with Warren County's mission and goals.

OUR CORE VALUES

Our Core Values drive and guide us as we serve our customers. As members of Telecom, we are committed to:

- **Collaboration:** We are dedicated to a constructive, team-oriented environment, gathering varied perspectives, sharing knowledge, leveraging unique skills, and building effective partnerships.
- **Continuous Improvement:** We strive for operational excellence through the on-going development of our individual team members and technology.
- **Innovation:** We encourage creative and critical thinking.
- **People:** We respect, care for, and actively listen to our coworkers and agencies.
- **Service:** We push our limits to provide consistent, agile, reliable, and accessible services to all.
- **Transparency:** We maintain open communications and ethical business processes to be accountable in our interactions and our work.

OUR DECISION CRITERIA

Is it good for Warren County?

Is it good for our Customers?

Is it good for our Tax Payers?

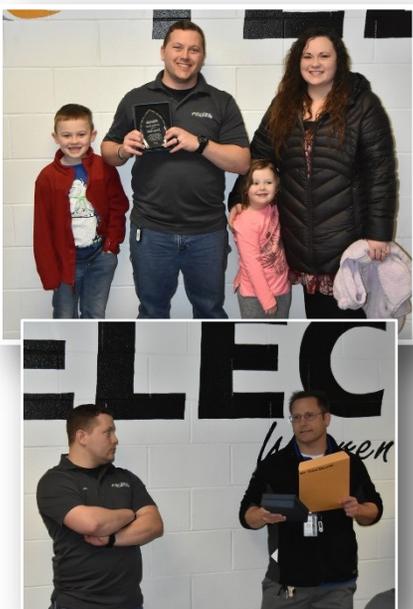
331 years of combined service to Warren County powered by



Paul Kindell, Gary Estes, Paul Bernard, Gary Hardwick, Dustin Flint, Jeff Cepin, Joseph Newton, Garrett Wilson, Jimmy Hollin, Allison Lyons, Kristy Oeder, David Shiverdecker, Mike Callahan, Debbie Griffith, Rhonda Bernard, Corey Burton, Don Sebastianelli, Glenn McKeahan, Joshua Moyer, Jeremiah Marcum, Dan Bunning, Becky Trovillo, Jessica Johnson, Philip Bomer, Kim McKinney.

Telecom Excellence

In January, the second annual #TelecomExcellence award was presented to Jimmy Hollin for his performance in 2019. Hollin was nominated by his Manager, Dustin Flint who helped present the award at a department luncheon. Surprising Jimmy was his wife Carlee + children Brantley and Amelia.



Retirement

Another Telecom family member achieved an honorable retirement this year! Becky Trovillo departed Telecom after 15 years of service to Warren County's citizens and departments as switchboard operator and Administrative Support. It's estimated that she directed more than 250,000 calls during her career!



New Team Member

Kim McKinney joined us on October 19th as our new Administrative Support and Switchboard Operator. She earned her Bachelor's in Business Administration from Ohio University and comes with 7 years prior work experience doing Administrative Support with a food service/vending company. She's also a proud Lebanon soccer mom to her two children, Matt and Kate.



COVID-19

Telephone Take-Home Kits Predicting a mass exodus from county offices, Telecom secured the necessary hardware to assemble take-home phone kits for County coworkers. It included all the cables, adaptors, phones, and headsets necessary to utilize one's county phone from the safety of their home. Training material was included to walk a coworker through the various scenarios they may utilize. Several departments also needed their phone system greetings, auto-attendants, and schedules altered to reflect new office hours and rules. Telecom managed the backend and voice recordings for this effort.





CRAFTERS AGAINST COVID-19

Warren County, Ohio received its 1st home made fabric mask donation!



CLARIFICATION: These masks are being gathered at the local level for specific facilities and companies who have requested them from our Warren County Emergency Operations Center. We understand not every hospital network or care facility yet approves of or is implementing this PPE but we'd rather be proactive than reactive. Any unused masks will be donated to cancer charities after this pandemic is behind us.

Finished masks should be sealed in bags, marked with quantity and name/community of donor then placed in a storage bin outside Warren County's EOC: 520 Justice Drive Lebanon, OH 45036

Can't deliver? Contact the Emergency Operations Center at 513-695-5001 and we will coordinate a pick-up.

#CraftersAgainstCOVID19 www.co.warren.oh.us

Proudly sponsored by





Enhanced Office Space Cleaning + Hygiene

In addition to the efforts made by Warren County Facilities Management, our Support Services Team added more touch-point and common space cleaning to their Keep-the-Lights-On procedure. We also joined the mad dash for affordable hand sanitizer, securing bulk from a local distributor, then bottling/labeling ourselves.



#TCKudos

To: Garrett Wilson **Dept:** Telecom
From: Allison Lyons **Date:** 3/19/20

Thank you for...
 running yourself crazy prepping for county coworkers' ability to take phones Connect App. Stay Healthy!!

To: Dan Bunning **Dept:** Telecom
From: Josh Moyer **Date:** 4/21/20

Thank you for...
 Dan has been a huge asset during this time of working from remote. He is always willing to help in any way he can and run and check on anything in the office if needed. He has also been our feet on the ground for DELTA's KLO Process. Thanks for always being a great team member!



To: Jimmy Hollin **Dept:** Telecom
From: Dustin Flint **Date:** 5/26/20

Thank you for...
 Coming in and still doing KLO and Backup Tapes during Covid-19, as most of the office was working from home. Jimmy helped me keep several projects moving along by being able to do any tasks I asked him to do. Anything that was asked of Jimmy to do across any task unit, he did without question.

Virtual was our New Reality Unable to meet in person, Telecom stood up several Webex channels for county departments, the Commissioners, and the various workgroups in which we participate. Agencies also used Zoom and Microsoft Teams to continue daily business with us. Pictured below is a setup of Deerfield Twp Battalion Chief Doug Wehmeyer who showcased all his 'Telecom Tech' that made his job possible (portable radio, Verizon MiFi for better internet connection at home, WCPSTN programs like CAD on his Surface, and virtual meeting on his second device).





Telecom Lives out our Core Values of
#People + #Service!

The United Way of Warren County recruited volunteers willing to shop for 60 identified low-income and at-risk senior citizens in our community who couldn't safely visit the grocery store.

The plan was to pick up a \$50 gift card and targeted shopping list then deliver the groceries to Warren County Community Services who would handle distribution. But when Telecom's rep arrived, all the gift cards had been distributed. Still wanting to serve, Kristy Oeder, Debbie Griffith, Jessica Johnson, Paul Kindell, and Gary Estes banded together and purchased groceries to fulfill orders for 5 seniors!

In the words of our office manager Kristy Oeder, "[It] makes me feel good to be able to do something to help people during this... I miss all of my Telecom Family."





Computer-Aided Dispatch Adapted to Notify First Responders

To give our first responders a heads up, CAD was used to flag addresses of known COVID cases. This was a partnership between the Warren County Health District and Emergency Services, updating CAD daily as citizens' quarantine or isolation periods expired.

Emergency Operations Center Technology With the potential of running out of EMS units due to COVID responses, our Public Safety Systems Manager built a special status screen that monitored only EMS units. We streamed it over our Portal and gave access to surrounding counties' EMA and Comm Centers to monitor our available EMS resources. This regional awareness helped neighboring agencies know how much or how little COVID was affecting our available apparatus. Don Sebastianelli produced several maps for COVID-19 case tracking— some on special dry-erase paper for daily updating.



To: Lesli Holt & EOC Workers **Dept:** WCDES EMA

From: Allison Lyons **Date:** 3/19/2020

Thank you for...
being so top notch and for being a serious force against this COVID-19 epidemic. You're doing a great job and your quick actions will surely make a difference. Stay healthy, stay alert, and stay you!

To: Mike Callahan **Dept:** Telecom

From: Allison Lyons **Date:** 3/19/2020

Thank you for...
doing your part to get county coworkers their desk phones and necessary equipment to work from home during COVID-19. I hope county coworkers know how fortunate they are to have IST and all your quick-response work.

#ProjectTriTech

Central Square Suite

- **Enterprise CAD:** Call Taking, Dispatching, Mapping/GIS, Reporting, CAD Browser
- **Inform Mobile:** Fire & Law Mobile
- **Inform IQ & Analytics:** Query, Searching, Reporting, Dashboards
- **Inform RMS:** Records, Master Indexes, State Reporting, Citations, Case Management, Property/Evidence, Civil, Warrants, Inform IQ & Analytics
- **Inform JMS:** Jail Booking, Release, Kiosk, Weekender, Visitation, Prisoner Release, Inform IQ, Analytics

Project Implementation

Team (PIT) Telecom continued to experience a productive partnership with agency-appointed representatives from local law enforcement and fire/EMS agencies. The team conducted a weekly Tuesday call with Central Square to address open issues and move forward with the project. Key players remained the same from 2019—Katy Farmer (WCSO), Lt. Nick Marconi (WCSO), Lt. Brian Payne (WCSO), Aaron Payne (Mason PD), Jenny Embleton (Springboro PD), Bill Kampman (WCSO), and Tim Simpson (Clearcreek Fire District).

Data Warehouse is the electronic storage of a large amount of information used to provide greater insight into the performance of an organization by comparing data consolidated from multiple sources. Data warehousing improves the speed and efficiency of accessing different data sets and makes it easier for forecasting budgetary decision-making items. Partner agencies like the Sheriff's Office and Clearcreek Fire District request reports from Telecom with specific fields they're looking for. Published reports to date: 9 fire, 1 PPE, 44 Jail/Court, 24 Law Enforcement,

The Home Stretch On June 8/9, the PIT completed the Property and Evidence Workshop and learned how to complete entry and processing, create evidence room locations,

barcoding, generate evidence item labels, create inventory reports, form letters, labels, and receipts. In mid-June, the RMS Team cranked through Output Designer which fine-tuned the fields and formatting of forms to be used by our law enforcement officers! They closed out June with Jail Training.



Enterprise Mobile/CAD Team Led by Analyst Joshua Moyer (pictured left), Telecom never lost touch of agencies' needs and configurations leading up to go-live.

On June 25, the environment was upgraded to version 20.2.4 then efforts changed from tweaking features to locking down design and moving forward with training documentation. A recent success was formatting the map to work as end users desire, with Warren County-centric map views and layer options. The LEADS interface was configured and forms were streamlined to ensure proper returns for our officers. Clearcreek Twp Fire Assistant Chief Simpson set up the new Fire Records Management System (FRMS) interface and tirelessly worked on the problem nature translation table to ensure that NFIRS codes would enter on the FRMS report.

Training Several Telecom Team Members joined the training effort to blitz our customers in the final 6 weeks before go-live. Allison Lyons (pictured left at Hamilton Twp PD), Paul Bernard, Joshua Moyer, Rhonda Bernard, and David Shiverdecker clocked more than 100 training hours reaching the departments who chose in-person classes. Many agencies took the option to attend a Train-the-Trainer, then facilitate the end user training themselves with Telecom-provided materials. This greatly expedited the training curve and helped us achieve such a short training window.

Lock Down

The program got locked down on August 27th to allow backend test data to be purged and to prepare for September 1st go-live.



#ProjectTriTech

Go-Live Finally Happened on September 1st, 2020!

COVID-19 may have stopped our Vendor reps and Core Project Implementation Team from all being on site, but it didn't stop us from working together! We took a multi-site approach leveraging the productivity of Microsoft Teams, a phone bridge, and the radio system to bring people together from across the country.

Central Square reps from Florida, Missouri, Texas, Indiana, Kansas, California, and Iowa were all plugged in for multiple days to pounce on any issues that arose. The faces you've grown accustomed to seeing in our #ProjectTriTech updates were all representing their agencies and troubleshooting connectivity, feature availability, and relaying any issues from the field.

This Go-Live was multi-faceted, transitioning CAD, Mobile, Jail Records, and Law Records in one fell swoop!

- Clerks from various law enforcement agencies were logged into CAD reporting their experience.
- Telecom swarmed the Emergency Communications Center at 0800 to transfer each ECO position to the new system, while monitoring final calls that needed completed on the old CAD system.
- Nearly 2 hours after go-live, the last incident was closed on Premier CAD, putting to rest a seventeen year-long system that served our County well.
- Telecom had team members scattered between the basement, dispatch, and customer sites, and it was all being documented in Activity and Issue Logs.



ECC Operations Manager Jesse Madden working with Telecom's Paul Bernard and Joshua Meyer in the Communications Center



The 1st pictured live user of Enterprise Mobile



Transitioning dispatcher workstations from old to new CAD



WCSCO monitoring the cutover from their office



Telecom's David Shiverdecker working side-by-side with ECO Bridn Holtel



Dustin Flint all smiles under that mask!



Radio System

82 agencies & 61 school buildings within Warren County utilize our Digital MARCS P25 Radio System.

Federal Participation

Largely due to Caesar Creek State Park, we share our talkgroups with Army Corps of Engineers and Coast Guard Auxiliary, should local departments need to work with them on a response.

Statewide

Interoperability with the State: if a large-scale emergency occurs, we have the same talkgroups as other MARCS-IP subscribing agencies across the state who could come to our aid and communicate with our first responders. This is possible because of our relationship and participation on the state of Ohio's MARCS system. The Ohio Department of Natural Resources (stationed at Caesar Creek) and the Ohio Department of Rehabilitation and Correction (prison probation officers) both have our talkgroups for communication with Warren County agencies.

RTICP: Telecom's Director & Community Manager maintain a 100-page Regional Tactical Interoperable Communications Plan (RTICP) that outlines how counties in Southwest Ohio will communicate with each other on the MARCS radio system. The Warren County Commissioners passed a resolution to adopt the plan in 2018, and other counties have followed suit.

Strategic Roaming: Director Kindell is an active member of the Statewide Interoperability Executive Committee (SIEC). In 2018, the committee began the process of protecting the State's radio system capacity by reducing unnecessary traffic from transient commuters. The draft of a statewide Strategic Roaming plan has been developed, which recommends that local channels (such as Police and Fire Primaries) only work in and around one's county where daily business is conducted.

Regional We share an interoperability package with neighboring counties who want our talkgroups for the purpose of mutual aid. Our 83TAC talkgroups work on MARCS towers within our county and one-county surround, allowing neighboring counties to hear our traffic from their station or bay.

In December, we allowed some Clermont County talkgroups to roam onto our system as they replaced a tower site.

Countywide Per the Board of County Commissioner's Radio Distribution Policy, all public safety agencies within Warren County are provided radios to utilize the countywide radio system. The obvious benefit of this is interoperability between agencies. Several other agencies such as Transit, Engineers Office, Public Works, and the Water Department also use radios on our system.



Peters Cartridge Factory Consultation

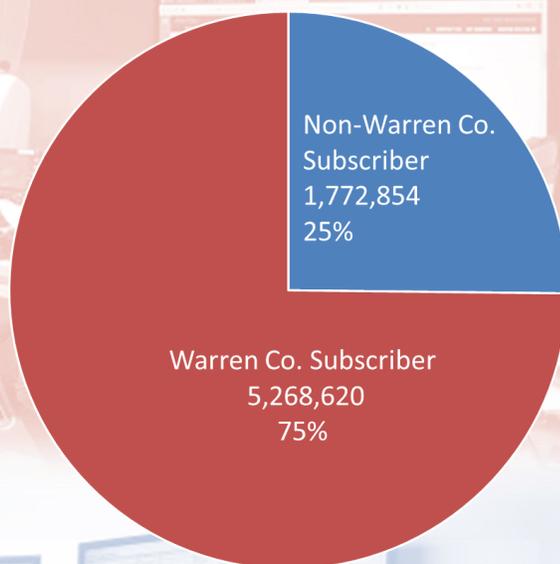
In March 2020, Deerfield Twp Fire Rescue & Hamilton Twp Fire requested assistance from Telecom's Paul Bernard and Corey Burton regarding radio communications at the old Powder Factory, now renovated into Cartridge Brewing and Peters Cartridge Factory Apartments.

With the amount of concrete, metal, and floors in this facility, we helped our Fire/EMS friends be proactive in ensuring radio communications would be successful at this establishment. Telecom walked the grounds with equipment capable of measuring radio signal strength, testing various levels, corners, and even crawling on the ground to simulate firefighter search methods. The Brewery opened for business Halloween weekend and apartments began leasing on November 2nd.

Radio System

One Network Operations Center (NOC) provides the prime site control of the radio system and the interface to the State system. In the event that we lose contact with Columbus, the Radio NOC takes over and Warren County can operate in Site Trunking across our 9 radio tower sites, still maintaining local talkgroups. Each rack is fed by two UPS power supplies, offering a high level of redundancy.

7,041,474 Radio System Activations



From the Radio Shop

2,250 radios

104 radio repairs,

75 aligned radios,

7 radio template changes,

250 alias changes,

12 new radio templates

419 maintained templates

5 Hot Box deployments

247 programmed radios

4,884,152 push-to-talks

4.9 seconds average call time

396 days cumulative talk time
(22 less days than 2019)

Radio System

New 83TAC Channel Assignments

At the March 2020 Warren County Fire Chiefs' Meeting, a new usage of tactical channels was approved. In light of #ProjectTriTech causing more mutual aid runs, and as recommended units will be more based off location, agencies are anticipating the need for more TAC channels. The following plan was implemented on July 20:

- 83TAC2 is reserved for all minor Mutual Aid EMS Responses. Because radio traffic for these types of events is minimal, 83TAC2 will be utilized for concurrent details. If an incident grows to a point that a separate 83TAC is needed, units will request it from Warren County Communications.
- 83TAC3–21: These will be utilized for all other responses that require a TAC (electrical fire, structure fire, vehicle crash, etc.). Warren County Communications will no longer skip TAC channels when assigning them, due to anticipating needing more than on the previous CAD system. If more than one TAC is needed, request it from Warren County Communications. There is no guarantee they will be adjacent.
- 83TAC17 will continue to be earmarked for responses into the City of Franklin, if not already used by another incident.
- 83TAC19 will continue to be earmarked for responses into the City of Lebanon, if not already used by another incident.

Upgraded Microwave

The microwave links between our Manchester and Snider sites have been upgraded with an in-between at ODOT and changed frequencies.

Benefit: more robust / less susceptible to rain fade.



Hotbox Deployments

Telecom maintains \$80,000 worth of equipment ready for pre-planned or rapid emergency deployment. Long-duration incidents like manhunts or mutual aid calls like structure fires are typical uses for hotboxes. We can give Warren County-programmed radios to outside agencies who may otherwise not have the appropriate talkgroups to communicate with our agencies.

Kits contain radios, batteries, chargers, headsets, and even battery packs for mobile devices. In 2020, we only had (5) hotbox deployments. Our partners can reserve these resources from Telecom or emergency request from Dispatch. An on-call Telecom team member can deliver to you or you can pick up from Justice Dr.

Countywide Participation Telecom is the point-of-contact any time a 9-1-1 call cannot be completed within Warren County. Through our troubleshooting, we decide if the problem resides within the 9-1-1 system or if it is due to a phone carrier having issues. If an issue escalates, we submit a help ticket with the responsible company (AT&T, CenturyLink, INdigital, Verizon, etc.) This gets all Warren County government buildings and the Lebanon + Franklin PSAPs on their radar so that our problem can be resolved.

Primary System Our standard mode of connectivity is fiber; but should that go down, it's important to know that microwave will continue 9-1-1 services for our citizens. In 2020, Telecom's Primary System ran as expected with no changes beyond standard updates. Now 5 years old, we replaced or upgraded all workstations in 2020. In 2021, servers will be replaced and the Windows server operating system will be upgraded.

Secondary System Housed at our disaster recovery site, it is online at all times. Should the primary system go down, the secondary system picks right up. It also provides connectivity to our secondary connection to the telephone company in the event that the primary system goes down.

Texts-to-911 Remain Minimal

Despite Text-to-911 going live a few years ago, few citizens seem to realize its functionality. Obviously, calling 9-1-1 is the preferred method but when a citizen is hiding or needs to remain quiet, texting is a great option.

In 2020, only 99 text-to-911 were produced by our citizens.

- **5** texts with Franklin Dispatch
- **24** texts with Lebanon Communications
- **70** texts with Warren County Emergency Communications Center



Warren County 9-1-1 Software Now Updates Cellular Caller's Location Every 20 Seconds!

The Auto Re-bid feature in our Communications Center's 9-1-1 software went live on August 31st. This enables the software to automatically re-bid the 9-1-1 caller's location every 20 seconds as long as the call is active. In the past they have had to manually re-bid the caller's location. This was done after testing of the new interface to Enterprise CAD magnified the benefits of having the Auto Re-bid feature enabled.

Supporting Communications

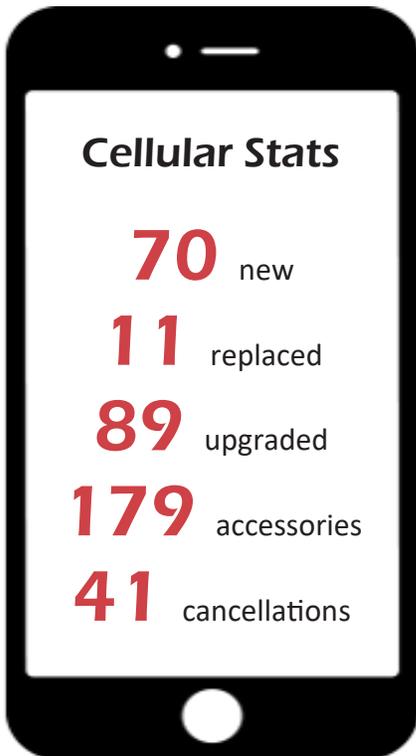
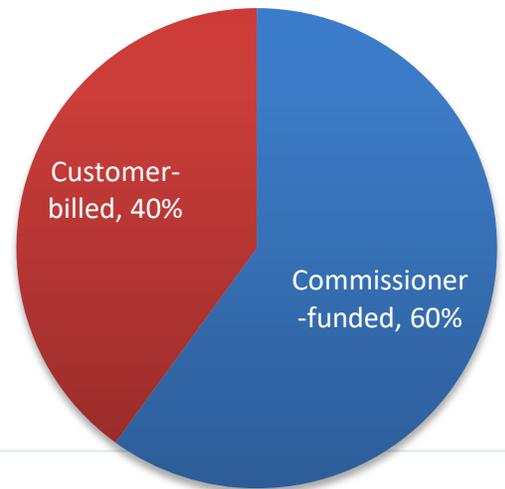
Telecom manages all County coworkers' cellular bills on one account which gets Warren County a bigger discount (fiscal stewardship of taxpayer dollars). We essentially replace the functionality of a Verizon store as all coworkers come to us for phone upgrades, accessories, and plan changes.

Non-Commissioner Funded Cellular Receivables totaled \$99,152.26

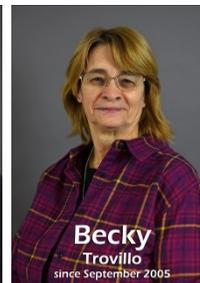
- CHILD. SERVICES
- WATER DEPT.
- ENGINEER
- HEALTH DEPT.
- PARK BOARD
- SOIL & WATER
- FAMILY ABUSE
- OHIOMEANSJOBS
- HUMAN SERVICES
- ARMCO PARK
- MARY HAVEN
- SOLID WASTE
- DOG WARDEN
- PLANNING COMMISH
- LEPC
- OMB-Healthcare
- TITLE CLERKS
- EMERGENCY MGT
- TITLE-FRANKLIN
- TITLE-MASON

The Board of County Commissioners, via Telecom, funds cellular services for 26 departments, totaling \$146,476 in receivables.

Cellular Receivables



In August, Task Unit Alpha cleaned up the inventory of returned county coworker cell phones. Until that point, we had no way of safely disposing of the phones while ensuring our coworker's data could not be recovered. We could not use the county's crusher because the phone's batteries could explode. We found an outside company that safely removed the phone batteries then securely crushed over 500 cell phones!



Our Administrative Team, also known as Task Unit Alpha, handled 7,561 switchboard calls in 2020!

Supporting Communications

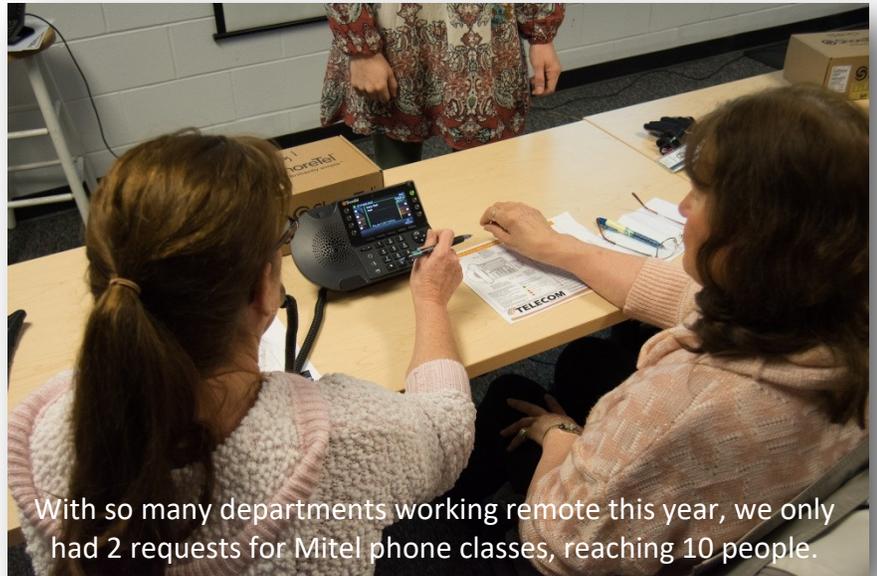


1,203 phone users (+62 from 2019) with
913 voicemail boxes (+20 from 2019) generated
1,466,209 phone calls (+35,902 calls from 2019), totaling
70,592 recorded hours (+7,915 hours from 2019)!

GETS/WPS Capabilities

Earlier this year, we notified eligible personnel on the Warren County phone system to apply for CISA's GETS and WPS programs. A 2-page technical bulletin was attached outlining GETS/WPS and what Telecom is doing to aid our customers in maintaining cellular priority despite heavy call volumes or limited service availability.

- Telecom added WPS (priority) to public safety and elected officials' cell phones on the WC phone plan.
- Telecom added Telecommunications Service Priority (TSP) to our public safety land lines.



With so many departments working remote this year, we only had 2 requests for Mitel phone classes, reaching 10 people.

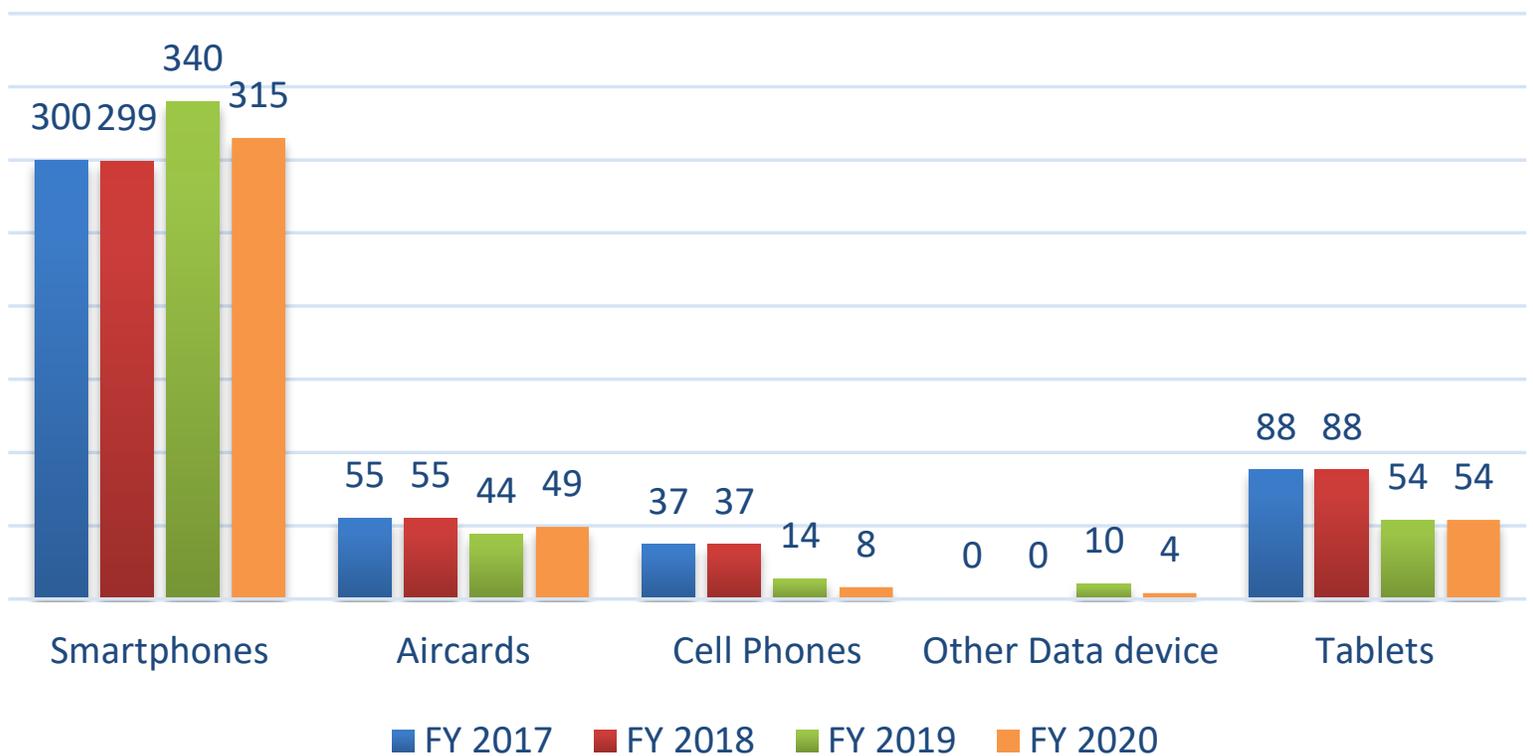
Campus-wide Overhead Paging

Telecom and Facilities worked with our vendor to get a new overhead paging system installed in county buildings. The intent of this system is for alerting during emergency situations should they occur. The overhead paging system consists of 19 zones broken up between the county buildings except for Juvenile, and the new jail. Juvenile and the jail will be added to the system at a later date. There is a zone for each floor in each building with the ability to page the zone, or the entire building. The paging system can also page all buildings and all zones at once.



Supporting Communications

County Coworker Equipment Counts



2020 Mobile Data Receivables

1st Quarter	\$ 24,970.72
2nd Quarter	\$ 25,138.04
3rd Quarter	\$ 24,776.52
4th Quarter	\$ 24,920.00
TOTAL:	\$ 99,805.28



Telecom administers a County Verizon account on behalf of all user agencies who want included. This achieves competitive cellular and data rates and also helps customers use the correct technology for their job. In 2020, we cost recovered \$99,805.28.

Telecom-recommended Models

Better = Cradlepoint IBR900-600M or IBR900LPE
(2 cellular connectors, doesn't need GPS Gate)



Telecom-recommended Antennas

Good = Tescso part# 595032
Phantom Fin Roof Antenna
(Connections: 1 cellular, 1 wi-fi, 1 GPS)



Better = Taoglas (Connections: 2 cellular, 2 wi-fi, 1 GPS)
Include the following parameters when buying from vendor: "Pantheon Screw Mount 5M GNSS-RG174 SMA(M), LTE(1&2)-CFD-200 SMA(M), 2.4/5.8GHz (1&2) CFD-200 RP-SMA (M)". Antenna should support 700 MHz, AWS, PCS and Cellular "A" for Verizon



As of 1/15/2020

Supporting Communications

Jail Support Our Infrastructure Team continued to support the construction effort of the new Sheriff's Office and Jail throughout 2020. Members participated in 4 walkthroughs to monitor progress on construction and worked in an advisory manner for several meetings regarding the changing needs of the structured cabling systems. Telecom also drafted a bid document to extend the campus fiber/copper network into the new building from 406 & 500 Justice Drive. This will add resilience to the existing campus fiber network by providing more diverse paths in the event of cable damage.



683 completed work

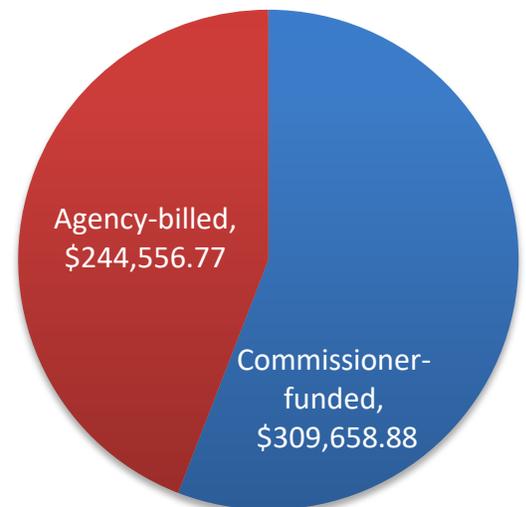
orders related to:

- email changes,
- county directory changes,
- Verizon data plans, hotspot, removal/addition of an employee,
- Verizon accessory purchases, cases, screen protectors, chargers,
- Verizon phone purchases, free upgrades, replacements for damaged phones, new hires

(113 more than last year)

Several departments pay for their Telecom-managed telephone services. Some include Armco Park, Children's Services, Dog Warden, Educational Services Center, Engineers, Health Department, Humane Association, Human Services, Mary Haven, Metro Housing, Park Board, Water, Salem-Morrow Fire, Soil & Water, and Solid Waste.

Telephone Services



Phone Service for WC Fire Depts

The Warren County Board of Commissioners permitted Telecom to offer Telephone Service to County Fire Departments for a monthly charge. First to take advantage of this offering was Salem-Morrow who received phone training from Telecom in September.

- Agencies save tens of thousands of dollars PER station!
- Telecom keeps the Voice over iP phone servers patched and updated.
- We built the phone system to public safety standards with no single point of failure and redundancy.
- You must have a reliable and reasonably fast internet connection plus a solid computer network.
- Office phones are \$32.70 per month
- Bay, meeting room, kitchen phones are \$15 per month.

Dispatch Center Technology

22 Workstations receive physical cleaning maintenance on a rotating schedule, each getting cared for 4 times per year. Two Telecom Integration Centers are located in our basement and contain all systems and programs available in the ECC (9-1-1, Radio, CAD/Mapping.) If Emergency Communications Operators need to abandon the ECC, they can report to Telecom and resume all necessary functions. To achieve social distancing in the Comm Center, dispatchers periodically inhabited the TICs since COVID-19 began.

CAD Computer Aided Dispatching is the heart of the system where calls for service originate. In the late 80s, Dispatch's original method of call taking was writing everything on cards and log sheets and referring to a large map book. To create a post-incident report, people had to dig through boxes. The introduction of CAD provided a database of addresses and an electronic depository of all calls for service. Eventually, mapping was integrated cluing a dispatcher into incident location and agency with jurisdiction. 2020 was the final year for Premier CAD, before going live on CentralSquare Enterprise CAD on September 1st. In its final 8 months, Premier CAD created **152,273 law calls** and **14,642 fire/EMS calls**.



PCAD Decommission With our transition to Enterprise CAD (ECAD) complete, we moved toward dismantling/repurposing hardware from our previous CAD product. We made sure all data was converted to the new product, we are maintaining CAD DSS abilities, the Prosecutor's Office was consulted to ensure they have any needed case-related data, and as of December 22, PCAD server, UDT and OQ were cleared for decom.

CAD-to-CAD Hub with Neighboring Counties and Communities We closed out 2020 with progress towards achieving CAD-to-CAD interoperability with neighboring counties and cities. More to come in 2021!

Radio Dispatching Telecom builds new console configurations as necessary. The Radio Team's daily Keep-the-Lights on responsibilities include checking all communication lines that run between the ECC and prime site (9-1-1, radio) and the connection with MARCS which ensures we stay connected to the state radio system.



Thanks to our FREE EMAG (Enterprise Messaging Access Gateway) from VZW, *our HipLink messages hit Verizon in under 1 second*, ready to be shipped to our customers.

HipLink Messages got a Makeover!

We emailed agencies on 9/1 with a new sample initial dispatch message. The layout is cleaner, spaced out, and takes advantage of new ECAD field options.

Example

Fire Charlie
Fire Alarm - 52

276 Franklin Rd
Waynesville
N Main St/N 3rd St

91 - 9121 - E17
91 1S & 1E & 1R & 1BA
S91, E93, R91, C91, TAC3

WCCADGIS
91200831-0009626
09:34
STx91_Group

Dispatch Center Technology

Mapping Telecom receives parcel, oddly shaped subdivisions, building footprints, and updated city boundaries. We then tighten it up for the purpose of public safety response needs to create the Dispatcher-facing map. This will also feed the agency-facing map once #ProjectTriTech (Central Square) InformMobile is live. Telecom maintains the source map used by CAD which directs the program to the appropriate responding agencies, aids in address verification, and is customized by agency and beat/response region.

PSAP/9-1-1 A Public Safety Answering Point (PSAP) is a call center responsible for answering calls to an emergency telephone number (9-1-1) for police, firefighting, and ambulance services. The Commission, via Emergency Services, provides PSAP services to all communities except two that choose to operate their own communications centers (Lebanon and Franklin.) The Commission provides 9-1-1 services and support to all communities in Warren County via Telecom's 24/7 on-call staff.



Priority Dispatch ProQA is a nationally recognized tool used by dispatchers to consistently ask questions based on the caller's emergency. Only Fire (EFD) and Medical (EMD) use this service. Telecom's role is maintaining the backend servers on which ProQA resides.

Alerting

- **Voice Paging:** Telecom purchases and provides fire pagers to any Warren County-dispatched agency who requests them. The radio consoles in Dispatch generate a two-tone sequential tone to activate the voice pagers and house systems of the proper agency and play the dispatcher's voice with relevant incident information. They also open up for the countywide all-call "long B" tone. To expedite mutual aid (early notification), we provide Warren County tones for outside agencies' pagers who request them (e.g. Goshen for Hamilton Twp incidents, Loveland-Symmes for Deerfield Twp incidents).
- **Station Alerting:** A pager built into the fire station receives tones from the ECC. Telecom maintains an accurate paging database which the CAD system relies on to automatically encode the tones. Dispatchers can also manually alert a station. Telecom ensures triple redundancy with ECC consoles, backup system, and MIP 5000.

Dispatch Problem Reports (DPRs)

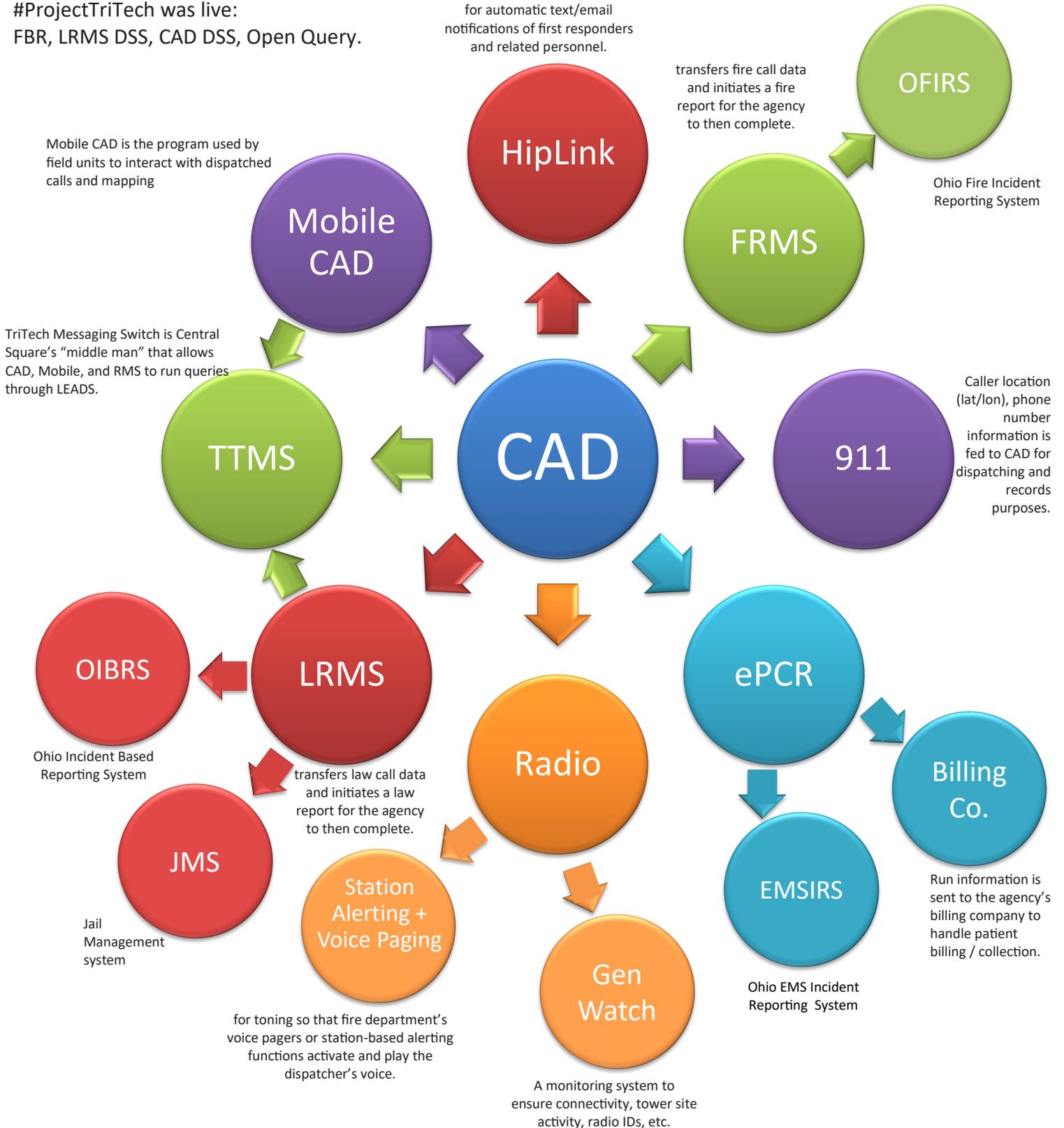
A 24/7 open line of communication exists between the Emergency Communications Center (ECC) and Telecom. Dispatchers are able to submit any problem, big or small, to Telecom. Our team members receive email alerts and if serious, Telecom's on-call personnel will be paged out to troubleshoot and escalate if necessary. With go-live of a large capital project (#ProjectTriTech), we're not surprised that we saw an uptick in DPRs this year.

422 DPRs
submitted
in 2020

CAD Interfaces

Interfaces are pipelines between two or more systems allowing information to flow between them. Below is a diagram of our active interfaces to and from CAD along with their purposes.

In 2020, we deactivated (4) interfaces once #ProjectTriTech was live:
FBR, LRMS DSS, CAD DSS, Open Query.



Records + Reports

LRMS Law Records Management System is a function devoted to the management of law enforcement information throughout its life cycle... from the time of creation or inscription to its disposition. Led by Telecom Analyst Rhonda Bernard (pictured right), this includes identifying, classifying, storing, securing, retrieving, tracking, destroying, or permanently preserving records. It also entails solutions for incident reporting, data analysis, training, medical records, personnel management, and risk management. Most of this year's work continued to be #ProjectTriTech. Our Analyst has continued to receive invaluable help from her core LRMS agency partners—WCSO's Kathleen Farmer, Nick Marconi, Brian Payne; Springboro's Jennifer Embleton; and Mason's Aaron Yeary. We serviced 13 LRMS Work Orders in 2020.



Response & Crime Analysis The record data we house on behalf of public safety agencies is used to analyze responses and crime statistics.

FRMS Fire Records Management System is utilized by all Warren County-dispatched Fire agencies. Telecom hosts the backend system in our Data Center while each fire department manages their own data and records. In the 1990s, a consultant studied the local fire services' technology and his recommendation was a consolidated countywide FRMS. The benefits would include cost-sharing, knowledge-sharing, assurance of NFIRS compliance, and eligibility for grant funding. A huge benefit of our existing FRMS is that it's tied into our CAD system, since we host both. Information can flow out of CAD and into our agency's FRMS, saving them data entry and increasing data accuracy (especially incident times). We serviced 33 FRMS Work Orders in 2020.



ePCR Electronic Patient Care Reporting is a sister product of our existing FRMS. By sticking with one vendor, the flow of information between FRMS and ePCR is more fluid and reliable. ePCR is utilized by all Warren County-dispatched EMS agencies. Not only does Telecom host the data but we have a dedicated analyst (Joseph Newton, pictured right) who works on behalf of our customers with the vendor, the state, and the billing companies. He helps modify agencies' EPCR workflows and helps improve their Quality Assurance process (checking for mistakes before the report is sent to the State or billing company). ePCR has an annual licensing cost which is initially covered by Telecom before being cost recovered; each agency paying their portion based on number of utilized licenses.



In 2020, we continued Department-specific adjustments to workflow plus Health Data Exchange (HDE) participation by 2 of our Departments. We also trained agencies on Zoll Data Management Console (ZDMC) and its capabilities to aid a Department in their PCR administration. Departments can use WebPCR + ZDMC to manage any PCRs without requesting assistance from Telecom. For the year, serviced 118 ePCR Work Orders.

Monthly & Yearly Reports Each month, Telecom uploads 10 radio reports, 15 CAD reports, and 11 911-Phone reports to an online retrieval site. These reports are meant to aid agencies in analyzing run counts, common incident types, call volume trends, and radio traffic trends. Several Chiefs rely on these to gauge staffing needs and to support funding requests from their trustees or city managers.



Mobile System

Interfaces

- CAD > VisionTek: the conduit between police and fire/EMS' Mobile Data Computers and Dispatch (Premier CAD) ran until our September #ProjectTriTech go-live.
- BMV/LEADS: allows law enforcement to see license photographs, driving records, wants & warrants, vehicle registrations, etc.

300 Mobiles were imaged When you bring your MDC to Telecom for 're-imaging', it means our technicians are installing the Windows operating system and putting on required software all at one time. They're also installing TriTech onto machines so that users can begin testing the features!

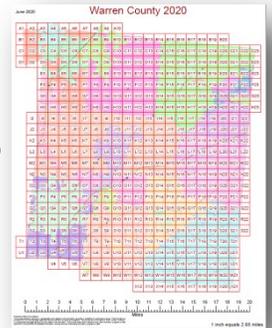
655 Two-Factor Authentication Tokens (up from 525 in 2019) are used for MDC access +



entry to the WCPSN portal which provides applications and virtual desktops. We have portal users across all the law and fire agencies as well as Telecom, Emergency Services, Warren County Water Dept, Child Support, and Warren County Human Services. The Portal was also used to facilitate the ShoreTel apps to non-county network users.

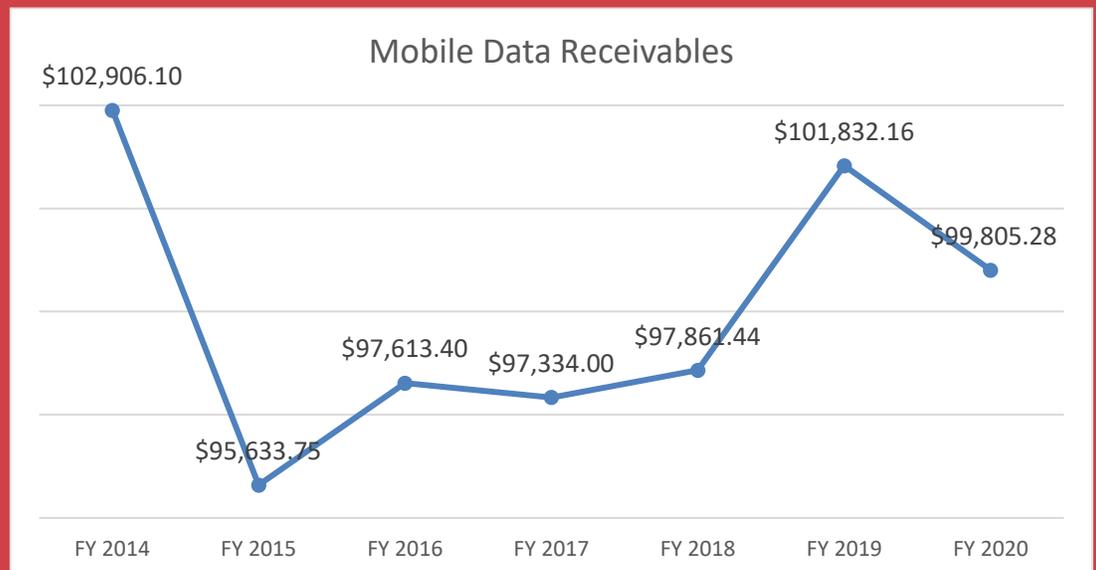


Mapping We will continue to maintain maps suitable for use by Agencies in both PDF and print formats. Butler County's recent need to revert to paper highlights the importance of not becoming solely reliant on screen-only maps. Agencies will be able to download the PDF and print if desired.



Verizon Mobile Data coverage is paid for by public safety agencies while Telecom manages the account on their behalf.

Agencies include: Clearcreek Fire, Carlisle Fire, Deerfield Twp Fire, Franklin Township Fire, Hamilton Twp Fire, Harlan Twp Fire, Mason Fire, Massie Twp Fire, Salem-Morrow Fire, Turtlecreek Twp Fire, Union Two Fire, Wayne Twp Fire, JEMS, Carlisle PD, Deerfield Twp WCSO post, Franklin PD, Hamilton Twp PD, Harveysburg PD, Maineville PD, Mason PD, Morrow PD, South Lebanon WCSO Post, Springboro PD, Waynesville PD, WC Emergency Services, Telecom, and WCSO Lebanon post.



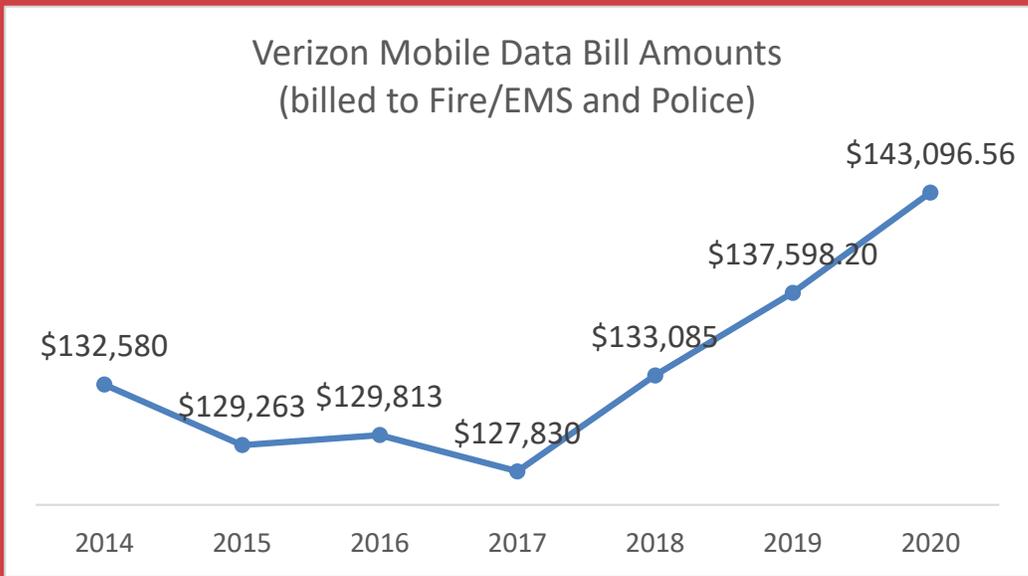
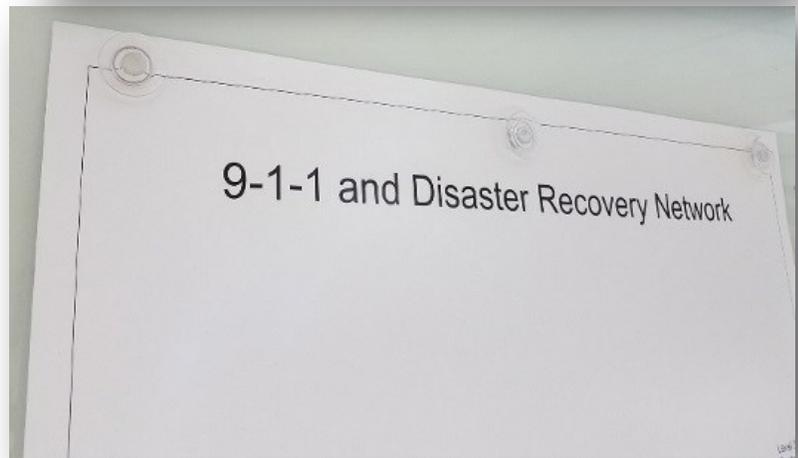
Disaster Recovery (DR)

DR is ongoing with the goal of geo-diversely locating our essential systems.

Phone In the event that the primary ShoreTel (Mitel) system goes down or we need to perform maintenance, the backup will keep our phones online. The DR site houses a backup for our conference bridge should Telecom's office be compromised.

PSAP / 9-1-1 Our plan to move the 9-1-1 secondary system to the new DR shelter is still in progress. This will better shield it from tower lightning strikes and frees up needed space in the radio shelter. Not having all of our DR equipment at one location adds diversity and better protection.

Dispatch + RMS Services Telecom has seen major improvements with each new CAD suite brought online. The first generation was one PC which only allowed one dispatcher on a call for service at a time. The second generation product was enterprise-grade greatly increasing ease of dispatching. Our third generation came online September 1, 2020! A copy of our #ProjectTriTech (Central Square) CAD system will be housed at our DR site should the primary system go offline. Our approach has always been proactive, methodically planning every scenario possible.



“The Vault”
Team Members make vault runs several times per week where backup tapes are securely stored for the purpose of records retention and data recovery. These tapes include data for everything in the Data Center.

Physical Plant

Physical Plant is any location that Telecom is responsible for, and includes buildings, rooms, and structures. Some common components of these locations include:

- **Building** This takes in to account the physical structure and can include anything regarding it, such as; doors, roof, rodent control, walls, etc.
- **Grounds** This includes access, driveways, walkways, and grounds control maintained by Warren County Facilities Management.
- **HVAC** Telecom is responsible for ensuring that proper heating and cooling, along with environmental monitoring, is taking place.
- **Power (commercial and backup)** Power is pivotal to any environment housing Telecom equipment and resources. Telecom utilizes battery, UPS, inverters, generators, and transfer switches as backup power should commercial power fail. This is important because if the local community experiences a power outage, Telecom's lights stay on, and this switch happens seamlessly.
- **Physical Security** Physical security of these location is important, and includes doors, gates, fencing, and related systems to make each site secure.

Main Physical Plant Locations

- **Data Center** *see more on the next page*
- **10 Towers** - (3) legacy tower sites were inspected and routine maintenance performed to align them with current tower safety codes. They carry the main radio system, hold the microwave antennas for backbone, and are the last mile equipment in that area. One site doubles as a Verizon platform. We're beginning to use the backbone system to extend the County VoIP phone system to county buildings not on the Justice Drive campus, where it's not feasible to run fiber cable.
- Zoar Tower received a storage shelter, eliminating the need and expense for storage trailers in the 500 Justice parking lot.



In 2020, we made several microwave upgrades and improvements to better support the data paths.

16 public safety-grade microwave links for the Data Backbone and System Control, VoIP traffic, voice traffic, radio, and WCPSN data.)

22 Microwave links for Public Works Information Backhaul, handling the data's 'last mile' from our towers to end users (water tanks, wastewater treatment plants, well fields.) This number was reduced by half since 2019 due to:

- utilizing access points which allow 1 tower site to communicate with several endpoints. They then use the network to communicate with their department's system.
- a lot of the old systems being eliminated by the upgrade to an IP telephone system.

Data Center

Telecom's Data Center has redundancy, two power systems, and high availability for both hardware and software. This Center houses data for LRMS, FRMS, CAD, ePCR, AudioLog, ICS, ShoreTel/Mitel, and HipLink.

Infrastructure Systems Manager Dustin Flint and Data Systems Supervisor Jeff Cepin (both pictured right) lead the two teams who most utilize the Data Center.



Connectivity (LAN, WAN, VPN, Internet) We use multiple connectivity methods to keep systems, applications, and resources easily accessible for our customers.

High Availability One of Telecom's goals is to eliminate all possible single-points-of-failure so that in the event of a system failure, our partners continue to operate as normal. With this in mind, many systems are redundant, so that in the event of a failure, resources are still available.

Security Telecom is held to the standards of CJIS (Criminal Justice Information System), LEADS (Law Enforcement Automated Data System), and CALEA (The Commission on Accreditation for Law Enforcement Agencies.) These drive how we store/retain/protect the data of our customers. We are periodically audited for security compliance and are constantly trying to stay ahead of the latest security risks.



Backups Telecom utilizes several different backup policies and types to ensure that data is backed up for data recovery; and to meet archival requirements. We performed 21,484 differentials and 4,369 full.

Testing *Firewall System Failover, Internet Failover, Mobile VPN Failover, Data Restore, Virtual Machine Restore*

Data Warehouse

Telecom made great improvements in our ability to house data, package it, and make it usable by our customers. In the past, there were reports for law and ePCR on our end but jail data was in its own environment. Our data warehouse is now one unified location for all of those reports to reside together.

Most popular Reports (last 30 Days)

Name	Reports Run	Average Processing Time (min)
Alpha Roster	1907	00:16.09
Court Report	905	00:12.02
Inmate History	749	00:02.09
Inmate History- by Name	668	00:01.89
Book Report by Date Range	467	00:06.41
Inmates Released- sorted by Name	432	00:07.23
Inmates to Release- sorted by Name	416	00:00.35
Charges Not Filed	392	00:03.54
Book Report by Date Range- last 24hrs	298	00:10.58
Inmate History- by SSN or OLN	259	00:01.26

Partnerships

Telecom is a cradle-to-grave Technology Advisor for the (3) legs of the Warren County Department of Emergency Services.



Emergency Communications Center Organized by FEMA, IPAWS is the Nation’s alert and warning infrastructure. It provides an effective way to reach and warn the public about emergencies. IPAWS is used to send notifications for three alert categories– Presidential, AMBER, and Imminent Threat.

Emergency Management Agency Telecom calibrated EMA’s weather station which supplies a real-time data feed of weather related stats (wind speed, temperature, barometric pressure, humidity, etc.) The data is specific to our county and useful in an emergency. Example: a chemical spill requires evacuation of all businesses and households down-wind. Referencing this weather station allows Emergency responders to calculate that square mileage.

Emergency Operations Center (2) 800MHz radio stations to communicate with the State in the event of an EOC activation and for regional communications. Telephones are directly connected to the 911 system. In the event of a widespread wind storm or blizzard, Emergency Services can ship non-emergency calls to non-emergency personnel in the EOC for call-handling with the simple push of a button on their 911 console.

City of Lebanon Division of Fire Telecom got CAD Browser access to Lebanon so they can view Warren County-Dispatched runs and improve interoperability.

Warren County Facilities Management and Telecom partner on the construction of the new Jail plus maintenance of tower site shelters, and various building cabling.

Warren County Sheriff’s Office (Jail Management System) We went live on InformJMS (Central Square) and Telecom houses JMS data. The WCSO currently logs into two systems but a future goal is the ability to tie into RMS records for reporting and analysis, eliminating the double sign-in.



State of OHIO MARCS Our Tier4 partnership provides our users with better portable coverage and expanded statewide capabilities. Plugging into the State saves our tax payers roughly \$250,000 per year in maintenance cost and we have a direct line to the MARCS 24/7 Help Desk.



Public Safety Agencies are a key reason for Telecom’s existence! Some auxiliary services we provide are:

Committee Representation: Telecom is active in Communications Work Group, Warren County Chiefs Associations, and the Emergency Communications Board. Our Community Manager is Recording Secretary for three of these groups; not only helping them keep timely records but aiding Telecom to stay at the forefront of meeting public safety needs, adjusting our technologies to fit their strategic missions, and maintain relationships with our customers.

ENGRAVING	2020	2019	2018	2017
Accountability tags	2,226	1,408	2,639	1,623
Status Boards	3	-	-	1
Passports	39	90	70	47
Other	132	315	22	33
Total:	2,400	1,813	2,731	1,704

Large-scale mapping: station radius, topography, response zones, etc.

Engraving of accountability tags, incident status boards, incident status boards, and miscellaneous signs/tags.

Going Above & Beyond

Bene-FIT Fair Each fall, our Support Services Team spearheads a raffle basket. This year's theme was "Party at Home" with beverage tub, yard games, wireless Bluetooth speaker, bottle opener & tote, frozen beverage station, hotdog steamer, drinks, and snacks! Along with the other participating departments, we helped raise \$5,283 for The Lebanon Food Pantry and Children's Services Christmas Present Project.



Warren County Virtual 9/11 Remembrance Ceremony

This year's remembrance ceremony looked different due to social distancing guidelines. Our Community Manager photographed and helped coordinate the live streaming on the Warren County Commissioners' Facebook page so that citizens and county workers could still take part. Highlights of the event included Donovan Elementary performing sign language, recollections from Franklin Township Fire Chief Mike Hannigan, prayer by Springboro Police Chief Jeff Kruthoff, and artwork from Kings students.



Christmas Child Sponsorship Telecom joined efforts with Children's Services again to sponsor a 4-year old boy we'll call "K"! On his list were winter clothes, coat, Toy Story, PJ Mask, Dinosaurs, Imaginix, and building sets! Telecom didn't let 2020 steal this boy's Christmas joy!

Via county sponsored draws and individually, Telecom team members gave the gift of life in 2020!



Community Management

BAR + SPUR REPORTS In the spring, Telecom released a customized Benefit Assessment Report (BAR) to each police and fire/EMS agency. It outlined their rosters and inventories for radios, pagers, tokens, MDCs, Hiplink recipients, training, and more. It



also attached financial investment where applicable to help agencies see the value of their provided services plus a break-down of Commissioner-funded and Agency-funded components. Chiefs were asked to review and report back any needed changes so that Telecom’s records could be more precise. We had roughly 50% response.

We were also asked to provide a broader community-based report to the Board of County Commissioners. We call it the SPUR—Services & Product Utilization Report. It takes the data a step farther, compiling it by community (e.g. Mason Fire, Police, Courts, Public Works all together). This allows the BOCC to see what they provide an entire community, via Telecom.

Telecom has a Challenge Coin!

Telecom Team Members can nominate a recipient by outlining how the candidate personifies our 6 Core Values: Collaboration, Continuous Improvement, Innovation, People, Service, Transparency. All Telecom Team Members get a vote and majority rules. If the nominee receives majority yea, a Challenge Coin Certificate is printed and packaged up with the nomination form and a challenge coin for the sponsoring Telecom Team Member to present! Voted-on Recipients to date: Emergency Services Director Melissa Bour; Clearcreek Twp Assistant Fire Chief Tim Simpson; Deerfield Twp Fire Lieutenant Matt Hannigan; Turtlecreek Twp Fire Chief Mike Jameson; Warren County Facilities Management’s Trevor Hearn, Mark Harrison, Mark Zindel; EMA Manager Lesli Holt; Ohio Department of Administrative Services’ Richard Schmahl, Rob Jackson, Dick Miller; and Central Square’s Ashley Durnan.

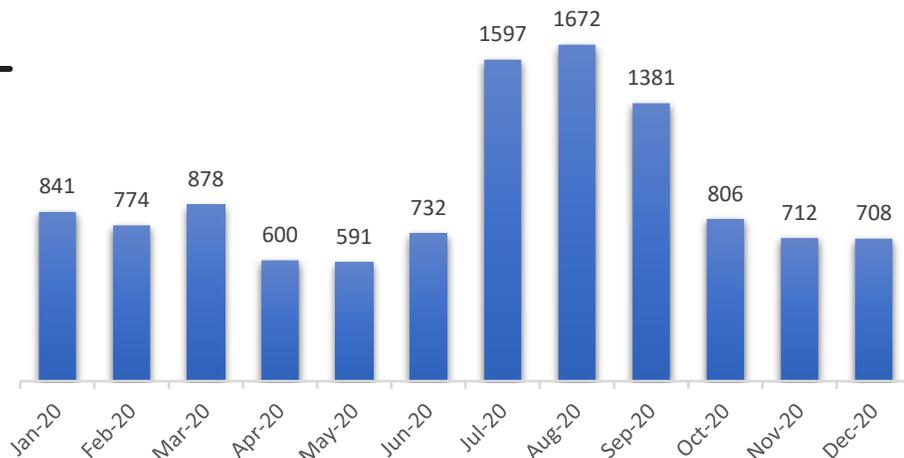


Truly a team effort, our cache of challenge coins was 100% funded by team member donations.

11,292
HELP DESK WORK ORDERS COMPLETED IN 2020

All Telecom team members manage customer service and vendor tasks in the work order system. This ensures no request gets lost in the shuffle and our customers can get progress updates via email. All customers should email help@wcoh.net with their service requests.

Closed Work Orders by Month



Community Management

Warren County TELECOM Training Catalog

Videos
for 24/7 online streaming

Data Systems

- Fire-Specific
 - Accessing ePCR Billing + State
 - CAD Unit Change on MDC
 - ePCR Refusal Walkthrough (private use only)
 - (FIRE) VisionTek Quick Keys
 - (FIRE) VisionTek CAD Forms
 - (FIRE) FRMS Training
 - MDC 101: CF-19
- Law-Specific
 - IQ Reporting Software for LRMS
 - MobileCAD QuickKeys (LAW)
 - Law MobileCAD Forms
- General
 - MDC 101: CF-31
 - MDC 101: CF-33
 - Sending SMS Texts from Outlook
 - ProQA EMD+EPD+EPD Go Lives (private)

Radio

- Auto Toning Box in CAD
- Emergency Button 2018 (private)
- (FIRE) XTS 2500 Anatomy
- Radio Check!
- HOW TO Swap a Mobile Radio
- IMPRES Battery Charger
- (LAW) XTS 2500 Portable Radio
- Learn the MARCS talkgroups
- MARCS in Schools Radio (private)
- Monitor V
- Noisances Delete
- Patching Radio Channels
- Portable Radio Battery Care
- Programming your Scan List
- Scan Off | Safety On 2013
- TAC Channels
- The Talkgroup Union
- XTS 5000 Portable Radio Anatomy

Handouts + Technical Bulletins
available at www.WarrenCountyTelecom.com

- CF-20 MDC
- SWMATAC Overview
- APX6000 Portable Radio Overview
- ShoreTel 485g Phone Training + Quick Sheet

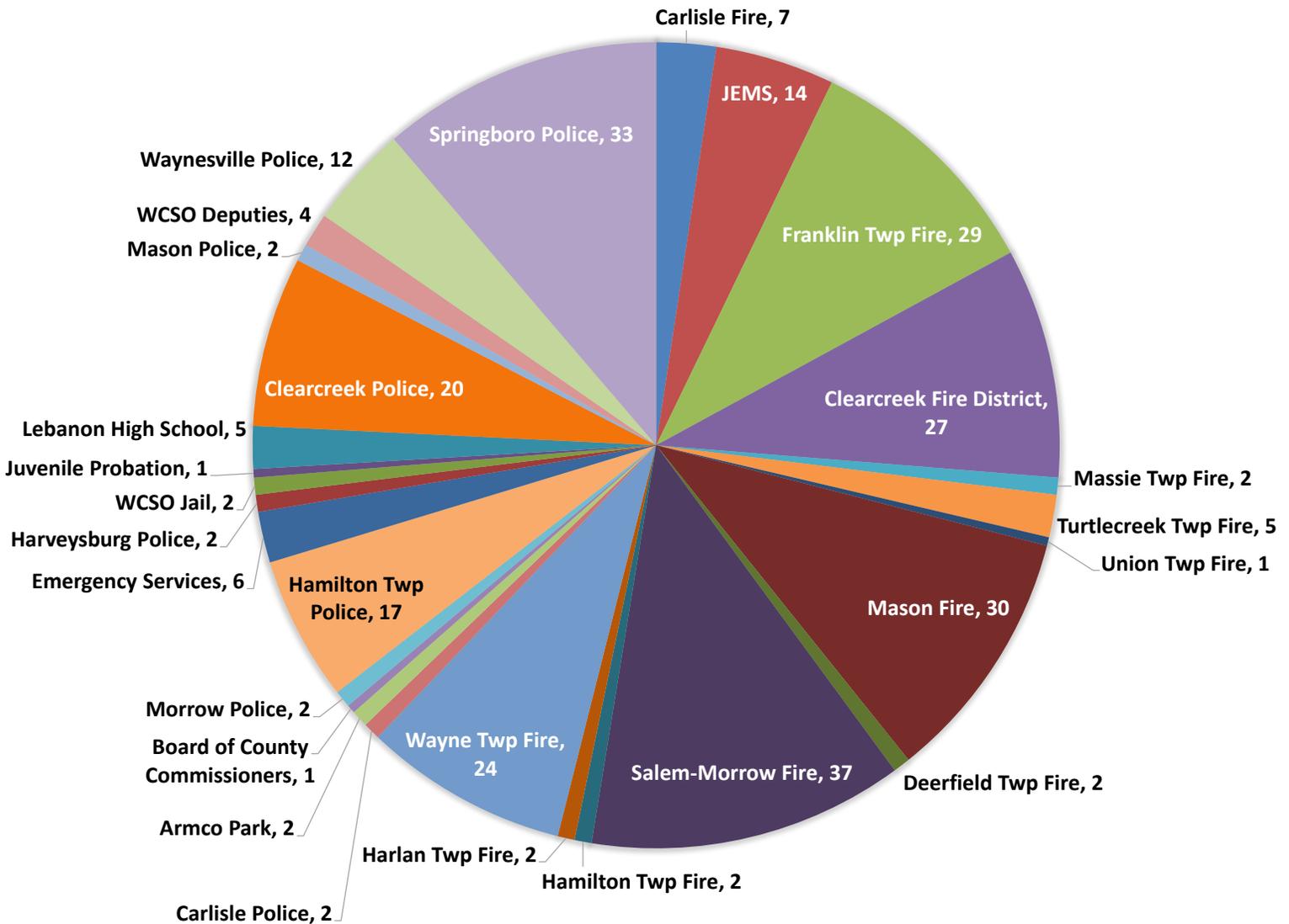
Classroom Training
A mix of videos, PowerPoints, and demos

- Corrections Officer Radio Training = 15 minutes
- Telecom Jeopardy = 90 minutes
- New Hire Orientation = 2.5 hours
- Full Fire Suite = 3 hours (Housekeeping + Radio + MDC + CAD)
- Full Law Suite = 2 hours (Housekeeping + Radio + MDC + CAD)
- Full Law Suite = 2 hours (Housekeeping + Radio + MDC + CAD)

Contact Community Manager, Allison Lyons
513.695.2802 | allison.lyons@wcooh.net
Standard Hours: Mon-Thur 9:00AM-4:00PM
(or evenings as schedule allows)

Telecom has offered end user training since 2006. Videos are available 24/7 from [our YouTube channel](#) and [website](#) plus classroom trainings are offered for several products and services. Trainees range from county coworkers to public safety and even state/federal agencies. In partnership with Emergency Services, Telecom even takes trainees on a tour of the Warren County Communications Center!

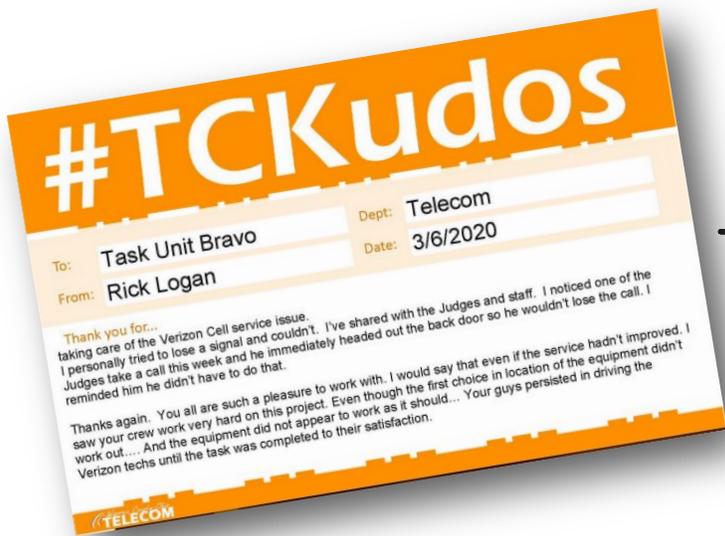
OF PERSONS TRAINED BY AGENCY



Community Management

#PoweredByTelecom

We pushed 40 alerts to our app in 2020. Further features include radio template lookup, newsletter, social media links, website browsing, weather, alerting, training videos, help ticket, and photo submission!



#TCKudos is our morale and recognition program. In 2020, 41 kudos were awarded, recognizing above-and-beyond efforts by customers, colleagues, and Telecom team members!

This is the 10th annual report designed and produced by our Community Manager Allison Lyons focusing on an illustrative, informative, magazine-style layout.



Community Management

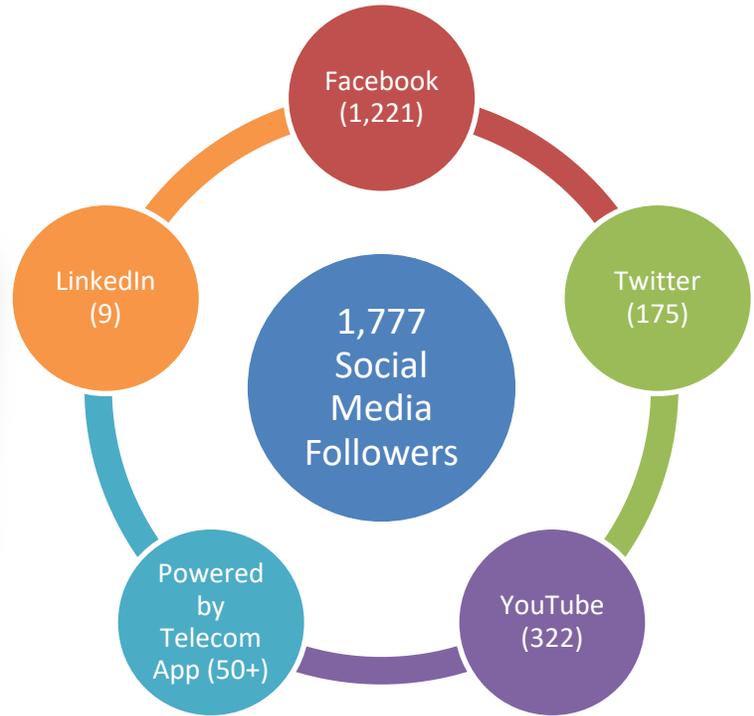
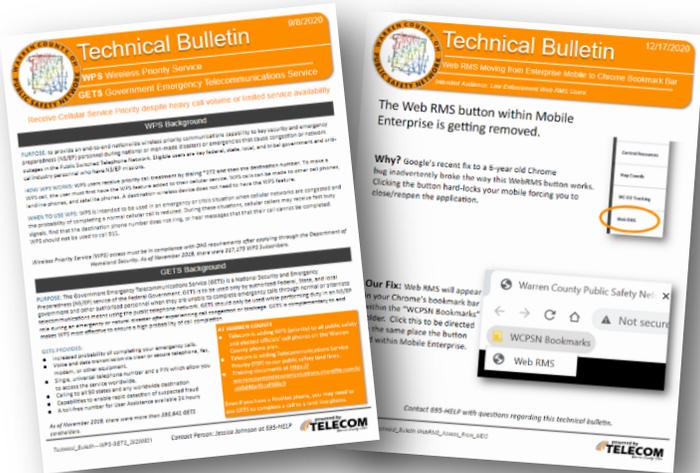
3 Issues of



TELECOMatters

our monthly newsletter of things that matter. all things Telecom.

10 Technical Bulletins covering Electronic Patient Care Reporting, WPS/GETS, Backup Tones, Dispatcher procedures, and more.



Our Training + Conference Rooms were utilized less in 2020 due to COVID-19 and virtual meetings. Compared to 2019, Training Room usage dropped from **168 to 74** and our Conference Room dropped from **59 to 28 meetings**.

You would have to take **146 direct flights** between CVG + LAX to watch the **33,228 minutes** of Telecom Videos our YouTube viewers watched in 2020... that's **554 hours!**





Warren County, Ohio
TELLECOM
Annual Report | 2020