

Safety Needs and Technologies Assessment for NYMTC's Suburban Counties

NYMTC May 2025 Brown Bag

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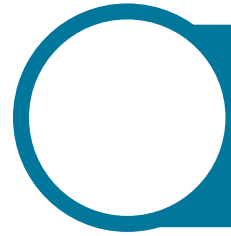


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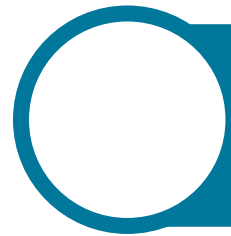


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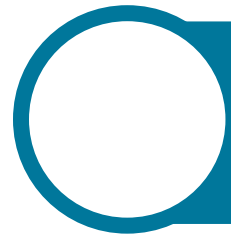
Study Components



Task 1: Develop Study Organization and Materials



Task 2: Develop Study Outreach Program

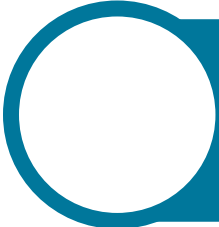


Task 3: Literature Review and Benchmarking Research

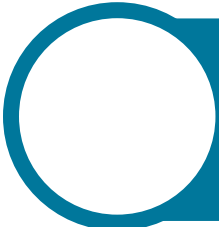
Study Components



Task 4: Develop a Safety Assessment Template



Task 5: Undertake a Safety Assessment of the Suburban Subareas



Task 6: Support the Development of a Safety Program for the Suburban Subareas

Research Plan Overview (Goals)

Launch an in-depth study into transportation safety concerns within NYMTC's suburban subareas

Develop and implement a dynamic outreach program tailored to the unique characteristics of the region to foster meaningful interactions and integrate diverse perspectives into the study

Examine NYC's Vision Zero planning to design effective safety assessment tools/templates suitable for suburban contexts

Synthesize insights from research and stakeholder discussions to identify actionable, evidence-based strategies and policies enhancing transportation safety in the study region

Construct tailored outreach program
in collaboration with NYMTC

Assemble diverse list of participants
from various sectors

Technical memo describing outreach
activities and study area materials

Outreach approach including online
surveys and interviews

Outreach material including agency/
community surveys, consent forms,
questionnaires and invitations

Task 2: Develop Study Outreach Program



Task 2: Develop Study Outreach Program

Survey Questions

Agency type

Years of experience

Job responsibilities

Experience with safety assessment development

Agency uses a standardized safety assessment template

Familiarity with emerging technologies for transportation safety

Contributing factors to transportation safety in suburban areas

Features to include in transportation safety assessment template

Challenges to conduct transportation safety assessments in suburban areas

Considerations for successful integration of new safety technologies?

Findings from TRB Outreach

Safety Challenges

- Difficult driving maneuvers
- Concerns due to animal crossing
- Low access to resources is a consequence for older drivers
- Visibility issues (re: pedestrians)
- High speed limits
- Heavy vehicles (trucks)
- Unsafe bus stops design and locations

Safety Needs

- Advanced intersection control
- Improved street lighting
- Traffic calming measures (specifically at residential areas entrances)
- Rapid emergency response
- Wildlife protection

Conventional/Emerging Safety Interventions/Tech

- Speed management
- Smart street lighting
- Connected traffic signals
- Red light cameras
- Traffic calming
- Road design elements
- Environmental: higher tree canopy
- Enforcement
- Educational campaigns

Task 3: Literature Review and Benchmarking Research



Complete a comprehensive literature review and identify emerging safety technologies across diverse transportation modes



Analyze Vision Zero plans for various cities across the United States



Benchmark regional comparisons between the study area and 10 similar metropolitan regions



Conduct in-depth online interviews with selected staff at metropolitan planning organizations or councils of government in each selected region

Task 3: Literature Review and Benchmarking Research

Vehicle Safety Technologies

Autonomous vehicles (AVs)

Advanced Driver Assistance Systems (ADAS)

Collision Avoidance Systems

Infrastructure Safety Technologies

Smart Traffic Management Systems

Intelligent Transportation Systems (ITS)

Roadway sensors and cameras

Safety Communication Technologies

Vehicle to Vehicle (V2V) communication

Vehicle to Infrastructure (V2I) Communication
Emergency Notification Systems

Integrating New Transportation Safety Technologies



- **Technology Pilot Programs**
- **Automated Vehicle Integration Policies**
 - Define specific areas or routes where automated vehicles can be tested or deployed, should be coordinated across jurisdictions to ensure safety and control
 - Integration with traffic management systems
 - AV data sharing with local and regional transportation authorities
- **Connected Infrastructure Development**
 - Prioritize the installation of smart traffic signals that can communicate with connected vehicles
 - Mandate the integration of V2I technology at critical intersections or along high-traffic corridors
 - Dedicate funding for smart infrastructure
 - Cross-jurisdictional infrastructure coordination
- **Data Privacy and Security Standards**

Task 3: Literature Review and Benchmarking Research

Included review of 43 Vision Zero action plans highlighting following initiatives:



Pedestrian



Bicycle Safety



Safe Roads



Speed
Management



Safe School
Zones



Engagement

Benchmarking MPOs selected

Metropolitan Planning Organization	State	Major City	Area (Sq. Miles)	2010 Census Population	2020 Census Population
Southern California Association of Governments (SCAG)	CA	Los Angeles	38,649	18,051,203	18,823,705
Chicago Metropolitan Agency for Planning (CMAP)	IL	Chicago	4,133	8,454,281	8,602,637
Metropolitan Transportation Commission (MTC)	CA	San Francisco	7,485	7,150,828	7,765,693
North Central Texas COG (NCTCOG)	TX	Arlington	9,448	6,417,630	7,698,817
Houston-Galveston Area Council (H-GAC)	TX	Houston	8,466	5,892,002	7,092,124

Benchmarking MPOs selected

Metropolitan Planning Organization	State	Major City	Area (Sq. Miles)	2010 Census Population	2020 Census Population
North Jersey Transportation Planning Authority (NJTPA)	NJ	Newark	4,410	6,579,801	7,025,148
Delaware Valley Regional Planning Commission (DVRPC)	PA	Philadelphia	3,811	5,626,331	5,893,466
National Capital Region Transportation Planning Board (TPB)	DC	Washington	3,555	5,068,589	5,732,469
Atlanta Regional Commission (ARC)	GA	Atlanta	4,550	4,818,050	5,585,284
Southeast Michigan COG (SEMCOG)	MI	Detroit	4,608	4,703,593	4,829,680

Task 3: Literature Review and Benchmarking Research

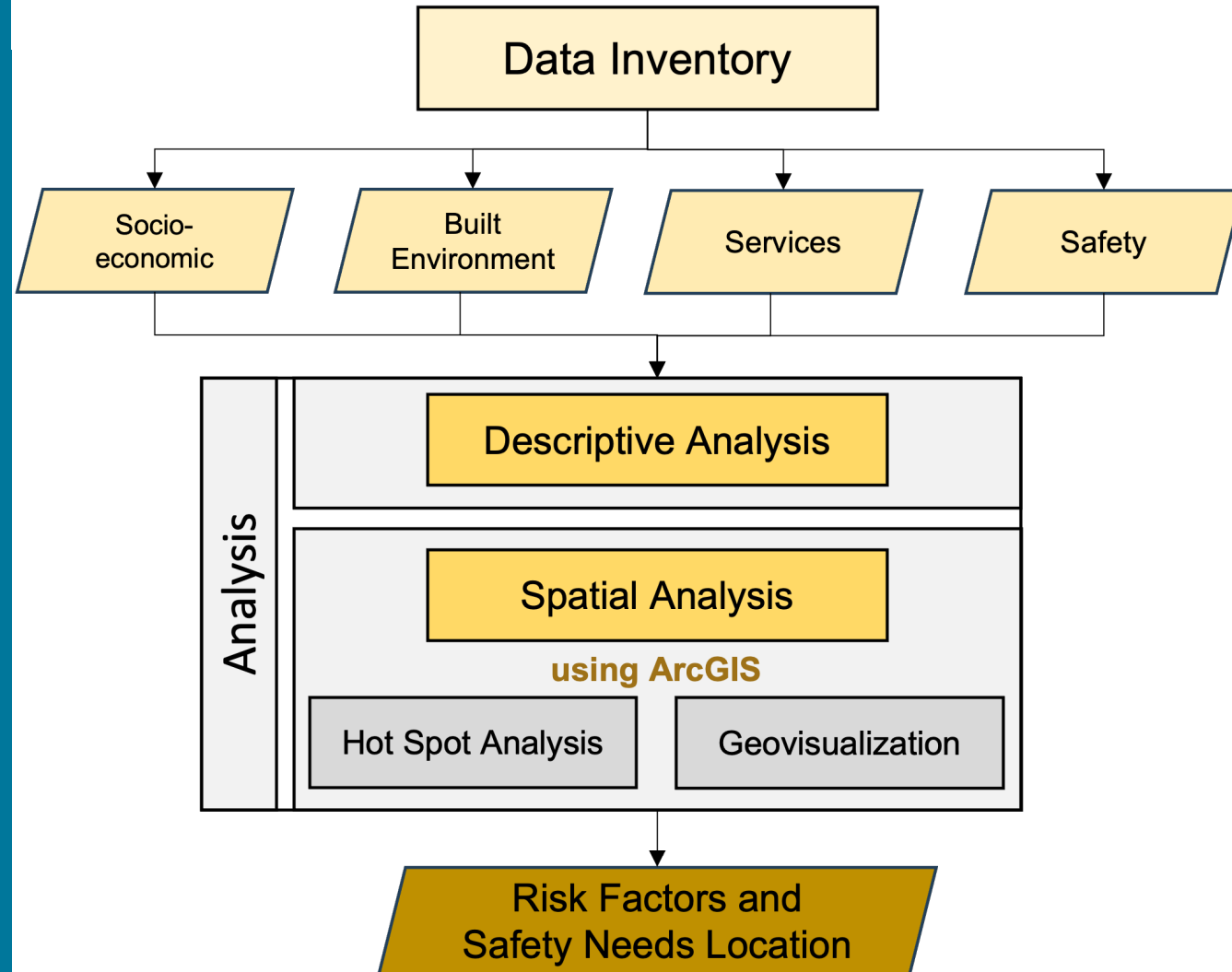
MPO Interview Takeaways/Recommendations

- Maintain balance between high-speed, high-volume roads and local roads
- Focus on how people travel rather than how many vehicles travel on roads
- Move beyond traditional benefit-cost analysis towards implementing safety analysis to assess project impacts on roadway safety, including monetizing potential lives saved or lost
- Emphasize pedestrian and cyclist-friendly design in suburban areas, including pedestrian cut-throughs and fully separated paths
- Advocate for safer roadway design elements such as medians and road diets to improve safety for all users
- Promote better access management in suburban shopping centers to enhance safety and traffic flow
- Continue discussions with localities to identify feasible safety improvements

Task 4: Develop a Safety Assessment Template

Utilize methodologies employed in NYC Vision Zero planning to draft detailed safety assessment template tailored to study area needs

Integrate analytical and programmatic components; incorporate mapping tools such as ArcGIS



Task 5: Undertake A Safety Assessment of the Suburban Subareas



Apply the safety assessment template completed in Task 4 and evaluate the safety parameters across each county in the suburban subareas



Engage in feedback loops with the NYMTC's suburban Transportation Coordinating Committees (TCCs) and refine the assessment accordingly

Task 6: Support the Development of a Safety Program for the Suburban Subareas

Existing Safety Efforts and Gaps

Through input gathered from TCC members

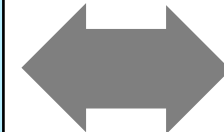
Review current
jurisdictional
safety programs



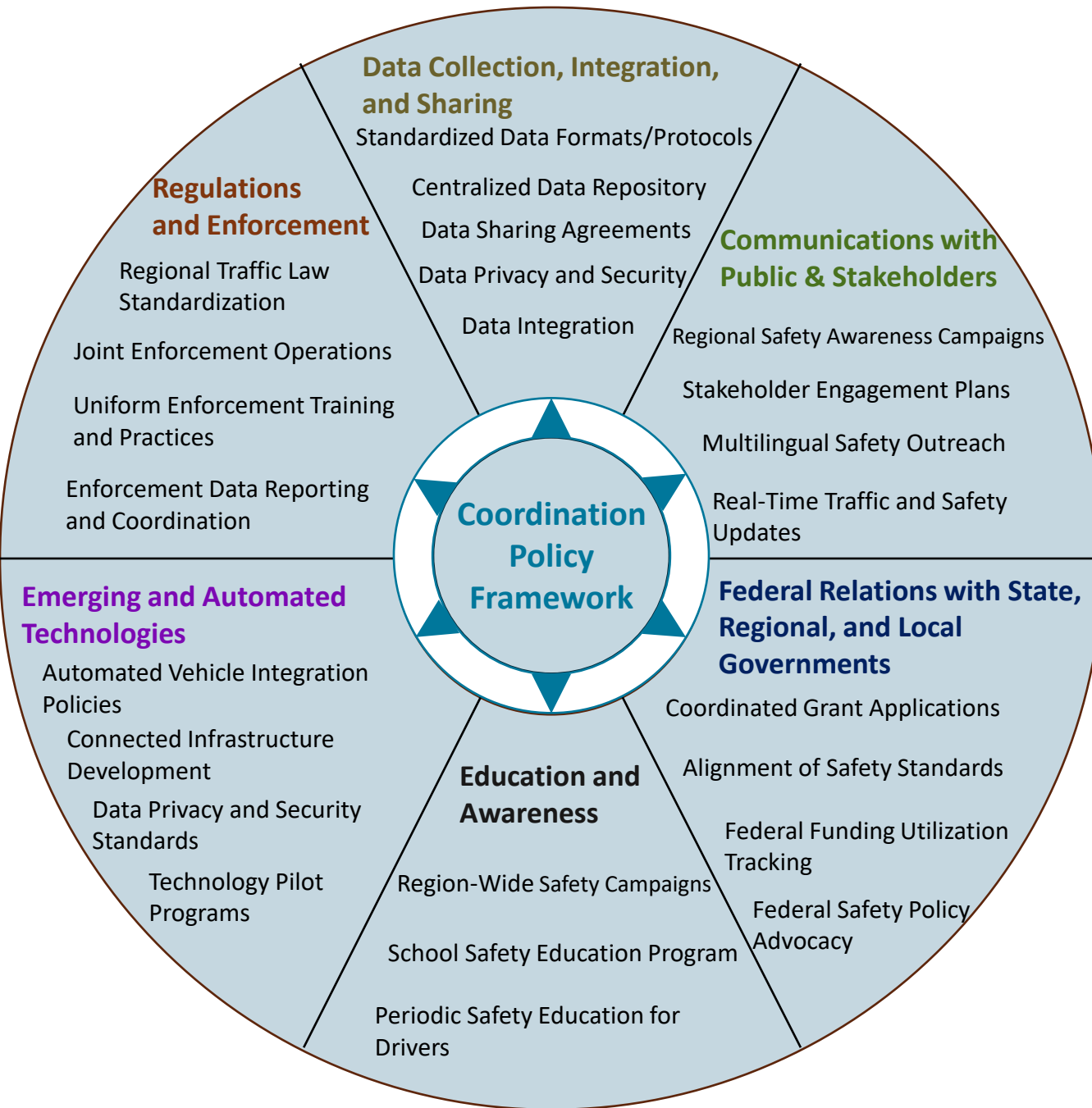
Identification of
coordination
gaps



Opportunities
for enhanced
coordination



**Policy
Framework
and Action
Items**



Policy Framework

Policy Framework

Data Collection, Integration, Sharing

- Standardized data formats and protocols
- Centralized data repository
- Mandatory data sharing agreements
- Real-time data integration for safety Monitoring
- Data privacy and security policy

Regulations and Enforcement

- Regional traffic law standardization
- Uniform enforcement training and practices
- Joint enforcement operations
- Enforcement data reporting and coordination

Policy Framework

Communications with the Public and Stakeholders

- Regional safety awareness campaigns
- Stakeholder engagement plans
- Multilingual safety outreach
- Real-time traffic and safety updates

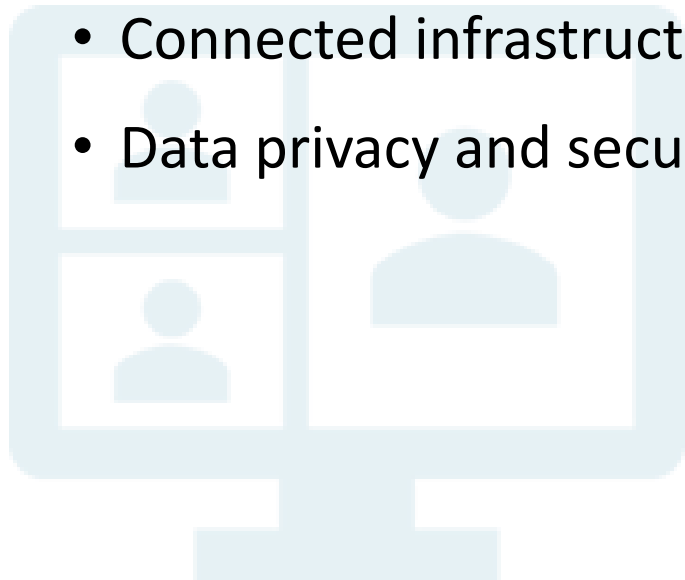
Federal Relations with State, Regional, Local Governments

- Coordinated grant applications
- Alignment of safety standards
- Federal safety policy advocacy
- Federal funding utilization tracking

Policy Framework

Emerging/Automated Technologies

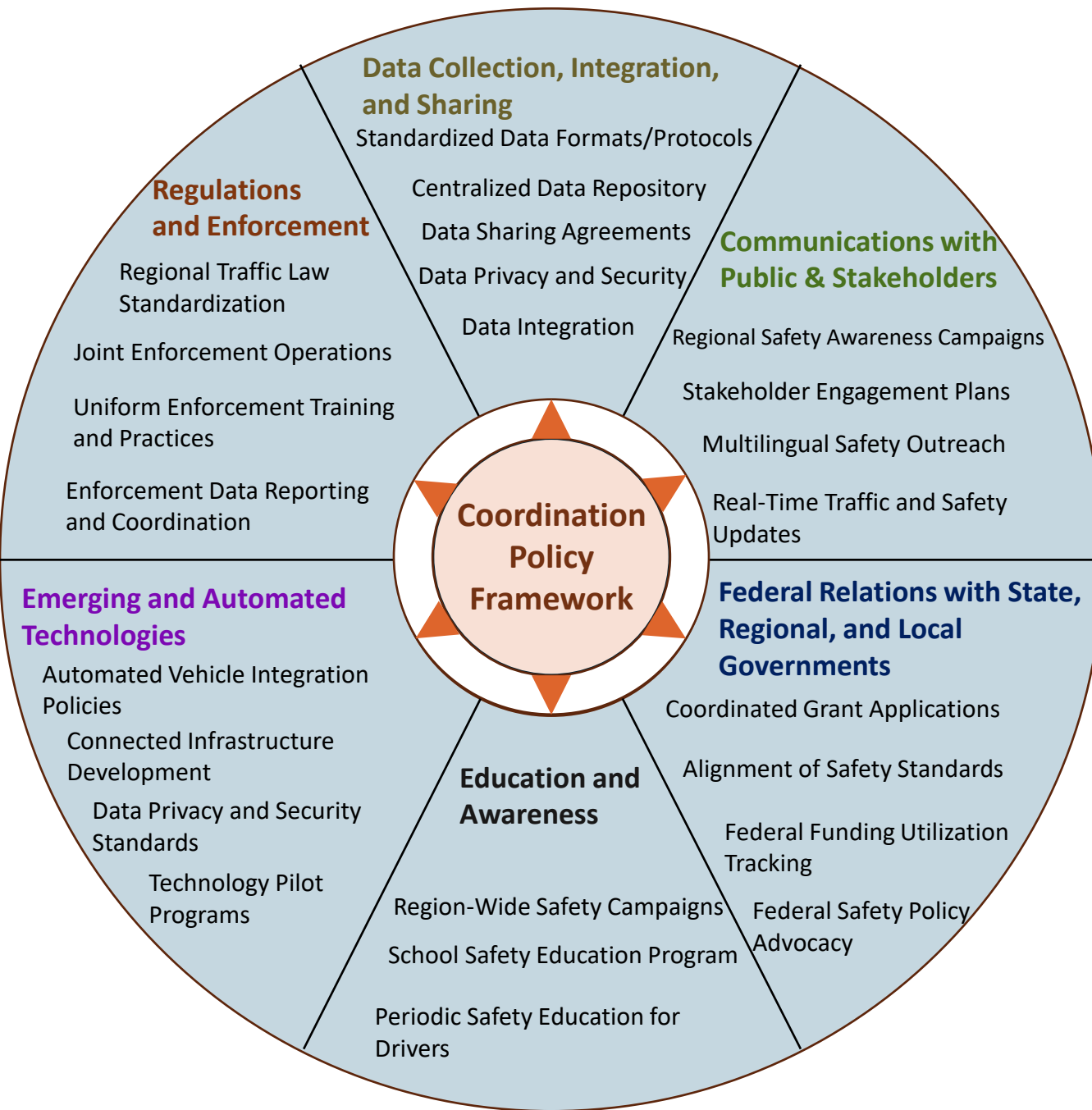
- Technology pilot programs
- Automated vehicle integration policies
- Connected infrastructure development
- Data privacy and security standards



Education and Awareness

- Region-wide safety campaigns
- School safety education programs
- Periodic safety education for drivers





Action Items

Action Items

Establish a Centralized Data Sharing Platform

- Create a centralized data repository
- Standardize data collection protocols
- Facilitate data sharing agreements

Launch Joint Enforcement Operations

- Coordinate joint enforcement actions
- Standardize enforcement protocols
- Share enforcement data regionally



Action Items

Implement Region-Wide Public Safety Campaigns

- Develop multilingual safety campaigns
- Create school-based education programs
- Promote real-time traffic safety updates
- Coordinate safety messages on Dynamic Message Signs (DMS)

Facilitate Cross-Jurisdictional Collaboration on Infrastructure Projects

- Coordinate cross-jurisdictional infrastructure planning
- Dedicate funding for smart infrastructure
- Implement pilot programs for emerging technologies



Action Items

Strengthen Inter-Jurisdictional Communication Channels

- Set up a regional communication task force
- Host regular coordination meetings
- Create a shared digital communication platform

Facilitate Cross-Jurisdictional Collaboration on Infrastructure Projects

- Coordinate joint grant applications
- Track federal funding utilization
- Advocate for federal safety policies



Steps for the Development of a Coordinated Safety Program

- Secure reliable funding for safety projects, infrastructure improvements, and enforcement initiatives
- Enhance collaboration with property owners and external stakeholders to address right-of-way limitations and other barriers
- Provide access to data collection, integration, and analysis tools for informed decision-making and program evaluation

Steps for the Development of a Coordinated Safety Program

- Offer training for staff and law enforcement on uniform enforcement practices and the implementation of safety technologies
- Supply technical expertise for the design and deployment of new safety technologies and infrastructure
- Develop communication platforms to coordinate safety efforts and improve public and inter-jurisdictional communication

Thank you!

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