## ITS Inventory

ITS Element	Description
Archived Data User Systems	Agencies and systems that use archived data
Buckeye Traffic Website	Buckeye Traffic (www.buckeyetraffic.org) provides Ohio travelers with up-to-date information on road conditions, traffic, construction, and other activity affecting roadways managed by The Ohio Department of Transportation (ODOT). Information provided by this site is updated frequently and comes from a variety of sources, such as pavement sensors, monitoring stations, traffic cameras, and through direct input by ODOT personnel.
Central Ohio Multi-Modal Traveler Information System	A regional multi-modal transportation information system would provide information related to transportation, emergency, and weather. This system shall display all types of travel related information so that travelers can make informed decisions about the best transportation mode, route, time, and costs for each of their trips. The system shall also serve as a clearinghouse for information on incidents, emergencies, and evacuations.
City of Columbus 311 Call Center	The City of Columbus 311 Call Center is the single point of contact for requesting all non-emergency City services. The call center is accessible by telephone during certain hours and by web interface 24/7. Transportation services include requests for pothole repairs, traffic signal operational concerns, and requests for changes in traffic control devices, e.g., signs, meters, signals.
City of Columbus 911 Call Center	The 911 Call Center is responsible for the handling of all calls for Police, Fire, and Rescue service. This center is staffed by highly trained civilian employees 24 hours a day, seven days a week. The 911 Call Center for the City of Columbus utilizes CAD technology, Ali mapping, and enhanced 911. The call center also receives all cellular 911 calls in the region.
City of Columbus CCTV	Closed Circuit Television (CCTV) refers to a surveillance system using cameras that transmits visual information over a closed circuit through an electrically conducting cable or wireless transmitter and receiver. It is both used for security purposes and traffic observation. The city of Columbus has cameras installed along its routes. The cameras are connected to their Traffic Management Center and help with observing traffic conditions, detecting incidents, or identifying security related issues.
City of Columbus Fire/EMS Dispatch	The center that dispatches the City of Columbus fire and EMS emergency vehicles.
City of Columbus Fire/EMS Emergency Vehicles	This element describes all fire engine, ambulance, and emergency vehicles used to respond to incidents within the city of Columbus. Most Fire/EMS vehicles are equipped with signal preemption technology.
City of Columbus Paving the Way Website	The Paving the Way website is designed to help Ohioans know when and where road construction might affect their drive by providing updated road construction and condition information.

ITS Element	Description
City of Columbus Police Vehicles	This element includes all police vehicles that maintain public safety for the city of Columbus. These vehicles are generally equipped with AVL systems, route guidance, and on-board incident management communication.
City of Columbus TERT	The City of Columbus Traffic Emergency Response Team (TERT) provides incident response that diverts traffic during major crashes (serious injuries or HAZMAT spills). TERT "substitutes" for police duties regarding traffic control after regular working hours. Employees of the City of Columbus Public Services Department are part of TERT.
City of Columbus Traffic Detectors	Traffic detectors describe the computerized field control systems located at every signalized intersection that run the red-yellow-green lights on traffic signal systems. The city of Columbus plans to use both video and vehicle detection to help with real-time signal timing once their entire signal system has been upgraded.
City of Columbus Traffic Signals	A traffic signal, also known as a traffic light, is a signaling device positioned at a road intersection, pedestrian crossing, or other location that indicates which driver, rider, or walker is assigned the right-of-way at a given moment, using a universal color code (and a precise sequence for those that are color blind). The city of Columbus owns and operates many local traffic signals.
Columbus Traffic Management Center	The Traffic Management Center (TMC) houses both the City of Columbus Signal Control System and ODOT's D6 Freeway Management System. This partnership's objective is to improve traffic flow, reduce congestion, and increase traffic safety. Within the center CCTV, DMS, and other traffic field equipment are controlled.
Commercial Vehicle Driver	This element refers to the personnel who operate vehicles carrying commercial goods including rail, truck, or plane freight.
COTA Bus Shelters	Bus shelters refer to COTA's roofed bus stops. Bus shelters are mainly at transit terminals and will contain travel information systems such as DMS in the future.
COTA CCTV	COTA currently monitors its facilities with a Closed Circuit Television surveillance system and plans to install Closed Circuit Televisions (CCTVs) in their Park and Ride locations.
COTA Fixed Route Fare System	A fare management system to manage the storage, processing and analysis of COTA's fixed-route farebox data.
COTA Fixed Route Transit Management System	COTA's dispatch facility for COTA's fixed-route buses. COTA uses CAD technology to dispatch their transit fleet. The Transit Operation System allows the radio room operators to assign drivers and provide demand response scheduling. This center also archives and counts data from COTA's Automated Passenger Counter. The center also receives CCTV feeds from on-board their transit vehicles for security monitoring.
COTA Information Kiosks	COTA plans to provide Travel information kiosks at selected locations. These kiosks will display the same information as their website regarding bus routes and schedules. COTA plans to expand the number of locations that host such kiosks.

ITS Element	Description
COTA Paratransit Management System	COTA's dispatch facility for COTA's paratransit buses. COTA uses CAD technology to dispatch their transit fleet. The Transit Operation System allows the radio room operators to assign drivers and provide demand response scheduling. This center also archives and counts data from COTA's Automated Passenger Counter. The center also receives CCTV feeds from on-board their transit vehicles for security monitoring.
COTA Paratransit Vehicles	COTA offers door to door service on demand, the so called Paratransit buses, for residents with disabilities. These vehicles are also equipped with CAD/AVL as well as an on-board electronic manifest. COTA's buses will also be equipped with a so-called On-Board Transit Fare Collector. This collection box will be on-board COTA transit vehicles and will accept SMART card as an electronic payment.
COTA Park and Ride Facility	Park and ride facilities allow commuters from throughout the area to conveniently access COTA's bus lines. Each park and ride provides free parking. Residents can drive to the park and ride, park their cars, and board a bus that will take them to various destinations.
COTA SMART Card	Currently, the fare boxes support exact change (both coin and paper) and COTA's magnetic fare cards. COTA's objective in 2010-2011 is to upgrade fare boxes to accommodate an Electronic Payment System (EPS) using smart cards, stored value cards, and credit cards with an embedded chip to store and process information. EPS will enable: Increased convenience to transit users; Less cash handling and improved security of fare revenues; Equitable fare structure; and Overall cost reduction.
COTA Ticket Vending Machines	Ticket vending machines for transit tickets are available at selected locations and allow riders to purchase a bus ticket for their trip in advance.
COTA Transit Database	The COTA transit database provides all types of information to their transit services including number of riders, buses utilized, incidents, etc. This data is mapped to the National Transit Database (NTD). In addition, COTA shares this information with the OSU Engineering Department for Research & Development purposes.
COTA Transit Fixed Route Vehicles	Fixed-route bus service is the backbone of the COTA system. The service includes express, local, crosstown, and neighborhood circulator bus routes. COTA's computer-aided dispatch and automatic vehicle location (CAD/AVL) system provides dispatchers and supervisors with the capability of tracking the location of the entire fleet in real-time. Global Positioning Satellite (GPS) devices placed on each fixed-route, demand-response, supervisor and maintenance vehicle allows dispatchers to track any COTA vehicle at any time. The system, which is integrated with the Franklin County Government's 800 MHz radio system, sends and receives fleet data over the same radio frequencies used by dispatchers to communicate with COTA operators.

ITS Element	Description
COTA Traveler Transit Facility	A transit center provides a centralized location to catch the bus along with other amenities like a day care center, banking, and health care center. COTA currently owns and services 3 transit centers: 1) The Linden Transit Center (Cleveland Ave & 11th Ave); 2) The Easton Transit Center (near Easton); and 3) The Near East Transit Center (1125 E. Main Street).
COTA Vehicle Component Monitoring	Another element of COTA's ITS program is the ability to provide enhanced maintenance capabilities to their fleet through vehicle component monitoring (VCM). VCM, or preventive maintenance software, enables automatic monitoring of transit vehicle engine components and provides warnings to COTA's maintenance personnel if failures are about to occur. This element will integrate with COTA's existing maintenance software that manages the maintenance records of transit vehicles.
COTA Vehicle Maintenance System	COTA's vehicle maintenance system that manages the maintenance records of transit vehicles.
COTA Website/IVR	Since 2003, advances in computer technology and the Internet have allowed COTA to provide web-based customer trip planning information. After a customer enters both origin and destination locations and trip times, a printable trip itinerary, including a map, is generated. Web-based trip planning allows the customer to specify parameters in developing itineraries, such as minimizing travel time, walking distances, or transfers. The website also provides real-time bus locator information. www.cota.com
County Base Map	A map depicting background reference information such as landforms, roads, landmarks, and political boundaries, onto which other thematic information is placed. A basemap is used for locational reference and often includes a geodetic control network as part of its structure. More complex maps may show municipal or city boundaries.
County EMA Emergency Operations Centers (EOC)	These EMA centers coordinate countywide emergency and disaster planning, education, warning, response and recovery to minimize the adverse impact on area residents and property.
County-wide Warning Siren Systems	Every county operates outdoor warning sirens that alert residents of an existing emergency. However, the Delaware County EMA only coordinates the 14 warning sirens in Delaware County and each jurisdiction is responsible for their own sirens.
CRAA Communications Operations Center	The Communications Operations Center of the CRAA is the operation base for the CRAA's own police force. The center is linked up to TV cameras within the airport vicinity for security surveillance.
CRAA Dispatch Facility	The CRAA has their own operations center that dispatches their shuttle fleet vehicles using AVL, CAD and GIS technologies.
CRAA Dynamic Message Signs (DMS)	A dynamic (or also variable) message sign (DMS) is an electronic traffic sign used on roadways to give travelers information about roadway conditions. The CRAA utilizes their DMS to display parking lot availability and to make public safety announcements.
CRAA Electronic Parking Payment System	Systems deploying various electronic technologies to support the automated collection of payment at booths in airport parking facilities. This system also includes road detectors which collect the number of vehicles within the facility.

ITS Element	Description
CRAA Freight Operations Center	This building will be the intermodal operation center for the CRAA and will be housed at Rickenbacker Airport.
CRAA Highway Advisory Radio (HAR)	Highway advisory radios (HAR), also called travelers information stations (TIS), are licensed low-power AM radio stations set up by local transportation departments to provide bulletins to motorists and other travelers regarding traffic and other delays. These stations are often near highways and airports. In the United States, only the government may have licenses for TIS/HAR stations and music is typically prohibited on the frequency. The CRAA owns a HAR station that provides passengers and dependents traveling to their airport with up-to-date flight arrival and departure information.
CRAA Shuttle Buses	These vehicles provide the public with transportation from and to parking lots to and from the airport.
CRAA Traffic Signal	A traffic signal, also known as traffic light, is a signaling device positioned at a road intersection, pedestrian crossing, or other location that indicates which driver, rider, or walker is assigned the right-of-way at a given moment, using a universal color code (and a precise sequence for those that are color blind). The CRAA owns and operates XX traffic signals.
DATA On Demand Transit Vehicles	The DATA on demand transit vehicles are dispatched on an as- needed basis for residents with disabilities. These vehicles will also be equipped with CAD/AVL in the future.
DATA Transit Dispatch Facility	The DATA has their own operations center that dispatches their transit fleet vehicles. The Center plans to use AVL technology to dispatch, track, and manage their transit fleet.
DATA Transit Fixed Route Vehicles	Fixed-route bus service is offered by DATA. These transit vehicles run on a set route and schedule. DATA plans to have an automatic vehicle location (AVL) system which will provide dispatchers and supervisors with the capability of tracking the location of the entire fleet in real-time. Global Positioning Satellite (GPS) devices placed on each fixed-route, demand- response, supervisor and maintenance vehicle allows dispatchers to track any transit vehicle at any time.
DATA Website	Website with future trip-planning capabilities, including creating and confirming reservations on-line.
Financial Institutions	Represents the financial institutions the regional transportation agencies will use as part of electronic fare payment systems.
Franklin County EMA Emergency Operation Center (EOC)	The Franklin County EMA operation center coordinates countywide emergency and disaster planning, education, warning, response and recovery to minimize the adverse impact on area residents and property.
Franklin County EMA TENS	TENS stands for Telephone Emergency Notification System and provides the same functions as a reverse 911. Using telephone communication, the system notifies residents of an upcoming emergency situation. Utilizing GIS, it helps pin point disaster locations (GIS response).
Franklin County RWIS Sensors	Road Weather Information System (RWIS) sensors used to provide pavement temperature, precipitation, barometric pressure, dew point, etc. and other environmental information.
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Central Ohio Regional ITS Architecture

ITS Element	Description
Franklin County/City of Columbus COMBAT System	The system called COMBAT, which stands for Central Ohio Management Based Applied Technology, tracks weather and operational data in real-time to help maintenance fleets run more efficiently and environmentally sound. Currently, both Columbus and Franklin County share the system which tracks things like the air and road temperatures, vehicle speeds, fuel and salt dispense, and maintains the rate of ice-melting brine application. COMBAT uses radio frequencies to stay in contact all the time. The system reduces environmental impact by reducing vehicle idling and by allowing closer control of ice-melting material application rates. The Mid-Ohio Regional Planning Commission helped secure \$4.1 million from the Federal Highway Administration to help fund the project. The city will spend an additional \$522,000 and \$237,000 will come from the county. Other agencies are currently showing interest in adding their fleet to the system.
Freight Operations Centers	This element refers to centers that coordinate the operation of freight vehicles (incl. trucks, rail and planes) and is connected to other modal systems' operations for efficient movement of commercial goods. Most freight management centers report the movement of commercial good through an electronic data interchange (EDI) system.
Freight Planes	Freight planes are the vehicles by which commercial goods are moved which are operated by professional pilots, typically administered as part of a larger fleet, and regulated by a Fleet-Freight Manager.
Freight Rail Operations	Freight rail operations coordinate the operation of freight trains and is connected to other modal systems' operations for efficient movement of commercial goods.
Freight Rail Vehicles	Freight rail vehicles move commercial goods and are operated by professional conductors, typically administered as part of a larger fleet, and regulated by a Fleet-Freight Manager.
Freight Truck Vehicle	This ITS element represents a vehicle that is used to transport goods which are operated by professional drivers, typically administered as part of a larger fleet, and regulated by a Fleet-Freight Manager. This classification applies to all such vehicles ranging from small panel vans used in local pick-up and delivery services to large, multi-axle tractor-trailer rigs operating on long haul routes.
Local 911 Call Centers	The 911 Call Centers are responsible for the handling of all calls for Police, Fire, and Rescue service. These centers are staffed by highly trained civilian employees 24 hours a day, seven days a week. This element represents the Public Safety Answering Points (PSAP) for the municipality and/or county.
Local CCTV	Closed Circuit Television (CCTV) refers to a surveillance system using cameras that transmits visual information over a closed circuit through an electrically conducting cable or wireless transmitter and receiver. It is both used for security purposes and traffic observation. These cameras may be used to observe traffic conditions, detect incidents, or identify security related issues.
Local Fire/EMS Emergency Dispatch	This element includes all fire and EMS departments that dispatch emergency vehicles.

ITS Element	Description
Local Fire/EMS Emergency Vehicles	This element describes all fire engine, ambulance, and emergency vehicles used to respond to incidents. Some of these are equipped with AVL technology (Violet Township). Most Fire/EMS vehicles are equipped with signal preemption technology.
Local Maintenance and Construction Management	This element contains all public works departments/divisions of any municipality in the region that deal with roadway maintenance and construction projects. This element also represents all facilities that dispatch maintenance and construction vehicles which are responsible for managing and maintaining all local and state roadways.
Local Maintenance and Construction Vehicles	These vehicles are responsible for managing and maintaining all local and state roadways. Many are equipped with AVL technology.
Local Maintenance Garages	Local maintenance garages house all roadway repair and snow removal vehicles operated by the local maintenance and public works department.
Local Medical Centers	This element refers to any medical center (e.g. hospitals and trauma centers) within the region.
Local Police/Sheriffs Management and Dispatch	This element represents the police and sheriff functions at the municipal and county level, including electronic crash reporting, emergency management, and dispatch of vehicles.
Local Police/Sheriffs Vehicles	This element includes all police and sheriff vehicles that maintain public safety. These vehicles are generally equipped with AVL systems, route guidance, and on-board incident management communication.
Local Portable Dynamic Message Signs (DMS)	Portable (and often trailer-mounted) dynamic message signs are used to alter traffic patterns near work zones and to provide traffic management for sporting events, natural disasters, and other temporary changes in normal traffic patterns. The messages displayed on the sign can be programmed locally on the unit's control panel or remotely via computer or phone on units equipped with a cellular modem. For example, the city of Hilliard uses portable DMS primarily for workzone management purposes. The City does not own/operate any dynamic portable message signs. The city uses them in some of their construction projects. These signs are owned & operated by the contractor - not the City. The city of Upper Arlington uses portable DMS primarily for workzone management purposes. OSU Transportation and Parking Division owns a total of 4 portable DMS to provide work zone information.
Local Storage Facilities	This element refers to depots and barns where maintenance materials are stored.
Local Traffic Database	Many municipalities collect and share traffic timing and volume data.
Local Traffic Detectors	Traffic detectors describe the computerized field control systems located at signalized intersections that run the red-yellow-green lights on traffic signal systems. Most jurisdictions and ODOT use both video and vehicle detection to help with real-time signal timing once their entire signal system has been upgraded.
	This element also includes local traffic controllers.

ITS Element	Description
Local Traffic Management Centers	This element represents the individual municipal and county stakeholders that own/operate traffic management/ITS equipment. Many of these stakeholders have a center that receives traffic information and manages the roadway equipment accordingly, as well as coordinates traffic signal control. This element includes the municipal and county public service departments and engineering departments.
Local Traffic Signals	A traffic signal, also known as a traffic light, is a signaling device positioned at a road intersection, pedestrian crossing, or other location that indicates which driver, rider, or walker is assigned the right-of-way at a given moment, using a universal color code (and a precise sequence for those that are color blind). Many municipalities have equipment installed on these signals that allows for signal preemption of emergency vehicles.
Local Vehicle Speed Monitors	Vehicle speed monitors are used to detect motor vehicles traveling at unsafe speeds. For example, the Village of Canal Winchester uses a "speed trailer" at various locations to do so. OSU Transportation and Parking Division uses a portable speed sign as needed. The CRAA uses radar technology to do so.
Media Channels	This element represents the mediums that broadcast information to the public, esp. radio and TV. Media Channels broadcast emergency information, weather, traffic conditions, roads closings, school closings and other vital information to the public.
Mid-Ohio Regional Incident and Mutual Aid Network	Regional public safety communications network.
MORPC Air Quality Website	The website provides Air Quality forecasts and monthly recaps for Central Ohio. Year-round, the Air Quality Program carefully monitors ozone and particle pollution levels and issues daily air quality forecasts for eight counties (Fairfield, Franklin, Delaware, Knox, Licking, Madison, Pickaway and Union). When there is a potential for high pollution levels an Air Quality Alert may be issued. There is a direct link from the air quality monitors/sensors to the website. www.morpc.org/energy/center/airquality.asp; or airquality.morpc.org.
MORPC Regional Online Dataport	The regional dataport website was developed as a one-stop shop for accessing regional information developed by MORPC about planning, demographics, land use, economic development, transportation, maps, contact lists, and GIS data in Central Ohio. It is also a portal to other federal, state, and locally developed information sets that may be more appropriate sources to answer user's data needs. http://dataport.morpc.org/
MORPC Traffic Count Database	MORPC is the repository for traffic counts in the region. MORPC maintains a large traffic count database for planning, studies, projects, and the regional travel demand model validation. MORPC obtains traffic count data mainly from the following sources: ODOT, counties, local jurisdictions, or by hiring private consultants for specific studies.
MORPC Transportation Modeling	Since 2004, MORPC operates an activity/tour-based model applied with micro-simulation. The model is being used by MORPC and ODOT for Conformity Analysis, transit alternative analysis, and highway MIS projects in the Columbus region.

ITS Element	Description
National Weather Service	This element provides weather, hydrologic, and climate information and warnings of hazardous weather including thunderstorms, flooding, hurricanes, tornadoes, winter weather, tsunamis, and climate events.
ODOT CCTV	Closed Circuit Television (CCTV) refers to a surveillance system using cameras that transmits visual information over a closed circuit through an electrically conducting cable or wireless transmitter and receiver. It is both used for security purposes and traffic observation. ODOT has 70 cameras installed along its routes in Franklin county. These cameras are connected to their Traffic Management Center and help with observing traffic conditions, detecting incidents, or identifying security related issues.
ODOT Central Office	Responsible for traffic and maintenance for District 6 (including Delaware and Franklin Counties).
ODOT Central Radio Room	The central communications hub for ODOT.
ODOT District Offices	Responsible for traffic and maintenance for other ODOT districts, including D5 for Licking and Fairfield counties.
ODOT Dynamic Message Signs (DMS)	A dynamic (or also variable) message sign (DMS) is an electronic traffic sign used on roadways to give travelers information about special events. DMS signs warn of traffic congestion, accidents, incidents, roadwork zones, or speed limits on a specific highway segment. ODOT provides a total of 15 DMS along their freeways to provide accident, work zone and amber alert information.
ODOT FIRST Patrol	The ODOT Freeway Incident Response Service Team (FIRST) was created in 2001 to help detect and clear highway incidents faster. FIRST's primary focus is detecting and responding to minor incidents, such as property damage accidents, flat tires, stalled cars and debris in the roadway. FIRST teams are dispatched by the ODOT Radio Room/Columbus TMC. FIRST teams patrol Interstates 270, 670, 71 and 70 within the outerbelt, as well as State Route 315. ODOT runs two shifts each weekday, providing service from 5:30 a.m. to 8 p.m. Crews also work weekends during special events.
ODOT Highway Advisory Radio (HAR)	Highway advisory radios (HAR), also called travelers information stations (TIS), are licensed low-power AM radio stations set up by local transportation departments to provide bulletins to motorists and other travelers regarding traffic and other delays. These stations are often near highways and airports. In the United States, only the government may have licenses for TIS/HAR stations and music is typically prohibited on the frequency. ODOT plans to provide such HAR along their interstate highways in the Central Ohio region.
ODOT Maintenance and Construction Vehicles	These vehicles are responsible for managing and maintaining all local and state roadways. Many are equipped with AVL technology.
ODOT Maintenance Garages	They house all roadway repair and snow removal vehicles operated by ODOT Districts.

ITS Element	Description
ODOT Overheight Vehicle Detectors	Overheight Vehicle Detectors detect overheight vehicles moving toward obstacles such as bridges, tunnels and other overhead structures and individually warns drivers. An audible alarm and/or sign is activated when an overheight vehicle is detected by the system. The infra-red based system, coupled with high intensity signing, offers great reliability in detecting and warning drivers of high vehicles to "DIVERT or TURN BACK."
ODOT Pavement Sensors	Pavement Sensors measure the surface temperature of roads or bridges. The sensors are also designed to sense the amount of salt present on the roadway when the surface is wet. There is usually one sensor installed in a roadway and at least one installed in a bridge deck near the RWIS tower. These pavement sensors are important tools that help forecasters and supervisors make decisions regarding frost, chemical applications, and whether any precipitation on the pavement will freeze or thaw. ODOT has pavement sensors installed on their ROW to help detect surface weather information and report it back to RWIS.
ODOT Ramp Meters	Ramp meters are traffic signals at freeway entrance ramps, which use video detection cameras positioned on the ramp and freeway to determine how quickly drivers can safely enter the freeway. Ramp meters have sensors that measure traffic speed and volume on the freeway, and traffic demand on the ramp. ODOT deploys 24 ramp meters.
ODOT RWIS	RWIS stands for Roadway Weather Information System. ODOT owns 158 weather stations, which provide coverage in all 88 of Ohio's counties. A central service located in Columbus processes the information from each station. ODOT garages use the information collected by the stations to plan their road treatment activities, especially during snow and ice conditions. ODOT also makes road conditions available to the public via a Web server (www.buckeyetrafffic.org).
	The weather stations and sensors are located along interstates, U.S. routes, and state routes. The system comprised 88 wireless weather stations and more than 160 pavement sensors. Two types of weather stations are installed: those located along highways, and those located at county ODOT offices. The stations reported a variety of information, including: Air temperature; Precipitation rate/type; Surface temperature; Subsurface temperature; Wet/dry surface; Dew point Relative humidity; Wind direction and speed; Traffic speeds and counts; Visibility. Data communications between the weather station and the central server at ODOT is conducted via cellular service in 5-minute intervals.
ODOT Storage Facilities	This element refers to depots and garages where materials are stored for ODOT.
ODOT Traffic Detectors	Traffic detectors describe the computerized field control systems located at every signalized intersection that run the red-yellow-green lights on traffic signal systems. ODOT currently uses both video and vehicle detection to help with real-time signal timing.

ITS Element	Description
ODOT Traffic Signals	A traffic signal, also known as traffic light, is a signaling device positioned at a road intersection, pedestrian crossing, or other location that indicates which driver, rider, or walker is assigned the right-of-way at a given moment, using a universal color code (and a precise sequence for those that are color blind). ODOT owns and operates about 100 traffic signals in Ohio.
ODPS Crash Database	This element refers to a statewide database of crash records.
OEPA Air Quality Database	The Air Quality System (AQS) is EPA's repository of ambient air quality data. AQS stores data from over 10,000 monitors, 5,000 of which are currently active. State and local agencies collect the data and submit it to AQS on a periodic basis. The AQS database contains measurements of air pollutant concentrations in the 50 United States, plus the District of Columbia, Puerto Rico, and the Virgin Islands. The measurements include both criteria air pollutants and hazardous air pollutants.
OEPA Air Quality Monitors	Air quality monitors are sensors dispersed throughout the field that detect air quality.
OSHP State Communication Center	The State Communication Centers is a dispatch facility that connects to ODOT and controls emergency operations. It also provides for joint dispatch to incidents.
OSHP State Highway Patrol Vehicles	This element includes all Ohio patrol vehicles that maintain public safety. These vehicles are generally equipped with AVL systems, route guidance, computers, and on-board incident management communication. All patrol vehicles are also equipped with electronic crash reporting systems.
OSHP State Radio Room	The state radio room is the dispatch facility for State Highway Patrol vehicles. The Ohio State Highway Patrol is divided into 13 geographic districts, each operating its own dispatch facility.
OSU CABS Buses	The fixed-route Campus Area Bus Service (CABS) provides convenient transportation in and around the Ohio State University Columbus Campus. OSU Transportation and Parking Services (TPS) is planning to utilize AVL technology for their CABS fleet.
OSU DPS EOC	Ohio State University's Department of Public Safety's Emergency Operations Center is the communications center for coordinating campus responses to major emergencies or incidents.
OSU TPS CCTV	Closed Circuit Televisions (CCTV) refers to a surveillance system using cameras that transmits visual information over a closed circuit through an electrically conducting cable or wireless transmitter and receiver. It is both used for security purposes and traffic observation. The CCTV of the OSU Transportation and Parking Services (TPS) are connected to their Parking Dispatch Center. The cameras are utilized as follows: for the cameras at street intersections, they act as detectors to change the signal timing, as well as assist with security and ground transportation information. For the parking garages they act as customer service assistance devices allowing dispatch to assist someone who is visibly having difficulty.

ITS Element	Description
OSU TPS Dispatch Facility	The OSU Transportation and Parking Services (TPS) has their own operations center that dispatches their transit and emergency fleet vehicles. The center plans to use AVL technology to manage, dispatch, and track their emergency and transit fleet. The center also receives CCTV feeds for security monitoring purposes.
OSU TPS Traffic Signals	A traffic signal, also known as traffic light, is a signaling device positioned at a road intersection, pedestrian crossing, or other location that indicates which driver, rider, or walker is assigned the right-of-way at a given moment, using a universal color code (and a precise sequence for those that are color blind). The Ohio State University Transportation and Parking Services (TPS) owns and operates (in collaboration with the City of Columbus) 14 traffic signals with closed loop, while two have wireless technology.
OSU Traffic Detectors	Traffic detectors describe the computerized field control systems located at every signalized intersection that run the red-yellow-green lights on traffic signal systems. The OSU Transportation and Parking Division currently uses both video and vehicle detection to help with real-time signal timing.
OSU Traffic Research	The OSU College of Engineering provides traffic data research to many public and private transportation organizations. Specifically, they collect data from the TMC (ODOT), COTA, and the City of Columbus.
OSU Website	Website with real-time OSU CABS passenger information.
Other Local Maintenance and Construction Management	This element represents other public works departments/divisions of any municipality in the region that deals with roadway maintenance and construction projects.
Other Local Traffic Management Centers	This element represents other local county or municipal traffic management centers in the region.
Other ODOT District Offices	This element represents the traffic operations centers in other ODOT districts.
Other ODOT Maintenance Garages	This element represents ODOT Maintenance Divisions in other ODOT districts.
Private Rail Wayside Equipment	The rail operated equipment at highway rail intersections. Interconnect with the region's traffic control departments.
Private Traveler Information Systems	This element represents the private traveler information providers serving the region, including websites, 511 numbers, or mobile features.

ITS Element	Description
PUCO Commercial Vehicle Information System	The term Commercial Vehicle Information Systems and Networks (CVISN, pronounced "see-vision") refers to the ITS information system elements which support CVO. CVISN includes information systems owned and operated by governments, carriers, and other stakeholders. CVISN's goal is to integrate state, federal, and private commercial vehicle operations into one network. As part of the Public Utilities Commission's (PUCO) CVISN, the Commission wants to integrate on-board components with Commercial Vehicle Operations (CVO). Their information system will allow operators to interface directly with trucks for screening and communication purposes. This system will also access automated vehicle identification information at mainline speeds for credential checking, roadside safety inspections, and weigh-in-motion using two- way data exchange.
PUCO Commercial Vehicle Registration System (CMV)	As part of PUCO's CVISN, the Commission wants to create an online registration system that provides administrative functions like providing credentials, tax, and safety regulation information to all commercial vehicle operators. The system would issue credentials, collect fees and taxes, and support enforcement of credential requirements.
Regional Event Promoters	This element refers to promoters and sponsors of special events, including Ohio State Buckeye football games. They coordinate with traffic and emergency providers.
School Buses	This element refers to school Buses operated by regional school districts. In case of an emergency, these vehicles can be used as transit vehicles to evacuate residents.
School District Dispatch	This element represents the dispatching systems for school districts buses.
Third Party Service Provider	Represents the dispatch center for private vendors providing demand responsive service or paratransit service under contract.
Traveler	This element describes the users of any transportation system.
Traveler Information Device	This element refers to personal devices used by the traveling public, including mobile computers, pagers, etc.
Vehicle	This element refers to vehicles owned by travelers.
whereismysnowplow.com	Website providing the general public with information about snow clearing activities of the COMBAT system.