

Regional Technology Plan Update – Scope : Focus Areas

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Audit Process Across Focus Areas

The Audit process of **Passenger Real-Time, Transit Service Planning Tools, Transit Signal Priority, and Integrating Mobile Payments** should include:

- Facilitated discussions with regional operating partners about their current resources, future needs, and vision for the future of regional technology integration. These discussions should be documented for future use.
- Outline of best practices in the region and barriers to interoperability in real-time and trip planning systems.
- Document IT department restrictions on technology procurement for each operating partner.
- Lengths of existing contracts and identify windows of opportunity for shared procurement of real-time and trip planning technologies.
- Highlight potential challenges of a regional procurement of real time software with multiple municipalities

Passenger Real-Time & Trip Planning [Fall 2025 Priority]

- Research and analyze case studies of successful collaboration in passenger real-time and trip planning tools from comparable regions.
- Conduct an audit of existing real-time and trip planning systems in the Triangle area, including interviews with key stakeholders.
- Conduct a cost-benefit analysis comparing promoting existing free tools like Google Maps versus paying for a dedicated transit application (such as Transit App) for real-time and trip planning.
- Develop clear interoperability standards for operating partners and funding expectations for Wake, Durham, and Orange County Transit Plans. Develop standards for CAD/AVL related hardware, including frequency of GTFS pings.
 - Develop budget recommendations for Wake, Durham, and Orange County Transit Plans for real time projects.
- Highlight the benefits and limitations of regional collaborations as well as the impacts of fragmentation.
 - Develop “resiliency plan” for passenger real time solutions anticipating potential roadblocks (example: vendor’s service offering changes). Include recommendations to maximize resiliency of adopted solutions.

- Create a roadmap with actionable steps for the implementation of regional technical solutions for real-time and trip planning.

Transit Service Planning Tools [Fall 2025 Priority]

- Research and analyze successful collaboration examples for transit service planning tools from comparable regions. Include tools for scheduling, run cutting, optimizing run times, optimizing on time performance, implementing service changes, publishing schedules and GTFS, and rider engagement related to transit service planning.
- Conduct an audit of existing transit service planning tools in the Triangle area.
 - Outline best practices and barriers to interoperability in planning tools.
- Develop clear interoperability standards for operating partners and funding expectations for Wake, Durham, and Orange County Transit Plans.
 - Develop budget recommendations for Wake, Durham, and Orange County Transit Plans for service planning tools.
- Highlight the benefits and limitations of regional collaborations as well as the impacts of fragmentation.

Transit Signal Priority (TSP)

- Research and analyze successful collaboration examples for Transit Signal Priority from other regions, focus on regions with multiple transit operators crossing multiple municipal boundaries. Include examples of Bus Rapid Transit lines that cross municipal boundaries.
- Conduct an audit of existing TSP solutions in the Triangle area,
 - Audit should include assessment of capabilities of existing CAD/AVL systems.
 - During Audit, engage with municipal emergency services staff, and transportation staff responsible for signal infrastructure. Document their needs and perspectives.
- Identify opportunities for interoperability given existing infrastructure and investment.
- Identify barriers to implementation given existing infrastructure and investment.
- Develop clear interoperability standards for operating partners and funding expectations for Wake, Durham, and Orange County Transit Plans.
 - Include standards for new signal technology investments
 - Develop budget recommendations for Wake, Durham, and Orange County Transit Plans for TSP projects.

- Highlight the benefits and limitations of regional collaborations as well as the impacts of fragmentation.
 - Develop “resiliency plan” for TSP anticipating potential roadblocks (example: vendor’s service offering changes). Include recommendations to maximize resiliency of adopted solutions.
- Create a roadmap with actionable steps for the implementation of interoperable regional TSP.

Integrating Mobile Payments with Cash Collection and Trip Planning

- Research and analyze successful collaboration examples for payments integration from comparable regions containing Bus Rapid Transit services.
- Conduct an audit of existing payment integration and cash collection systems in the Triangle area.
 - Outline best practices and barriers to interoperability in payment integration and cash collection systems.
- Conduct a market analysis to inform recommendations
 - Include analysis and recommendation: Should trip planning and payments be combined in one app? What options are available, what are the pros and cons?
 - Include analysis and recommendation:
 - What options exist to integrate fixed route fare payments with first mile last mile solutions such as microtransit and TNC?
 - What options exist to implement open payments (credit card tap), especially for BRT boardings.
 - How can technological solutions be convenient and equitable for unbanked and cash-based riders?
- Develop clear interoperability standards for operating partners and funding expectations for Wake, Durham, and Orange County Transit Plans.
 - Develop budget recommendations for Wake, Durham, and Orange County Transit Plans for mobile payments projects.
- Highlight the benefits and limitations of regional collaborations as well as the impacts of fragmentation.
 - Develop “resiliency plan” for mobile payment solutions anticipating potential roadblocks (example: vendor’s service offering changes). Include recommendations to maximize resiliency of adopted solutions.
- Create a detailed roadmap with actionable steps for the implementation of regional technical solutions for payment integration and cash collection.

Open Transit Data Portal

- Research and analyze successful collaboration examples for open transit data portals from other regions, focusing on solutions that pull data from disparate sources (multiple transit operators).
- Audit existing shared data sources
 - We have limited existing tools. The regional bus stop database is one example.
- Outline intended audiences and benefits to these audiences for the open data portal. Audiences should include: other government entities, universities & nonprofits, businesses & entrepreneurs, and the general public.
- Identify what types of data should be prioritized for open data sharing
 - Develop reporting standards for identified data types
- Highlight the benefits of regional collaborations and the impacts of fragmentation.
- Develop budget recommendations for Wake, Durham, and Orange County Transit Plans for open data.
- Create a phased roadmap with actionable steps for the development and launch of the open data portal. Phase One should be possible within 1-2 years. Phase Two within 2-3 years. Phase Three within 4-5 years.
 - Implementation should include guardrails to avoid cybersecurity risks associated with publishing open data to the internet.

Regional GTFS Publishing Standards

- Research and analyze successful examples for regional GTFS publishing.
- Audit existing practices for GTFS publishing in the Triangle area, identifying pain-points where are GTFS feeds diverge
- Establish regional standards for GTFS publishing, including communication protocols for GTFS updates and service changes.
- Highlight the benefits and limitations of regional collaborations as well as the impacts of fragmentation.