



Assessment of the Montgomery County Emergency Medical Services System



WELCOME



Page, Wolfberg and Wirth, LLC



Washko & Associates, LLC

Project Consulting Team



Stephen Wirth, PWW
Attorney/EMS Consultant



Jonathan Washko, W&A
EMS Consultant



Shannon Gollnick, PWW
EMS Consultant/
Project Manager



Christie Mellott, PWW
EMS Consultant/Attorney



Matthew Konya, PWW
EMS Consultant/Attorney



Bob Nadolski, W&A
EMS Consultant



Ryan Stark, PWW
EMS Consultant/Attorney



Glen Youngblood, W&A
EMS Consultant

Thank You to the Project Steering Committee

Brian McKown, Director

Montgomery County Department of Public Safety

Ed Martin, EMS Field Specialist

Montgomery County Department of Public Safety

John Weed, First Deputy Director –PSTC

Montgomery County Department of Public Safety

Brian Kuklinski, Executive Director

Lower Providence Community Center Ambulance
Montgomery County Ambulance Association

Dr. Alvin Wang, MD, Chief Medical Officer

Montgomery County Department of Public Safety

Regional EMS Medical Director

Scott France, Executive Director

Montgomery County Planning Commission

Dave Brown, Deputy Director – EMS

Montgomery County Department of Public Safety

Drew Shaw, Environmental Planning Manager

Montgomery County Planning Commission



Thank You to the Participating Agencies

- 308 Plymouth Community Ambulance Association
- 313 Volunteer Medical Service Corps of Lower Merion & Narberth
- 318 Whitemarsh Ambulance
- 322 Lower Providence Community Center Ambulance
- 325 Friendship HLH Ambulance
- 329 Goodwill Steam Fire Engine Co. #1 Ambulance
- 332 Gilbertsville Area Community Ambulance Service
- 336 Skippack Emergency Medical Services
- 345 Volunteer Medical Service Corps of Lansdale
- 351 Community Ambulance Association
- 352 Horsham Fire Company Ambulance
- 355 Bryn Athyn Fire Company
- 356 Upper Merion Fire & Rescue Services Ambulance
- 358 Cheltenham Township Emergency Medical Services
- 369 Upper Perkiomen Valley Ambulance
- 376 Freedom Valley Medical Rescue
- 380 Second Alarmer's Assoc. & Rescue Squad
- 397 PennSTAR Flight
- JFST-2 JeffSTAT
- Montgomery County Ambulance Association
- Montgomery County Fire Chiefs Association
- Montgomery County Volunteer Fire-Rescue Association
- Montgomery County Public Safety Training
- Montgomery County Emergency Communications
- Montgomery County Emergency Management
- Montgomery County Planning Commission
- Police Chiefs Association of Montgomery County
- Pike County Commissioners
- Pennsylvania DOH – Bureau of EMS
- Western Berks EMS
- Jefferson Health System
- Tower Health System
- Penn Medicine



DISCLAIMER

This presentation and report (“Report”) is the culmination of an extensive period of data gathering and analysis. The analysis, conclusions, and recommendations are based on the consultants’ best efforts and extensive experience in the realm of EMS system operations and design. This report has been prepared to assist the County in evaluating a myriad of issues and does not purport to be all-inclusive or to contain all necessary information that may be required to fully evaluate the EMS system.

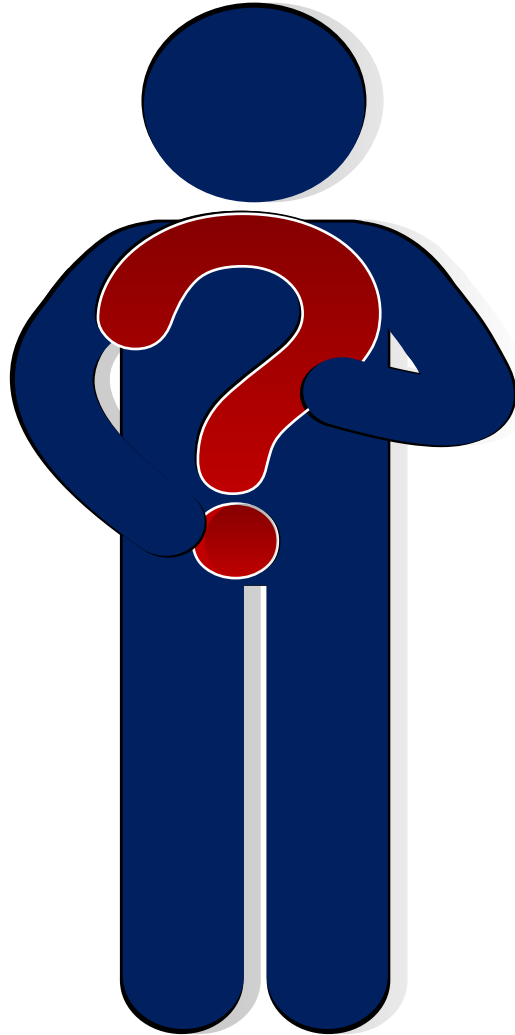
Though we occasionally refer to statutes and regulations, those references are made in our capacity as consultants, and not as attorneys. This report and any statements contained herein are not to be considered in any way as legal advice and should not be relied upon as such. We also present financial models and information in the report, presented in our role as consultants, and not as accountants. These financial models and information are not to be considered in any way as accounting advice and should not be relied upon as such. We also cannot guarantee the accuracy of any of the information relied upon during the preparation of this report that has been gathered from system stakeholders, as this information comes from a wide range of sources, including anonymous surveys.



AGENDA

- **Project Overview**
- **Methodologies, Strategy & Limitations**
- **S.W.O.T. Analysis**
- **Key Challenges and Findings**
- **Root Causes**
- **System Designs & Comparisons**
- **Key Recommendations**
- **Path Forward**
- **Q&A**





Please Hold Your Questions Until The End

Online: Please type your questions in the chat box which will be monitored throughout the presentation and reviewed during the QA session

PROJECT OVERVIEW



The vision for this project is for a thorough and strategic evaluation of how the Emergency Medical Services System (EMSS) is currently being provided within and adjacent to Montgomery County as compared with other geographical areas of similar size and population, and to provide guidance/recommendations to address the future of EMSS delivery in Montgomery County based on emerging trends and best practices in EMS.



Project Methodologies



Project Strategy

- **M**utually **E**xclusive **C**ollectively **E**xhaustive (MECE) Framework

Quantitative Assessment



- Review of 200+ Documents and Reports
- Temporal Demand Analysis
- Geospatial Demand Analysis
- CAD Data Analysis for the past three (3) years
- Financial/Cost Analysis
- Staffing/Schedule Demand Analysis

Survey Response Data



- 1,200+ Stakeholder Survey Responses
- EMS Leadership Survey
- EMS Practitioner Survey
- Public Safety Stakeholder Survey
- Municipal Stakeholder Survey
- Public Survey

Qualitative Assessment



- Two Public Listening Sessions
- On Site Stakeholder Visits
- 200+ Hours of Scheduled Stakeholder Interviews

Project Limitations

Data

- The data does not include incidents and services not captured by the County
- State NEMSIS data was requested however, not received for use in report analytics



Stakeholder Participation

- Engagement varied widely amongst the EMS Agencies



Survey Participation

- While survey completion was strong, it was not inclusive of the entirety of each stakeholder group



Financial Analysis

- Financial models were derived from publicly available sources, EMS agency-provided data, County CAD data, Census data and regional market comparisons



Project Deliverables Library

EMS System Toolkit

Educational presentation designed to provide insight on roles, responsibilities, structure, and design of EMS systems



Executive Summary

High level briefing of the project findings and recommendations



Appendix

125-page document including 100+ tables and graphs



Quality Improvement Toolkit

Educational presentation designed to guide QA/QI program design standards and best practices



Master Report

381-page report of all the project research, findings, and recommendations



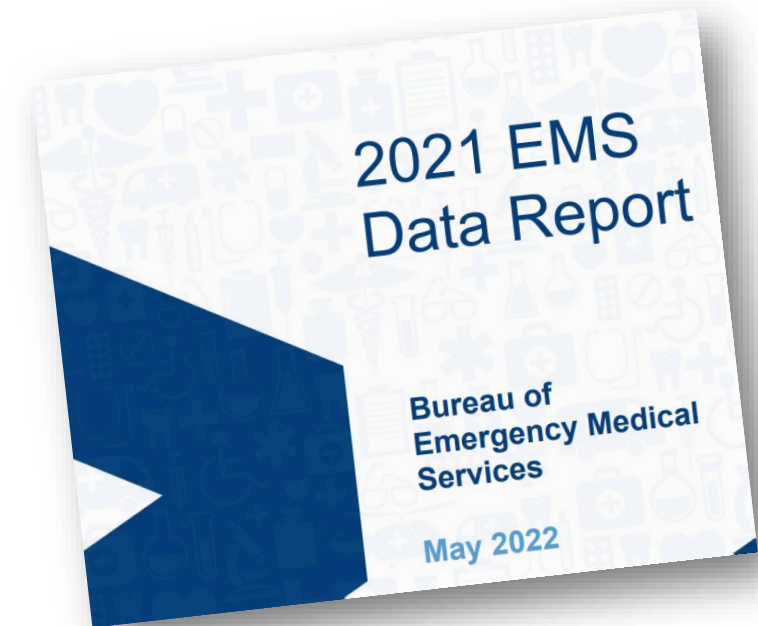
Demand Analysis Toolkit

Informative Toolkit that explains temporal and geographical demand analytics and their use in system design



Montgomery County EMS Is Very Busy, Doing Better Than Other Counties, But Needs Significant Reform

- Montgomery County is in the second highest tier for demand for EMS and second only to Delaware County for 90% of EMS response times at 12 minutes or less
- Overall, in 2021 Montgomery County EMS agencies were performing well in comparison to the remainder of the Commonwealth with respect to response time – but there are many cracks in the system and the same level of service may not be sustainable without positive change
- Some progress in municipal/EMS agency collaboration and increased support facilitated by MCEMS – But more work needs to be done to achieve consistent financial support from municipalities across the County
 - Positive Example: Douglass Township and Gilbertsville Ambulance – tax millage, board representation on the ambulance service, regular communications and reporting



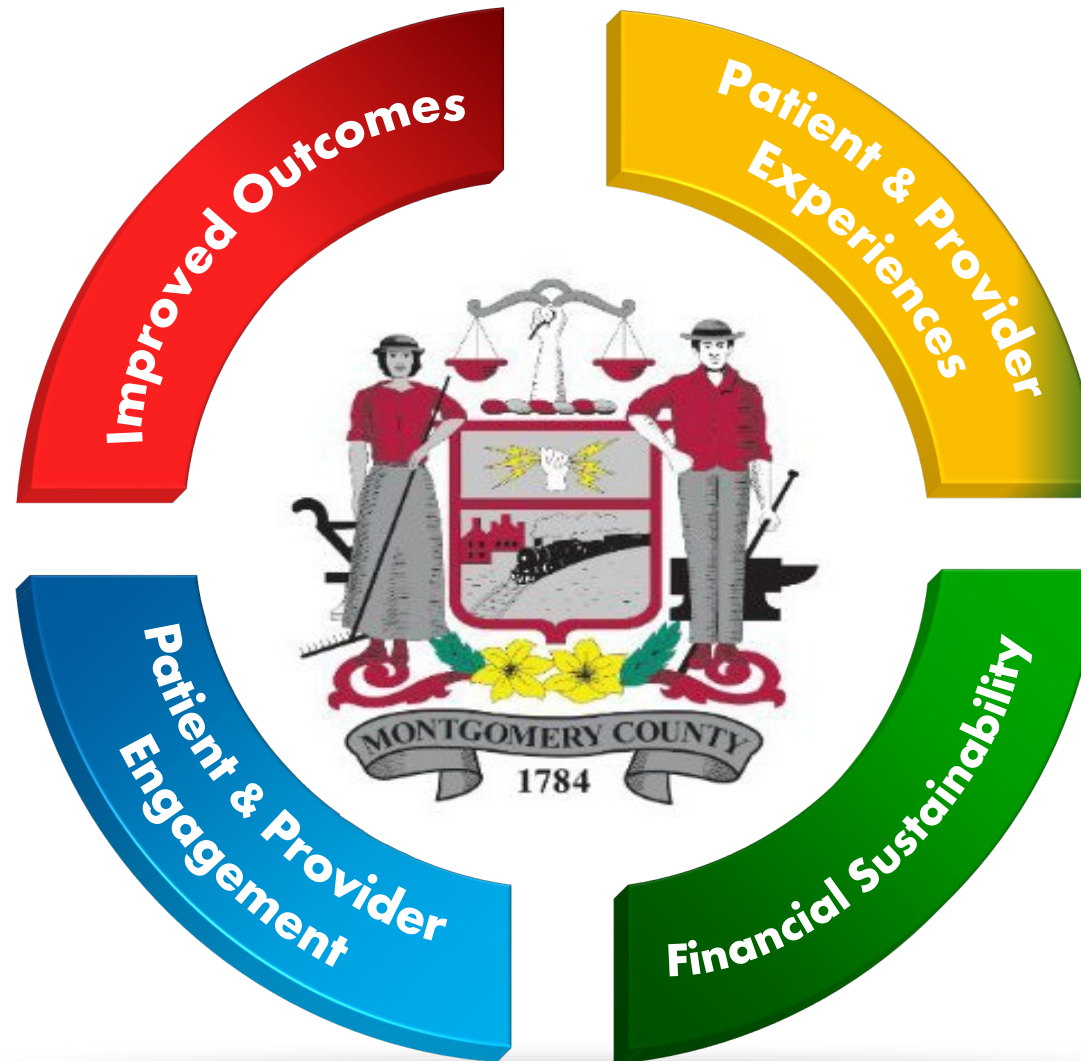
System Outcome Drivers & Key Pillars – Our Collective Compass

IMPROVED OUTCOMES

- Equitable Care
- Risk Management through pooling
- Improved Community Health
- Preventative Care

PATIENT & PROVIDER Engagement

- Provider Satisfaction
- Recruitment & Retention
- Work/Life Balance
- Safety
- Educated
- Living Wages & Benefits



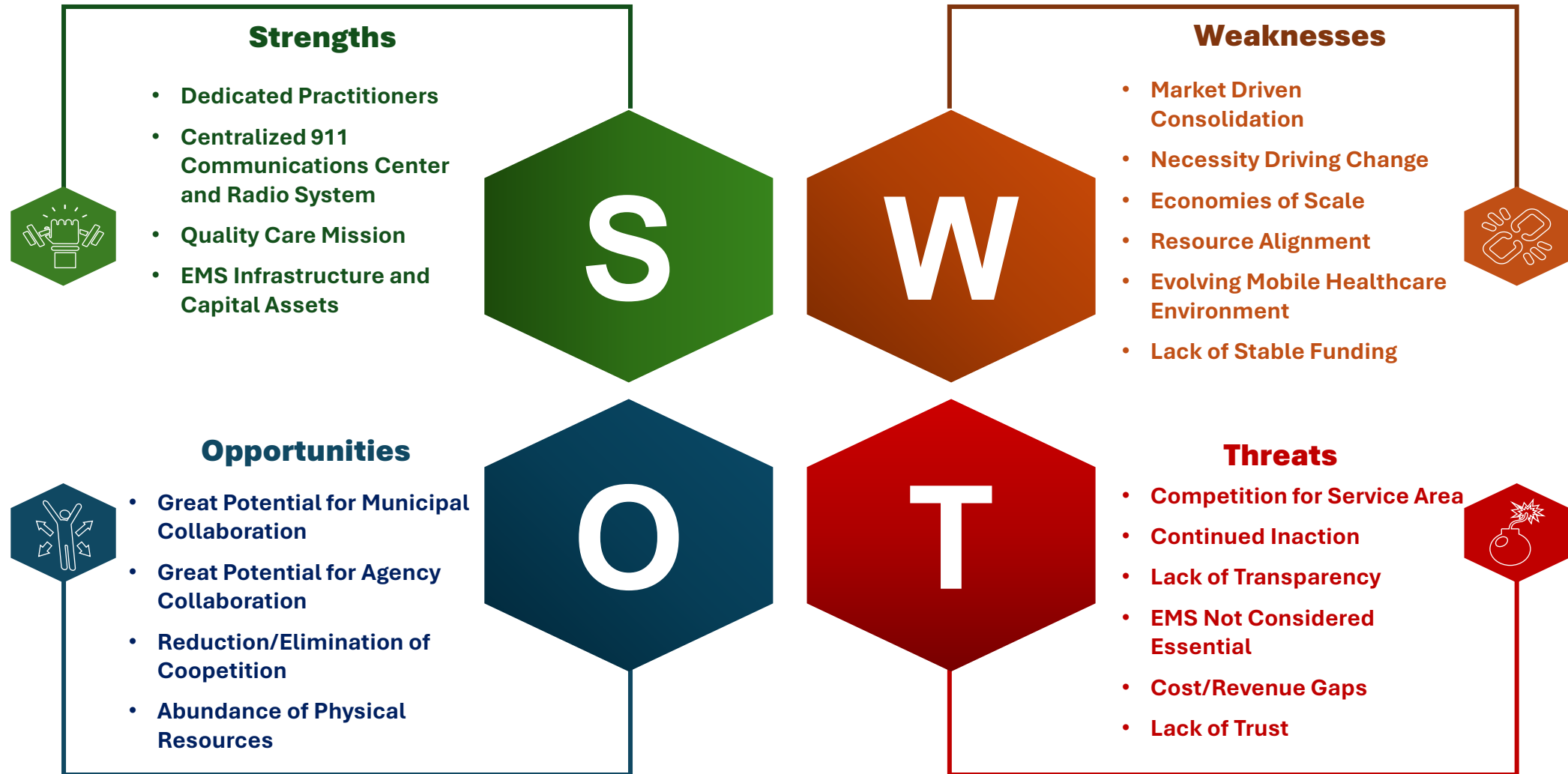
IMPROVED PATIENT & PROVIDER EXPERIENCES

- Patient Satisfaction
- Improved Outcomes
- Increased Safety
- Increased Access
- Improved Quality

FINANCIAL SUSTAINABILITY

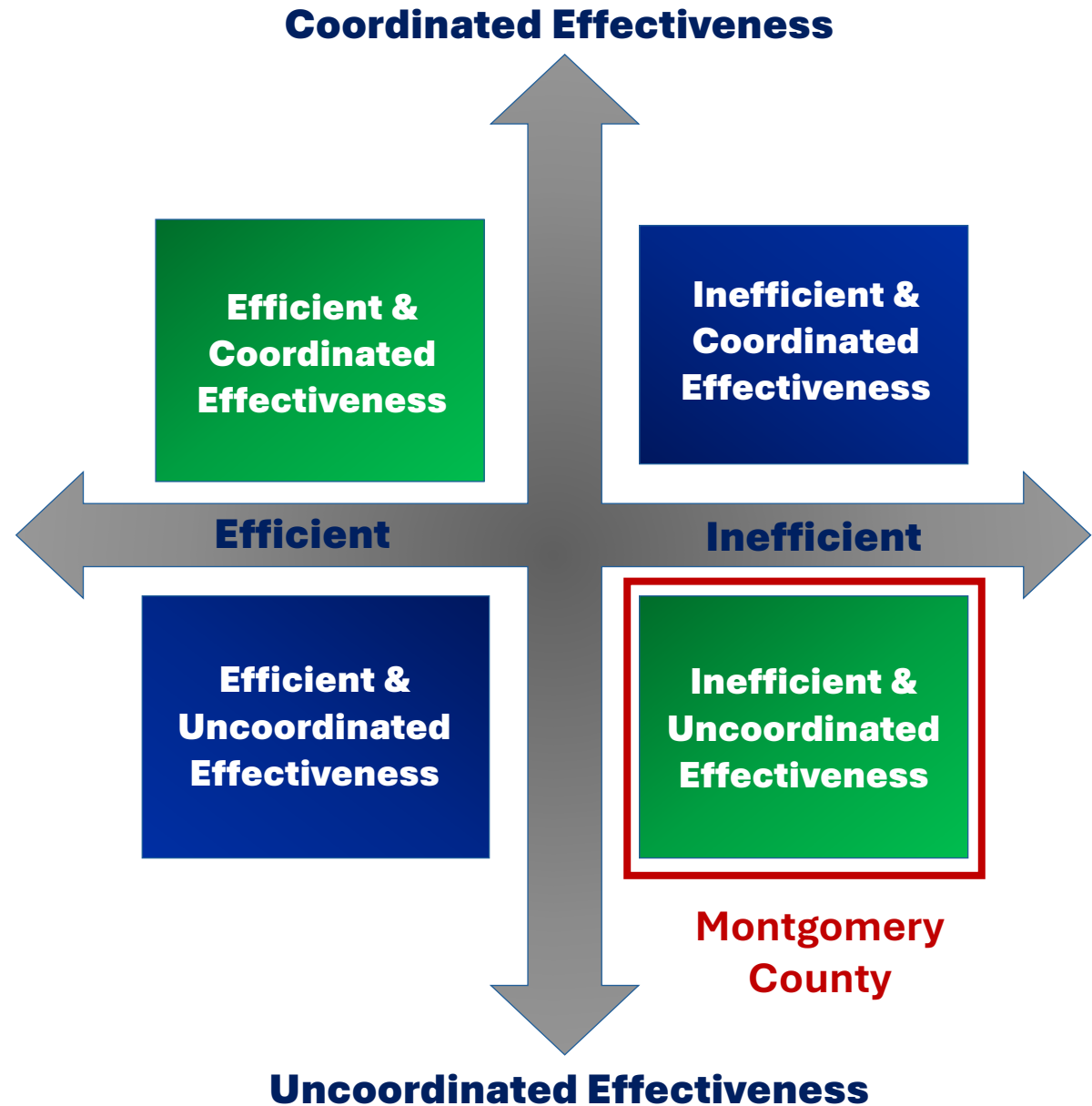
- Aligning Revenue with Cost
- System Sustainability
- Increased Productivity
- Cost Efficient
- Economies of Scale

SWOT Analysis – Montgomery County EMS



Current System Design – "Magic Quadrant"

- The current EMS “system” is comprised of 17 different entities whose origins are heavily tied to the communities that created them
- As time has passed, however, these separate entities have become increasingly interdependent for responses but have not collaboratively worked to improve the efficiency and effectiveness of this new reality
- The outcome is the current system - *from a county-wide perspective* - is over-resourced, financially fragile, and operationally uncoordinated



The Problem: A System in Need of Change



The Approaching Crisis Is Here. . .

U.S. NEWS



Scripps News Investigates: The deadly toll of a US ambulance shortage

Aging and damaged ambulances are making it tough for emergency departments around the country to provide reliable service.

USA TODAY



HEALTH

What if the ambulance doesn't come? Rural America faces a broken emergency medical system

JUNE 26, 2023

Portage Ambulance Association ceases operations

by Sean Eiler/WJAC staff | Thu, November 21st 2024 at 8:27 PM

Updated Fri, November 22nd 2024 at 9:54 AM



AVOCA AMBULANCE ASSOCIATION ANNOUNCES CLOSURE

NOVEMBER 18, 2024



"State of the State" EMS System: Previous Studies

SR 60 **2004**

“Our emergency service providers are in a state of emergency. They need the state’s leadership now in partnership with our municipalities to meet the many challenges they confront today, and which will only worsen if not addressed.”

CCAP **2019**

“The study also found, as previous ones have, that the current system is not sustainable, and action must be taken sooner rather than later for the sake of public safety. Not only are EMS agencies closing, but many of those that are still in service are taking longer to respond to calls.”

“The financial situation of the state’s EMS agencies is a key reason for the ongoing declining number of agencies. From a recent high of 1,645 agencies in 2013, the number in 2017 fell to a low of 1,278.”

- Senate Resolution 6



SR 6 **2019**

SR6 was developed after “...delay or failure to take appropriate action has continued to extend and expand the challenges facing Pennsylvania emergency services.”

AAA Letter to Congress **2021**

“...our nation’s EMS system is facing a crippling workforce shortage, a long-term problem that has been building for more than a decade. It threatens to undermine our emergency 9-1-1 infrastructure and deserves urgent attention by the Congress.”

"State of the State" EMS System: An Evolving Crisis

Webster defines **CRISIS** as “a time of intense difficulty, trouble, or danger. A time when a difficult or important decision must be made.”

The State of EMS in Pennsylvania was in “Crisis” nearly a quarter of a century ago.

Inaction has allowed a concern to become a **Crisis** with the closure of

168 EMS squads statewide

during the Covid years of 2020 thru 2022

Licensure Level	Agency Count 2020	Agency Count 2022
QRS	459	386
BLS Squad	21	28
BLS Ambulance	425	345
ALS Squad	29	24
ALS Ambulance	374	359
Air Ambulance	16	14
TOTAL AGENCIES	1,324	1,156

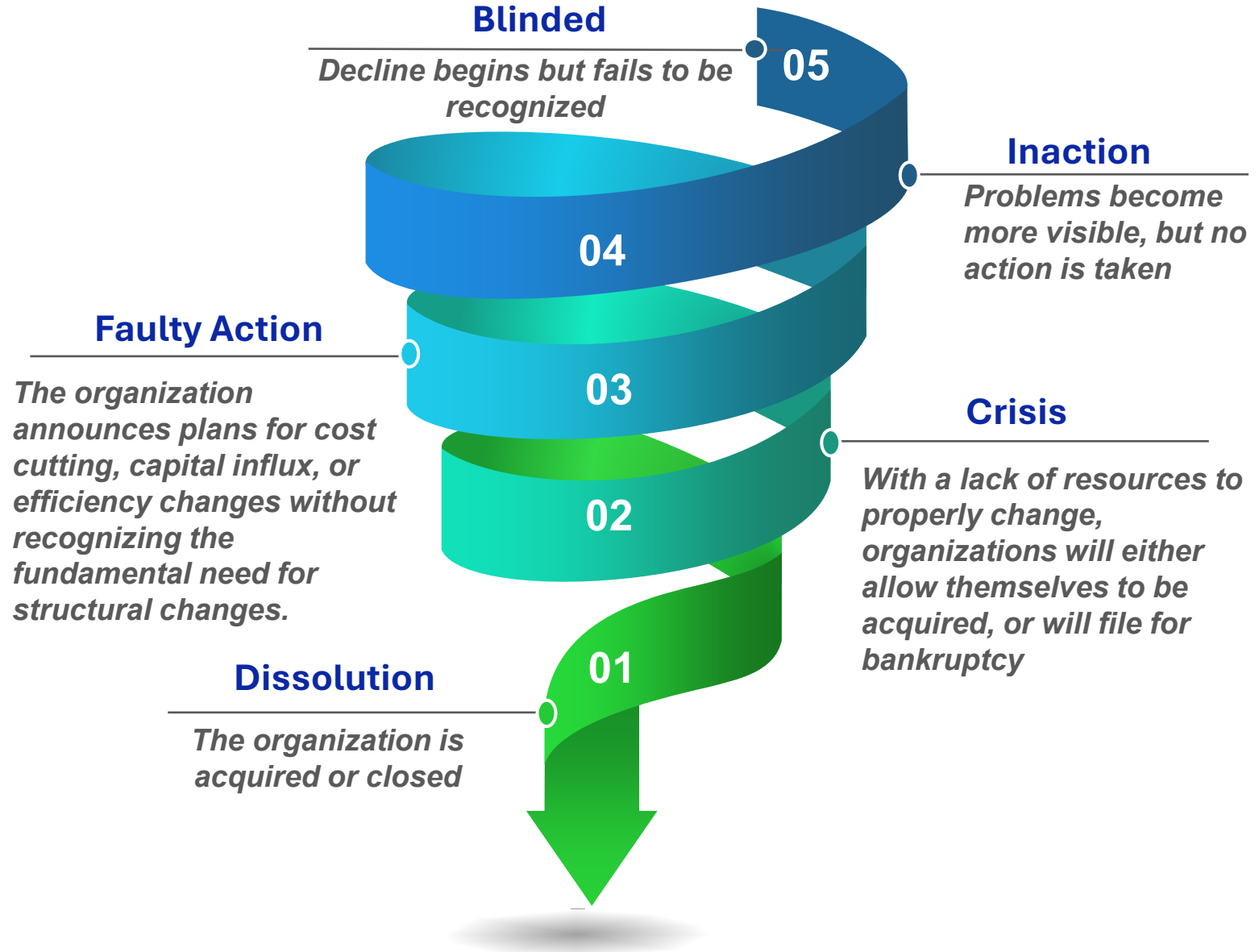
**Source: Pennsylvania Department of Health – Bureau of EMS*

Evolutionary Economics

How EMS Agencies Decline

“Shifting The Burden To The Intervenor”

- Common theme found in describing most, if not all the closures/failures
- In this phenomenon, short-term improvements lead to long-term dependency
- The "intervenor" may be local or state assistance. These initiatives help the component in the short-term but leave the “System” fundamentally weaker
- The agency becomes dependent on the intervenor, the initiative is not sustainable, the agency closes, and the burden of response is placed on the remaining agencies





Key Issues Facing EMS In Montgomery County

Fragmentation



Independent agencies compete, complicating coordinated response efforts

Financial Instability



Declining reimbursement, rising costs, and inadequate municipal funding strain agency operations

Workforce Crisis



High stress and low wages drive personnel away from EMS careers

Resource Allocation



Competing agencies duplicate efforts, delaying responses to emergencies and increasing costs

Lack of "Systemness"



Fragmented oversight hinders necessary systemic changes and improvements

Summary - Financial Health of EMS Agencies



17 INDEPENDENT AGENCIES, ACTING INDEPENDENTLY, WITH HIGHLY VARIABLE FINANCIAL PERFORMANCE



IRS FORM 990 BASED STRESS TESTS REVEAL SOME AGENCIES AT RISK FOR SHORT TO MIDDLE-TERM INSOLVENCY



SOME AGENCIES HAVE HAD TO DIVERSIFY REVENUE-GENERATING ACTIVITIES OUTSIDE OF 9-1-1 SERVICES

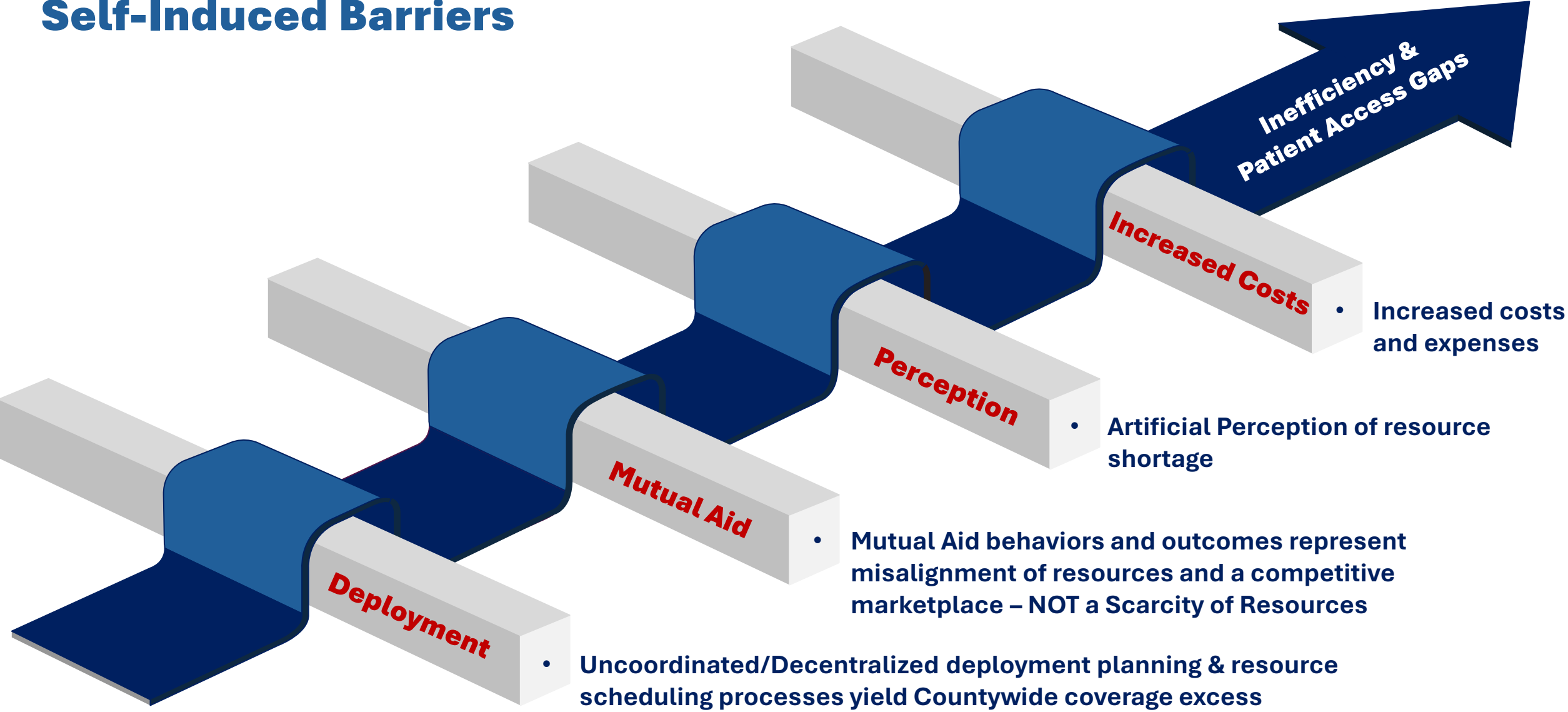


LACK OF PRODUCTIVITY - LOW UNIT HOUR UTILIZATION (UHU)

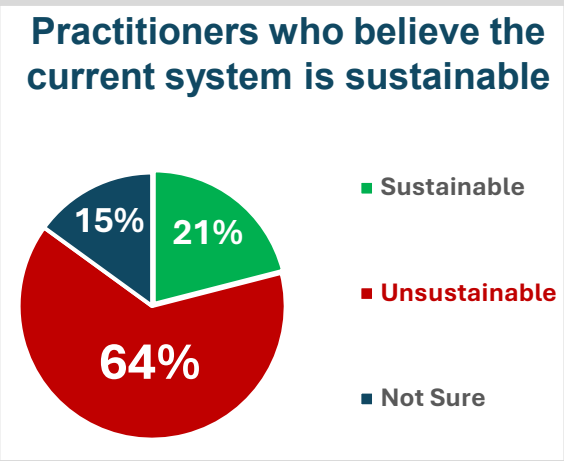
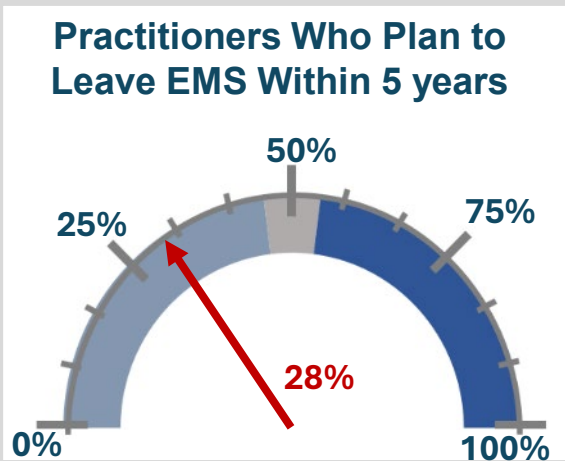
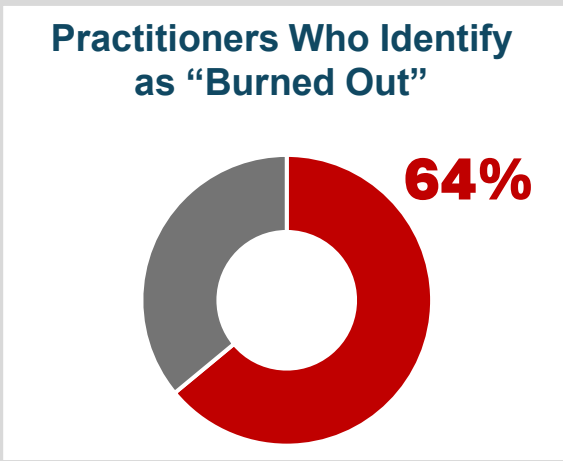
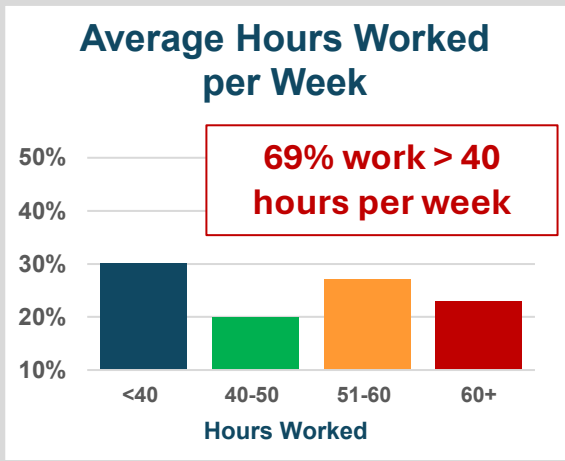
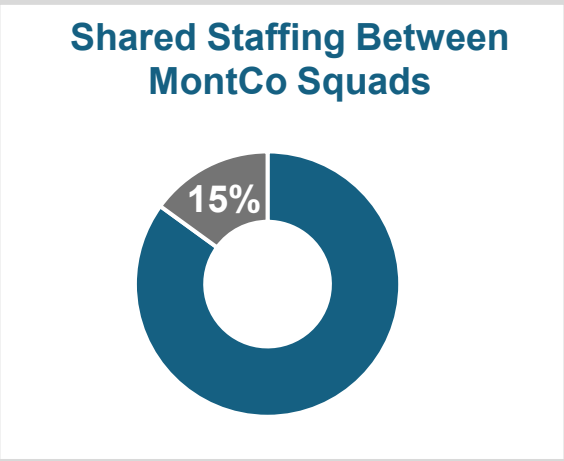
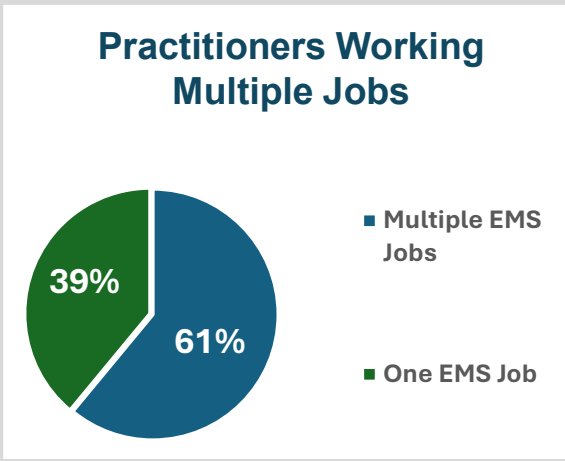
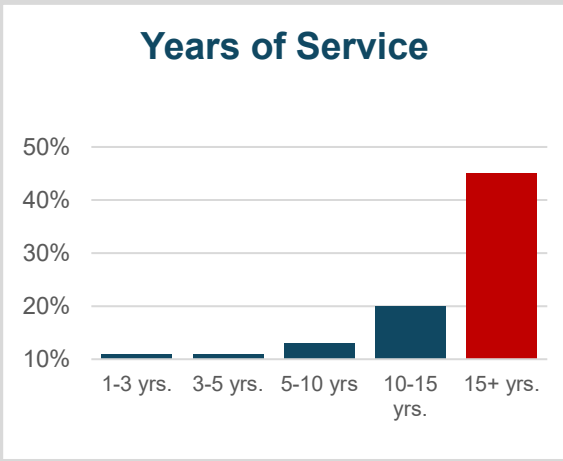
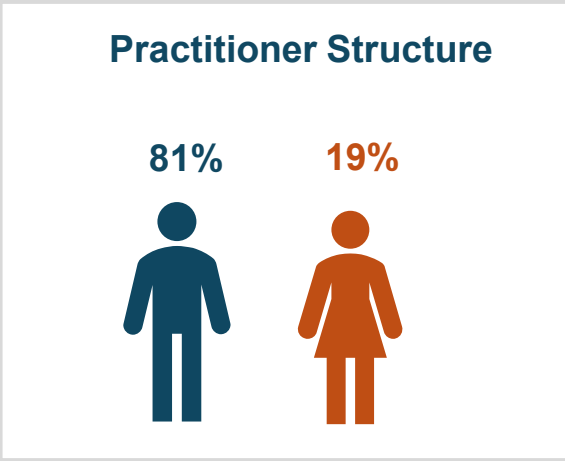


SOME AGENCIES HAVE LIMITED RESOURCES TO RECAPITALIZE THEIR DURABLE MEDICAL EQUIPMENT, AMBULANCES, AND OTHER SPECIALIZED EQUIPMENT

Self-Induced Barriers

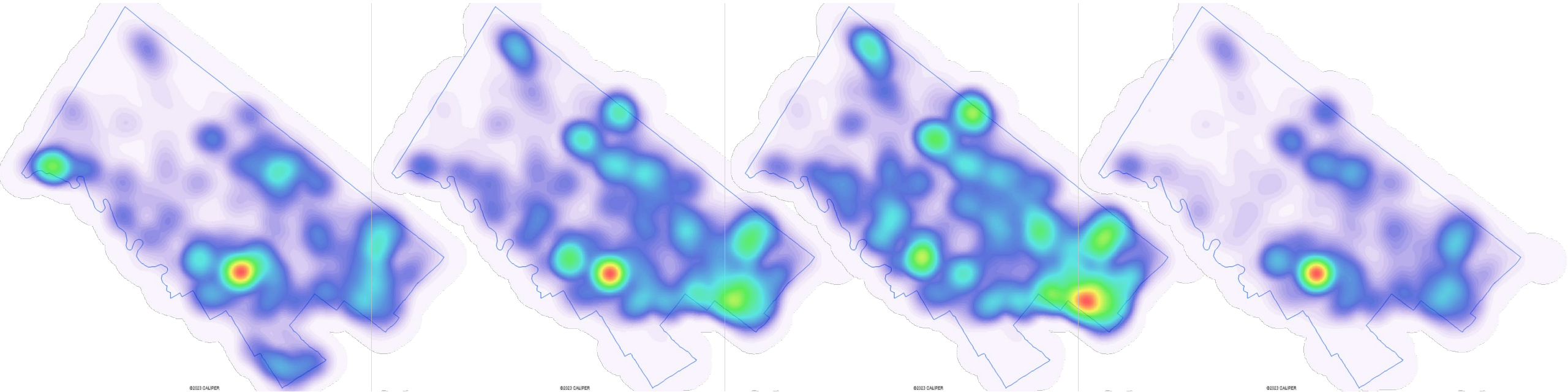


Survey Data Finds An Exhausted Workforce



Montgomery County EMS

The Impact of Resource Imbalance



**Calls Within
Montgomery County**

**Mutual Aid
Dispatches**

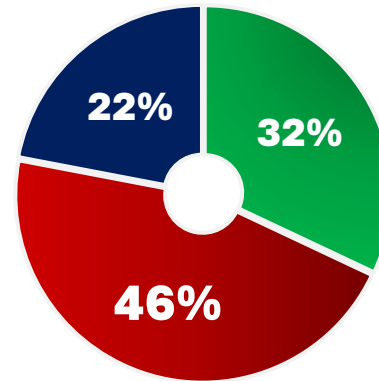
**Mutual Aid
Arrivals**

**Mutual Aid
Recalls**

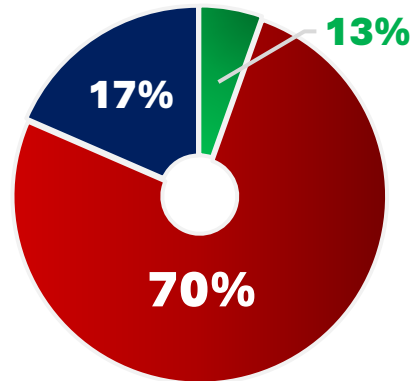
*** ** Most of the Mutual Aid Requests are coming from one general area; however, the vast majority of those requests are ultimately “RECALLED” (cancelled) - leading to increased costs for surrounding agencies and increased frustration for those EMS crews**

Survey Data Finds Misalignment on "Sustainability"

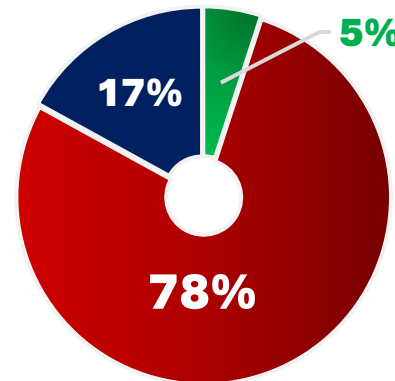
There is a significant variance of perception from agency leadership and the municipal and first responder community within Montgomery County



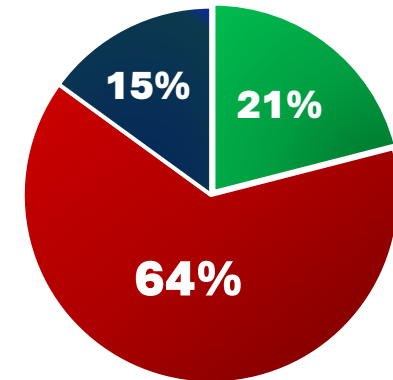
Agency Perspective



Municipality Perspective



Public Safety Perspective

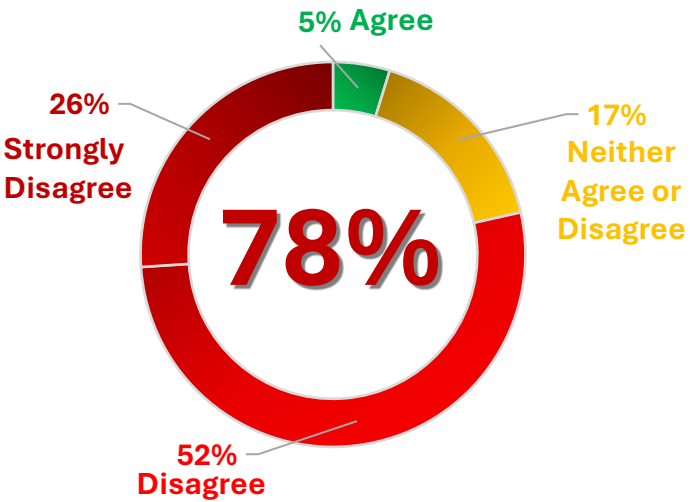


Practitioner Perspective



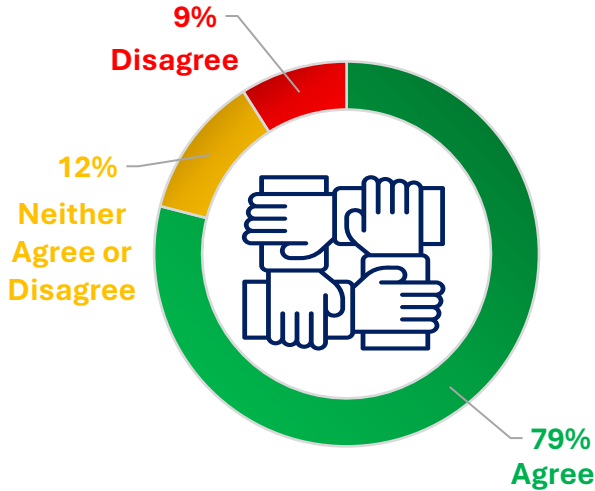
Municipal Survey Responses – Ready for Change

As currently structured, the Montgomery County EMS System can continue providing service without any significant changes.



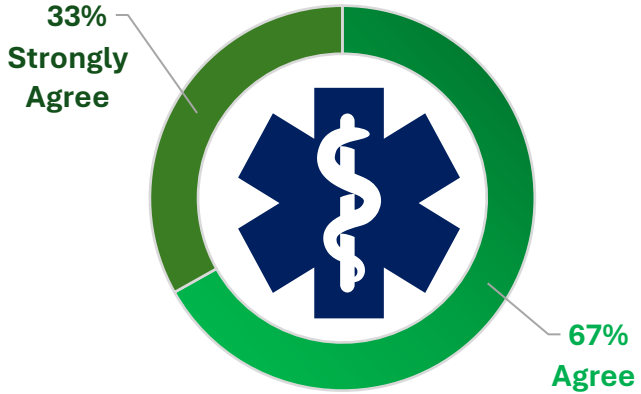
78% of Municipalities believe that the system is unsustainable in its current form

If it would be beneficial, I would support increased EMS collaboration with the county versus individual community arrangements.



**No municipality was strongly against collaboration*

At the conclusion of the project, we would like to see an improved EMS system that provides quality patient care, reliable services, patient and providers satisfaction, and long-term financial sustainability.



**No municipality disagreed at any level*



**Root Causes:
Localism, Legacy
and Legislation**

Key Factors



Culture of Localism

- Government structure of independent municipalities and history of squad development to serve specific geographic areas emphasizes “protecting our own” response areas, leading to diseconomies of scale across the County

Culture of Legacy

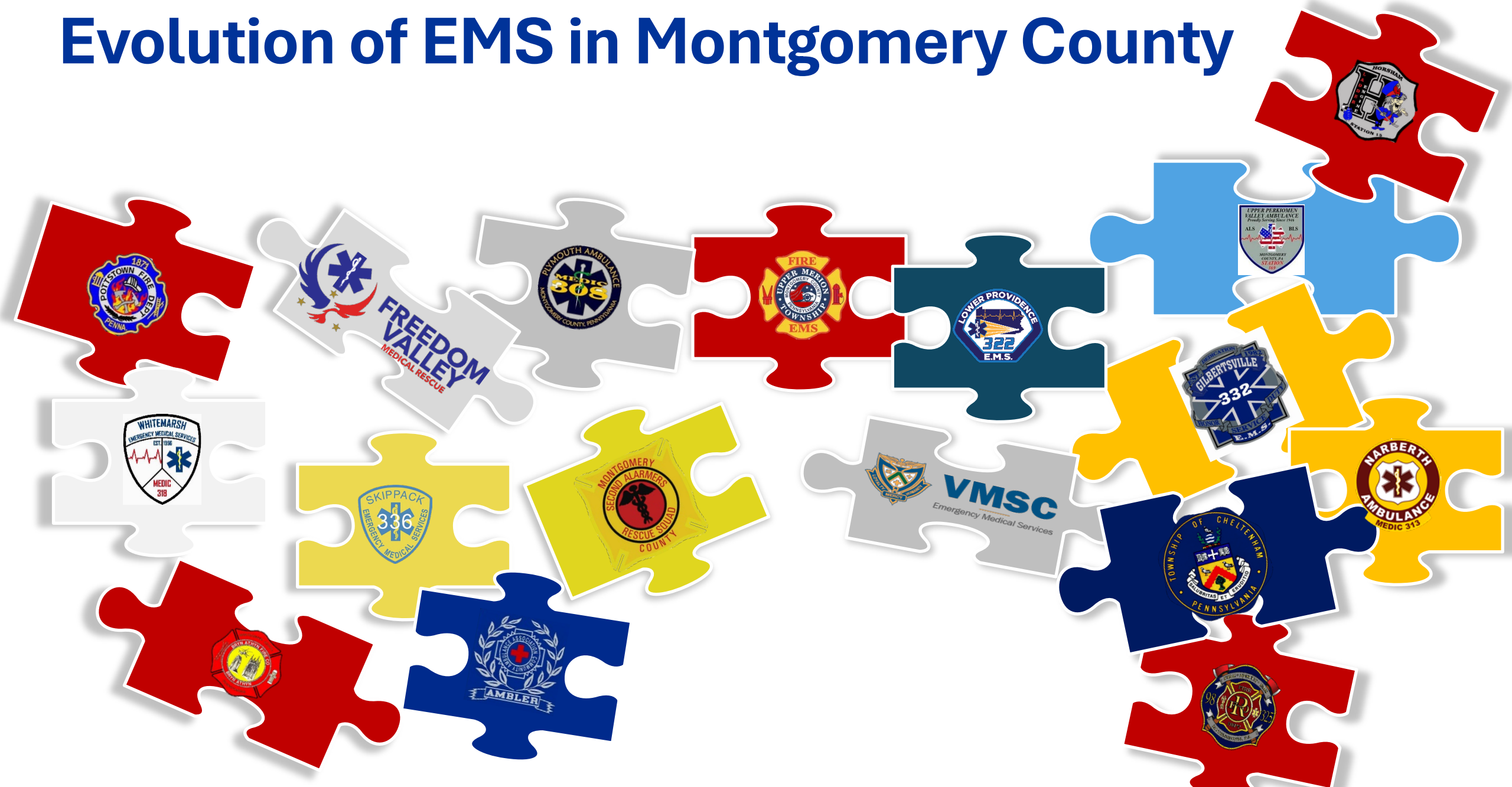
- EMS is operating under models designed in the 1980s and has not significantly changed with the drastic shifts in health care – this is a national problem. Most agencies have not shifted from the traditional ambulance service to providing “mobile healthcare”

Restrictive Legislation

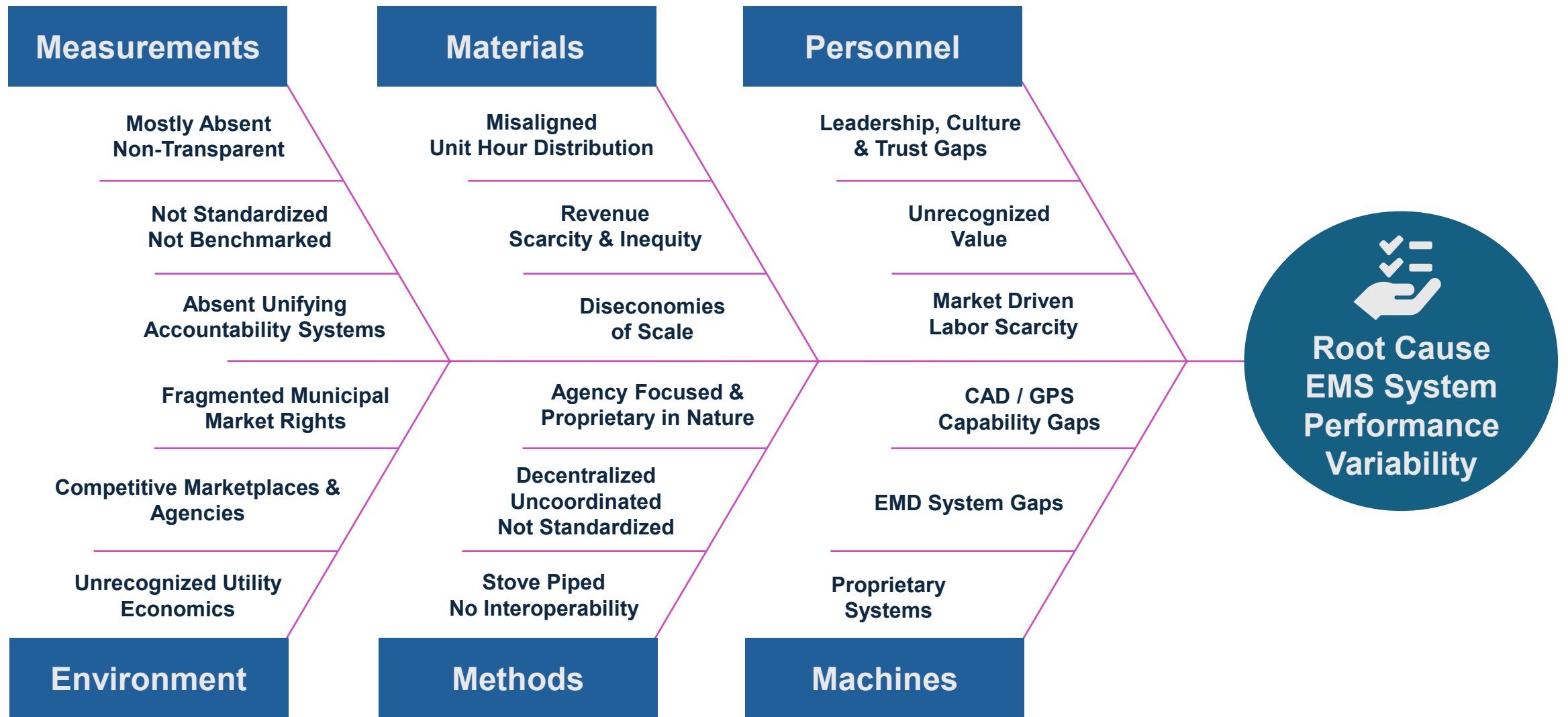
- Municipal laws for ensuring the provision of EMS allow for wide variations in financial support between communities which hinders multi-agency collaboration. No significant direct funding to EMS agencies at the state or county levels. No effective laws mandating that EMS be *funded* as an “essential public service”



Evolution of EMS in Montgomery County



Montgomery County EMS Study – Ishikawa (Fishbone)



Root Cause Analysis



What Stakeholders See & Feel

What Are the Root Causes

Competitive Marketplace

Lack of Independent Accountability

Diseconomies of Scale

Broken Reimbursement System

Weak EMD System & CAD Sensitivity/Specificity

Legislative Failures (all levels of government)

Decentralized/Uncoordinated Operations

Challenging Economy/Inflation/Social Polarization

Not-For-Profit Board Structure & Internal Focus

Variations in Business Acumen

Regional County EMS Councils

Pennsylvania Emergency Medical Services Act Title 28, Chapter 1021, 35 Pa.C.S. §§ 8101-8157

- Authorized the formation of Regional EMS Councils for the purpose of planning, coordination, and delivery of EMS services within a specific geographic region of The Commonwealth
- 13 Regional EMS Councils (REMSC) were created
 - *Montgomery County is 1 of 5 that is a single county REMS Council*
 - *The others are Bucks, Chester, Delaware, and Philadelphia*
- Director of the REMSC must be approved by the Pa. Dept. of Health

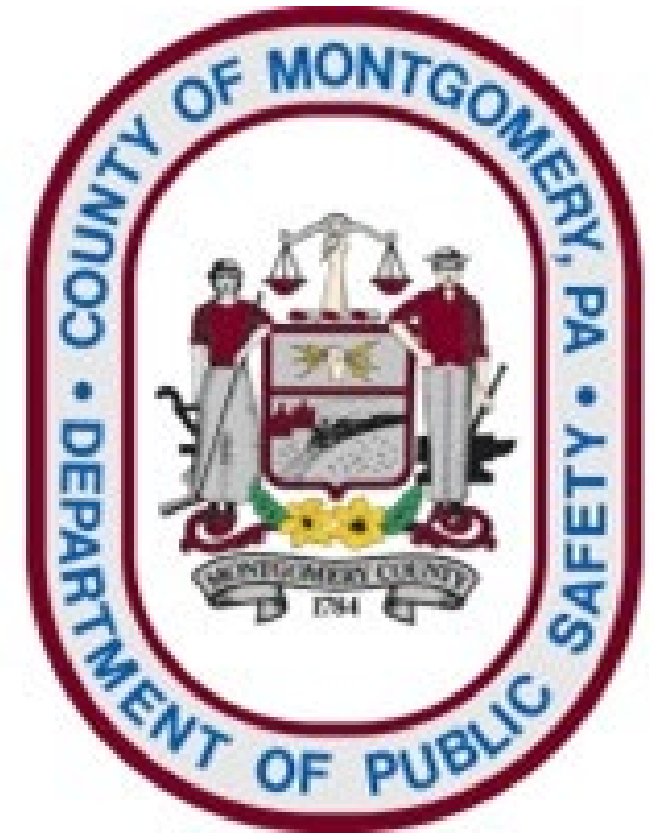


13 Pennsylvania Regional EMS Councils

Roles and Responsibilities:

Regional EMS Council

*Montgomery County EMS Council has responsibilities to **BOTH** Montgomery County **AND** the Pennsylvania Department of Health – A dichotomous role that occasionally stresses the relationship between the EMS agencies and the County*

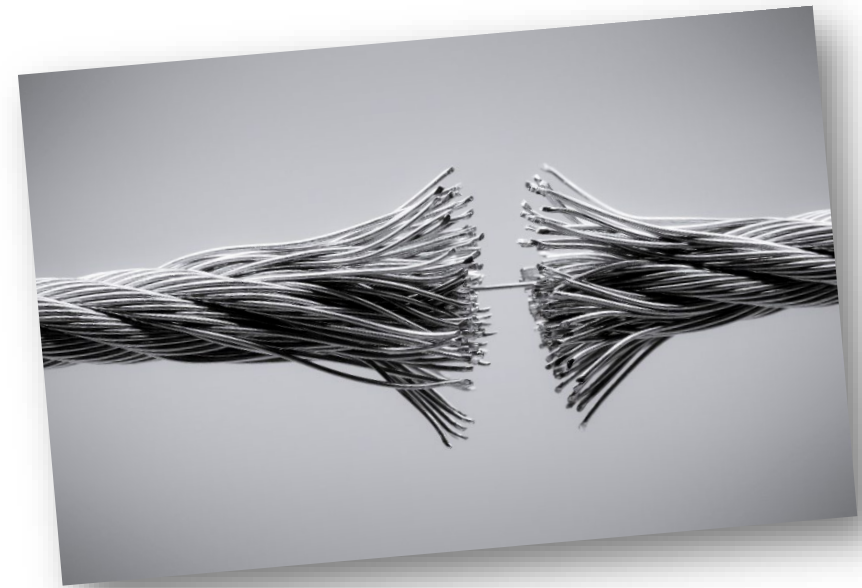


Roles and Responsibilities:

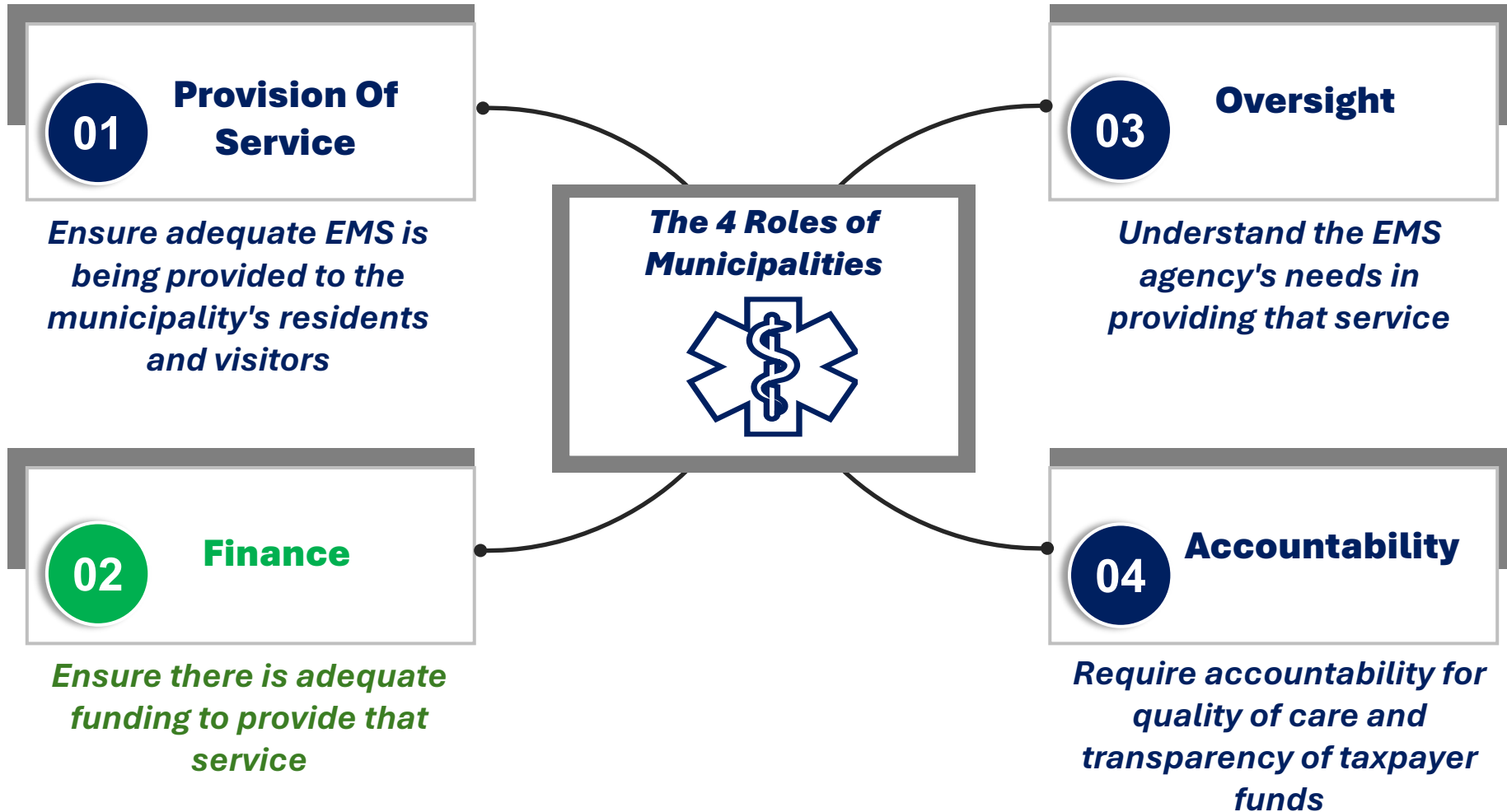
Boroughs and Townships

Pennsylvania Acts 7, 8, & 9 of 2008

- The municipality shall be responsible for ensuring that fire and Emergency Medical Services are provided within the municipality by the means and to the extent determined by the municipality, including the appropriate financial and administrative assistance for these services
- The municipality shall consult with fire and emergency medical services providers to discuss the emergency services needs of the municipality
- The municipality shall require any emergency services organizations receiving municipal funds to provide to the municipality an annual itemized listing of all expenditure for these funds before the municipality may consider budgeting additional funding to the organization



Roles and Responsibilities: Boroughs and Townships





SYSTEM DESIGNS & COMPARISONS

Montgomery County



- Population: 856,533
- Growth Since 2010: 7%
- Land Area: 483 sq. miles
- Population Density: 1,773

- County is both a single county Regional EMS Council with authority under the Pennsylvania Department of Health and a Division of the Montgomery County Department of Public Safety
- EMS is comprised of a variety of delivery agency models including fire based, EMS only, and industrial
- The Montgomery County 9-1-1 center is the single PSAP for all EMS agencies within the County
- Though the County EMS Division advocates and regulates under state law
- The EMS agencies within Montgomery County, the legislative authority lies with the 62 individual municipalities
- These municipalities are free to “contract” with any of the available licensed agencies within Montgomery County and/or any of a myriad of licensed private providers with operations in or near the County

System Comparative

17 Independent Agencies



- Population: 856,533
- Land Area: 483 sq. miles
- Population Density: 1,773
- 91,000 Responses Annually
- 38 – 52 Daily Ambulances (108 Total Combined Assets)
- Static Deployment
- 4 EMT & 1 Paramedic Program



Columbus, OH Fire Based Provider

- Population: 913,175
- Land Area: 223 sq. miles
- Population Density: 4,109
- 126,000 Responses Annually
- 40 Ambulances
- Static Deployment
- 5 EMT & 3 Paramedic Training Programs



Indianapolis/Marion County, IN Consortium Provider

- Population: 968,460
- Land Area: 403 sq. miles
- Population Density: 2,466
- 119,000 Responses Annually
- 44 Ambulances
- Hybrid Deployment
- 5 EMT & 3 Paramedic Training Programs



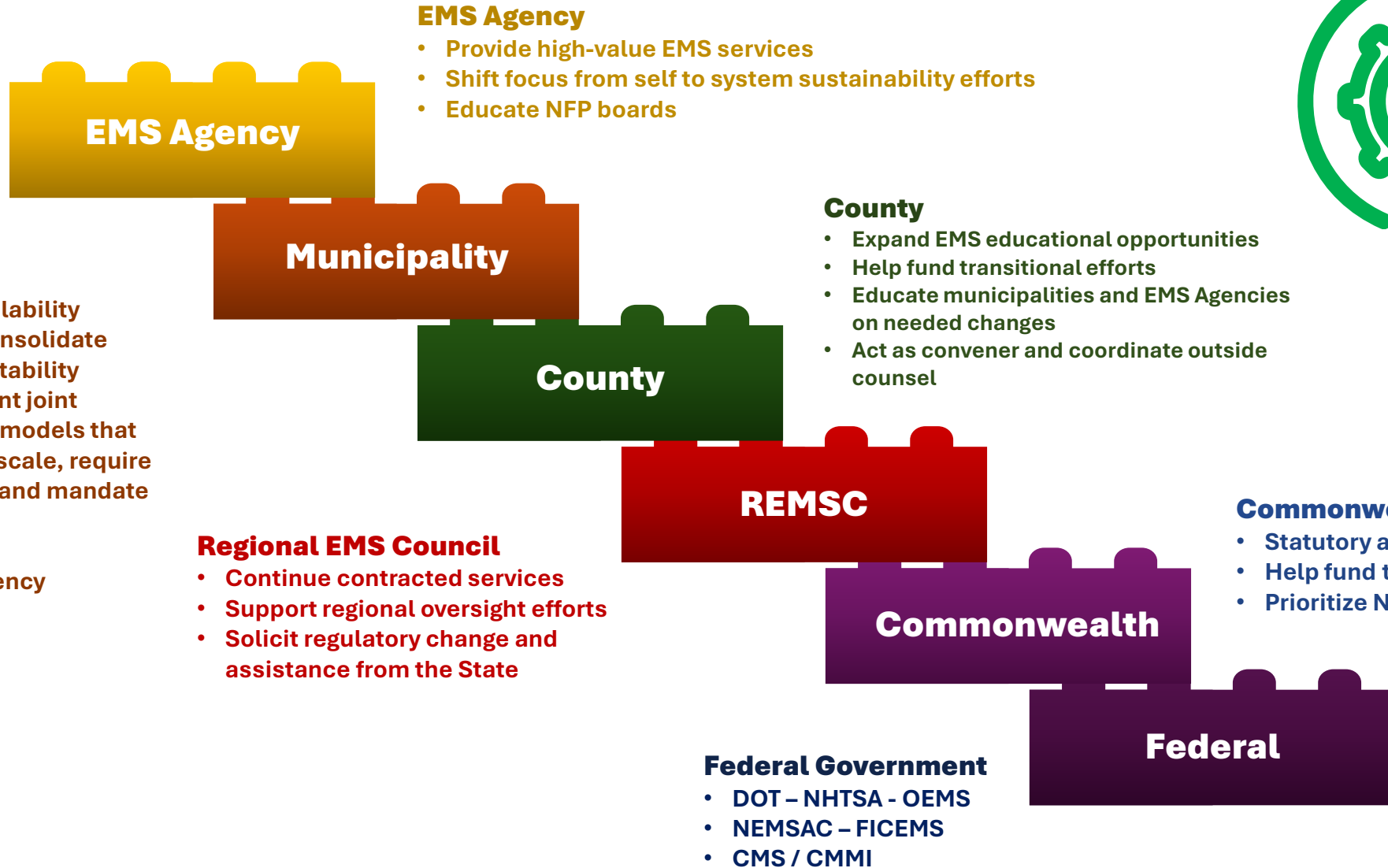
Lee County, FL County Based Provider

- Population: 886,007
- Land Area: 784 sq. miles
- Population Density: 1,130
- 86,500 Responses Annually
- 36 Ambulances
- Static Deployment
- 5 EMT & 3 Paramedic Training Programs



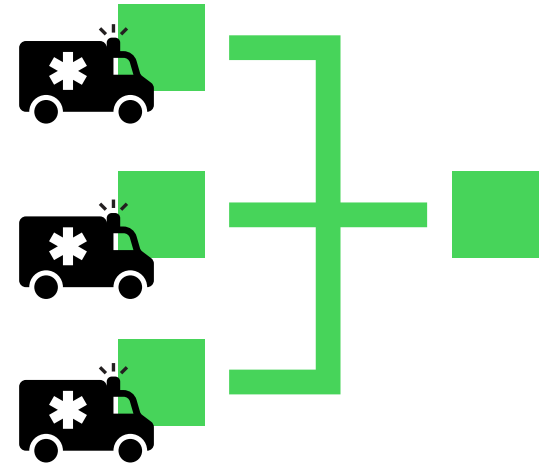
**Key Recommendations:
Building a Model
EMS System**

Build A Sustainable EMS System



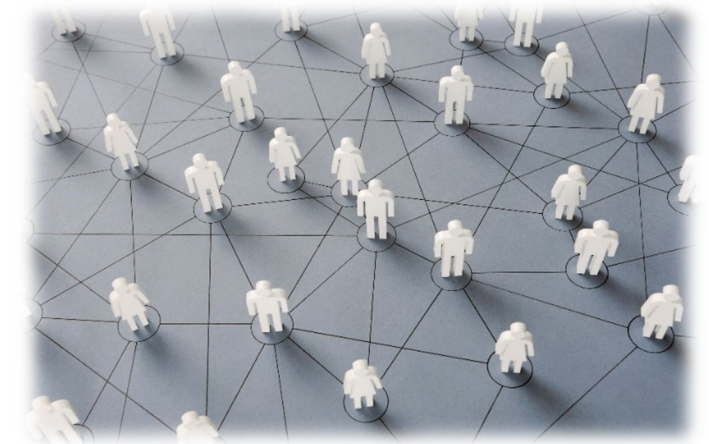
Regionalization & Collaboration With Independent Oversight

- **Phased Implementation Approach**
- **Develop Model Municipal EMS Contracting Guidelines**
- **Support Responsible EMS Agency Consolidation**
- **Establish Regional EMS Authority(ies) and/or an EMS Oversight Entity**



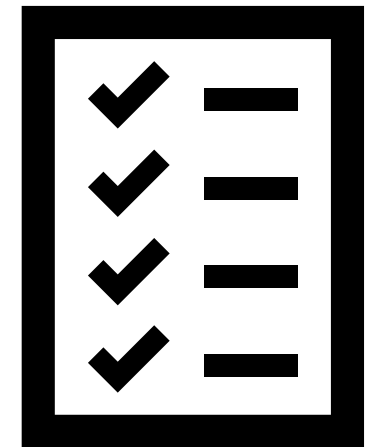
Modernize Communications and Dispatch

- **Commit to Use of Mobile Data Terminals (MDTs) and Automated Vehicle Location (AVL) for All Agencies**
- **Implement the Advanced Medical Priority Dispatch System (AMPDS)**
- **Explore Care Navigation Systems**



Optimize Resource Utilization

- **Implement a Tiered Response System**
- **Develop Countywide System Status Management (SSM) Protocols**
- **Standardize On/Off Duty Reporting**



Enhance Clinical Performance

- **Enhance Countywide Quality Metrics with Standardized Data Collection, Adoption of National Measures, and Mandatory Reporting**
- **Establish a Peer-Driven Quality Improvement (PDQI) Board**
- **Enhanced Medical Director Engagement and Oversight**



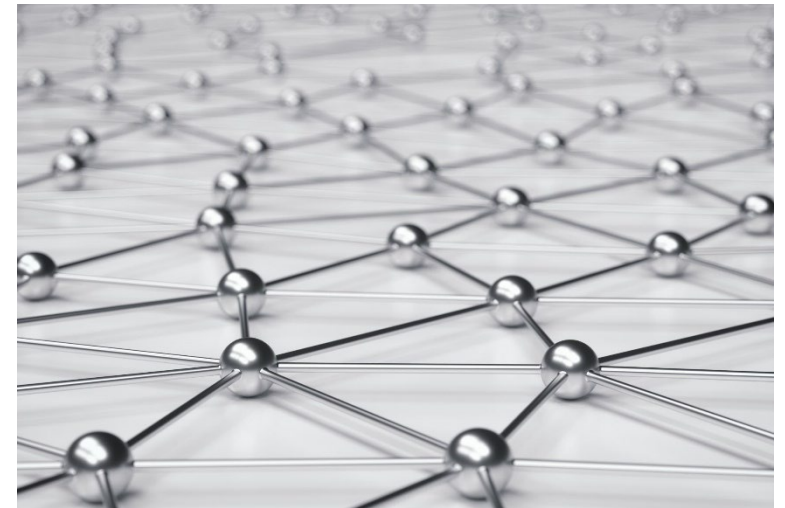
Invest More in the EMS Workforce

- **Expand Paramedic & Other EMS Training Opportunities**
- **Support Collaborative Recruitment & Retention**
- **Incentivize Career and Volunteer Workforce**
- **Cooperative Workforce Strategies**



Enhance Preparedness for Emerging Threats

- **Buttress Existing EMS System**
- **Consistently Conduct Interagency Training Exercises**
- **Better Allocate Equipment Based on Need**
- **Prioritize Cybersecurity Preparedness**



A group of firefighters in a huddle, with a silhouette of a person pointing towards the text. The background features a dark blue circular graphic with a grid pattern and a bright light source behind the firefighters.

The Path Forward: Shared Responsibility, Collective Action

Funding Challenges – A Call To Action

Declining Reimbursements

Payer mix shifts towards more government reimbursement significantly impact agency revenues

Diseconomies of Scale

Uncoordinated efforts have created redundancy and increased Costs

Increased Demand

Demographic changes countywide have increased demand for services year over year



Unbalanced Municipal Support

Significant variability between municipal support for EMS within the County

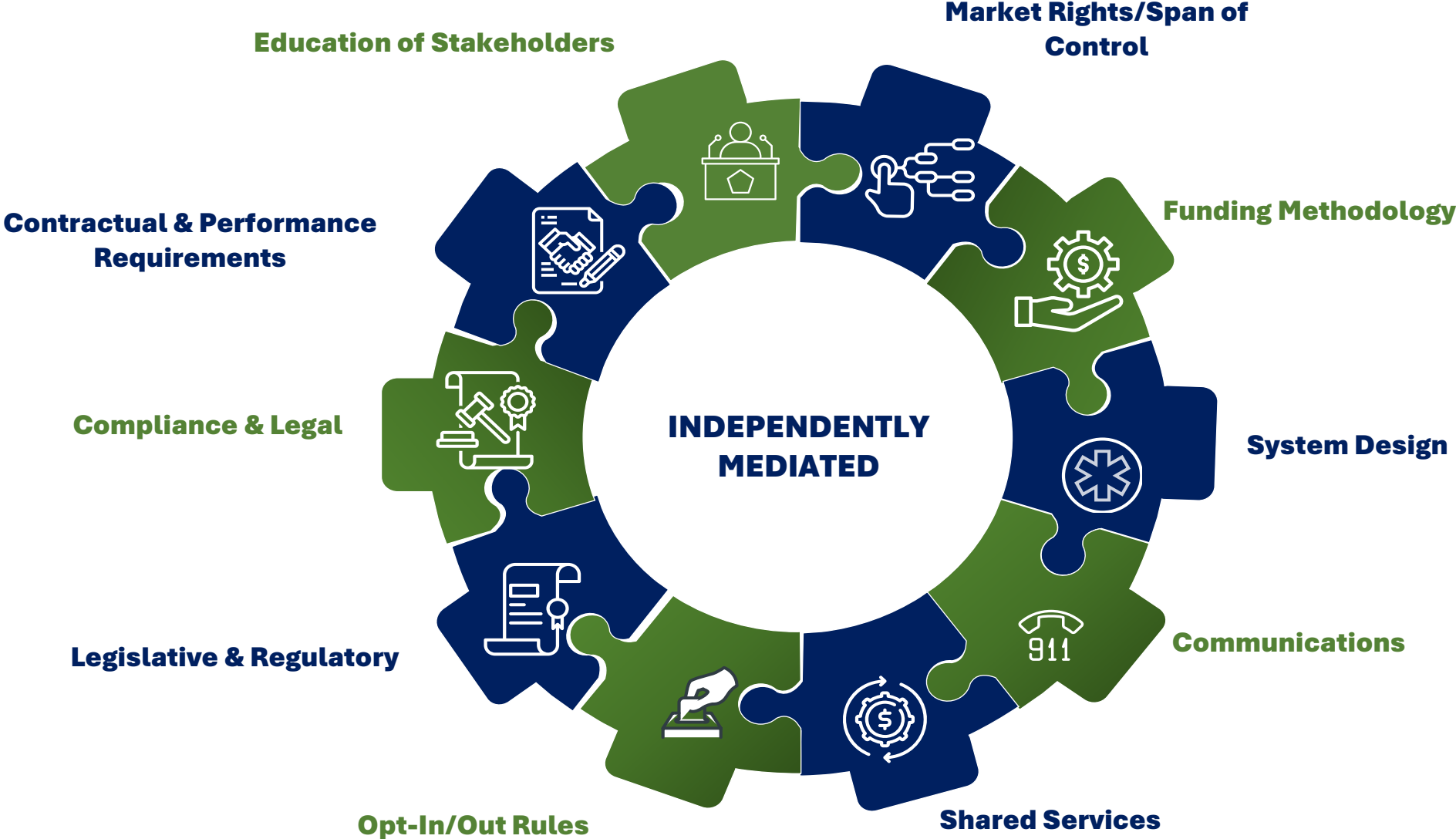
Lack of Prioritization

EMS is not funded as an “Essential Public Service”.

Rising Costs of Service Delivery

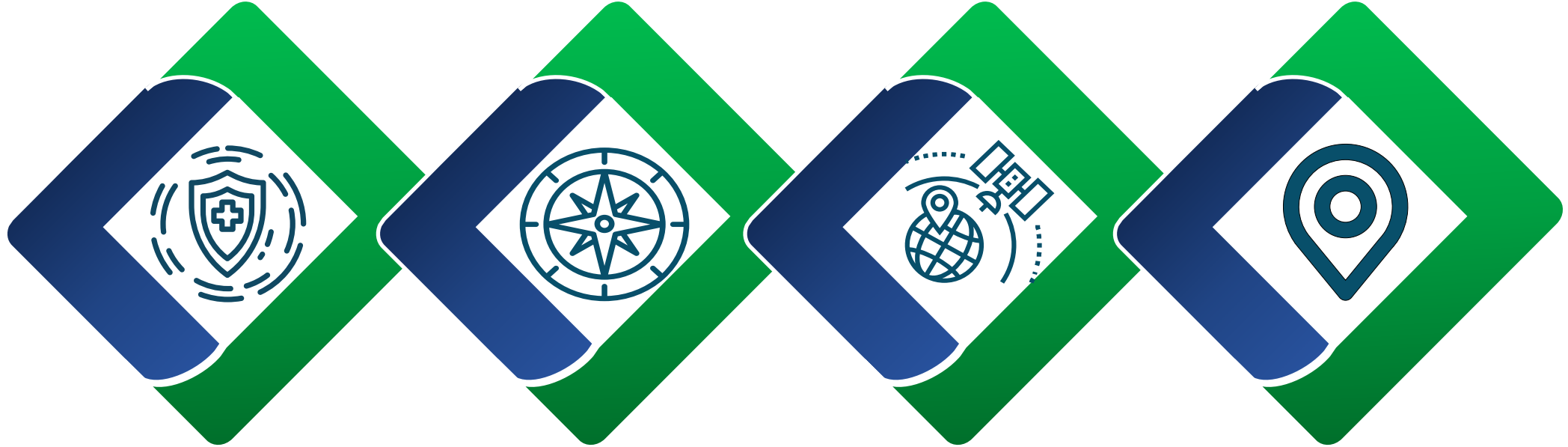
Increases in the cost of labor, equipment and supplies outpaced funding and reimbursement

Next Steps...The "HOW"



The Future of EMS System Design

For Montgomery County EMS to be a leader in the evolution of EMS and out-of-hospital care, it **MUST** first amend its existing system



**Mobile Integrated
Healthcare**

**Care
Navigation**

Telemedicine

**On-Site
Services**



QUESTIONS?



For Questions and Comments



EMS Strategic Plan - Public Comment and Feedback Form

Sign in to Save Progress

Please use this form to submit public comment or feedback regarding the EMS Strategic Plan and/or the planning process. This form is not for formal complaints against an EMS agency or EMS provider. File a complaint [here](#).

Topic*

-- Select One --

Public Comment/Feedback*

<https://www.montgomerycountypa.gov/FormCenter/Emergency-Services-4/EMS-Strategic-Plan-Public-Comment-and-Fe-443>