



Department of
**Commerce &
Insurance**

Tennessee Emergency
Communications Board



MissionCriticalPartners
Because the Mission Matters

Strategic Plan Annual Review – 2020

Final Report

PREPARED JULY 2020 FOR
THE TENNESSEE EMERGENCY COMMUNICATIONS BOARD

MissionCriticalPartners.com

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1 Introduction

In May 2017, the Tennessee Emergency Communications Board (TECB or Board) published a five-year Strategic Plan (Plan) that provides direction and actionable goals across five core areas:

1. Planning and Policy
2. Technology
3. Communication
4. Training
5. Funding

The Plan outlines TECB's vision for continuing to advance 911 services in the State of Tennessee (State).

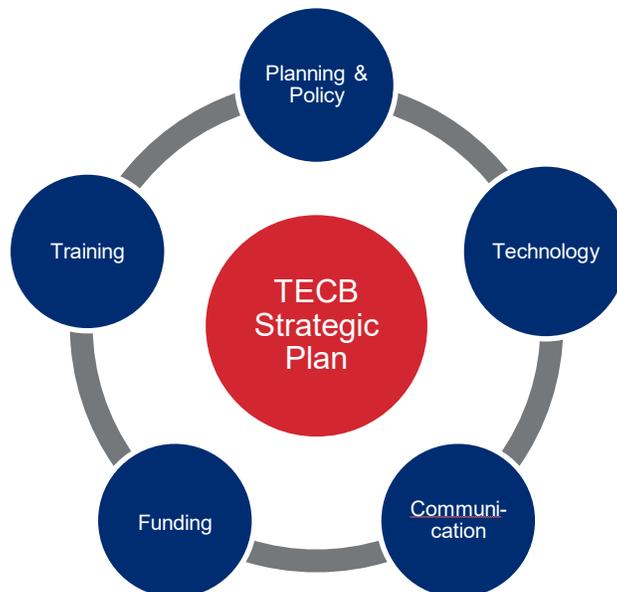


Figure 1: Five Core Strategic Areas of Focus

To maximize the value of the Plan, a process to regularly review its initiatives has been implemented to ensure that:

- The Plan remains relevant to the operating environment.
- The Plan aligns with the Board's mission and values.
- Short- and long-term priorities are being met.
- Initiative timelines still apply.
- Performance measurements still fit the objective.

This process provides an opportunity to assess progress, discuss any challenges or barriers, note initiatives that are no longer valuable or relevant, and identify any additional initiatives needed in the core

areas to further advance TECB’s vision. This report highlights the activities that have taken place over the past three years, after the initial approval of the Plan.

2 Approach

Upon rollout of the Plan, the TECB has worked to address the focus areas identified. Much of this work has happened organically, while other initiatives—such as the bi-annual satisfaction survey, development of a communications plan, and Next Generation 911 (NG911) transition activities—have been carefully designed to drive the goals established in the Plan. The following sections address each of the focus areas of the Plan and provide an overview of actions and decisions made to ensure continuous improvement of the processes, technology, communication, training, and funding that support 911 in the State.

2.1 Planning and Policy

Long-Range Planning	
The TECB has maintained continued attention and focus on long-range planning through:	
2018	<ul style="list-style-type: none"> Hosted vendor meetings to understand current technology performance and future options Visited emergency communications districts (ECDs) and supported districts with questions Completed the annual Plan review
2019	<ul style="list-style-type: none"> Tracked ECD site visits ensured an equitable number of visits statewide Continually reviewed progress on projects and Plan review Conducted quarterly program reviews to assess progress on initiatives, and reprioritized focus when necessary
2020	<ul style="list-style-type: none"> Continuing efforts to build upon initiatives started in 2018 and 2019

Performance Measures and Reporting Updates	
The TECB focused on performance measures and reporting through:	
2018	<ul style="list-style-type: none"> Annual review of the Plan to ensure relevancy with current issues Completion of the biannual customer satisfaction survey In-person updates in each Grand Division regarding progress toward NG911 and other TECB initiatives
2019	<ul style="list-style-type: none"> Conducted an annual Plan review Completed the 2018 satisfaction survey and town hall meetings to convey results and seek suggestions for improvement Reported progress on projects quarterly through the project update sheets and TECB hosted webinars

Performance Measures and Reporting Updates

The TECB focused on performance measures and reporting through:

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| 2020 | <ul style="list-style-type: none"> • Annual Plan review • Continuing quarterly project updates (i.e., one-pagers) for ECDs • Hosting an end of year (2019) webinar to share project updates from calendar year 2019 • Initiating quarterly vendor updates at Board meetings to address progress with the transition to the AT&T nationwide NG911 solution, text-to-911, and the federal grant projects |
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Bylaws

The TECB updates Bylaws as needed, but has taken the following steps over the past three years:

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| 2018 | <ul style="list-style-type: none"> • TECB updated its Bylaws during the November 2017 meeting to address special distributions and allow for more public comment during Board meetings |
| 2019 | <ul style="list-style-type: none"> • There were no Bylaw updates in 2019 |
| 2020 | <ul style="list-style-type: none"> • In February of 2020, the Policy Committee recommended a change to the Bylaws to allow committee members to serve until replaced, which reduces the chance of a temporary gap in committee membership and alleviates the risk of not reaching a quorum at committee meetings <ul style="list-style-type: none"> – This will be voted on at the May 2020 Board meeting |

Policy Review and Development Process

A Policy Advisory Committee was established to review and recommend updates to the TECB. Over the past three years, the following activities have taken place:

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| 2018 | <ul style="list-style-type: none"> • TECB established the Policy Advisory Committee to review and recommend policies to the Board <ul style="list-style-type: none"> – Each policy contains a unique number, title, purpose, and effective date, plus a description if the policy supersedes or replaces an existing policy |
| 2019 | <ul style="list-style-type: none"> • No new policies were presented or adopted in fiscal year (FY) 2019 • The Policy Advisory Committee remains relevant, and will be used as policy changes are introduced |
| 2020 | <ul style="list-style-type: none"> • The Policy Advisory Committee is in the process of reviewing required and permissible expenditures • The committee had a meeting scheduled for March 31, 2020; however, due to the COVID-19 pandemic, the meeting was canceled and will be rescheduled |

2.2 Technology

Hosted Call-Handling (Call-Handling as a Service)	
Call-Handling as a Service (CHaaS) actions include:	
2018	<ul style="list-style-type: none"> The solution was installed and made available for ECDs Seven ECDs had active projects and one ECD went live TECB anticipated reaching more than 100 seats in 2018
2019	<ul style="list-style-type: none"> The TECB worked closely with AT&T and the ECDs to support discussions and the decision-making process 11 public safety answering points (PSAPs) with 38 seats went live on the platform 12 additional PSAPs expressed interest in the service Road show meetings were held in mid-April (2019) to educate districts on the product
2020	<ul style="list-style-type: none"> AT&T modified network operations center (NOC) support for CHaaS PSAPs to streamline the troubleshooting process; PSAPs now work directly with AT&T and do not work through the Comtech NOC for CHaaS issues 19 PSAPs with 78 seats are live on the platform Six PSAPs have active projects and are working towards deployment CHaaS will be included in the TECB NG911 request for proposal (RFP) that is anticipated to be released in the summer of 2020

Text-to-911	
Text-to-911 continues to be a work in progress and deployment activities include:	
2018	<ul style="list-style-type: none"> TECB worked with the Operations Committee to set a deployment strategy TECB supported a successful trial of text-to-911 service at Marshall County in October 2017 Training, operational, and public relations materials were developed to support PSAPs when the service becomes available
2019	<ul style="list-style-type: none"> In November of 2019, TECB changed direction with the deployment text-to-911 strategy AT&T is offered an interim text-to-911 solution to support text until integrated service is available with the transition to the AT&T nationwide solution Eight PSAPs requested service since the November 2018 announcement and one district, Shelby County, went live
2020	<ul style="list-style-type: none"> PSAPs continue to request service using the interim solution Seven PSAPs are text ready 33 PSAPs have deployments in process PSAPs will have the ability to deploy integrated text-to-911 when they transition to the AT&T nationwide solution Integrated text-to-911 and support for real time text (RTT) is included in the TECB NG911 RFP that is anticipated for release in the summer of 2020

Network Reliability

Redundancy continues to be recognized as a need for the PSAPs in the State; activities that have taken place to support this focus area include:

2018	<ul style="list-style-type: none">• TECB completed an outage study and is exploring the use of future federal grant funds for establishing redundancy into prioritized PSAPs
2019	<ul style="list-style-type: none">• The TECB requested approval for use of federal NG911 grant funds to provision a redundant link into the primary PSAP in each district
2020	<ul style="list-style-type: none">• Due to federal NG911 grant delays and misunderstood vendor requirements, the TECB decided to postpone rollout of redundant connections using grant funds• Redundancy is included as a part of the upcoming TECB NG911 RFP anticipated for release in the summer of 2020

Situational Awareness

The TECB has initiated projects and activities to help improve situational awareness, including:

2018	<ul style="list-style-type: none">• Emergency Call Tracking System (ECaTS) equipment installations were initiated in PSAPs throughout the state• Identification and security logistics prevented the Comtech dashboard from going live
2019	<ul style="list-style-type: none">• Implementation of ECaTS statewide dashboard reached 50 percent completion• With transition to the AT&T nationwide solution, it was recognized that PSAPs will gain access to a portal that allows them to see their PSAP information—such as the availability of the PSAP, view and set (roadmap item) their alternate routing plans, call detail records, and abandonment status.
2020	<ul style="list-style-type: none">• ECaTS rollout is approximately 60 percent complete and continues to provide PSAPs and the state with situational awareness• Situational awareness and dashboard access have been included in the upcoming NG911 RFP anticipated for release in the summer of 2020

Continuity of Operations (COOP)

The TECB has researched options to help support COOP, including:

2018	<ul style="list-style-type: none">• TECB issued a Mobile PSAP request for information (RFI); upon review of responses and discussion with the Board, the effort was tabled• ECDs were asked to submit their COOPs to TECB
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Continuity of Operations (COOP)

The TECB has researched options to help support COOP, including:

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| 2019 | <ul style="list-style-type: none">• TECB transitioned to use of a new tool (everbridge®) for mass notification, introducing cost savings and providing improved functionality• ECDs were asked to follow TECB Policy 9¹ and TCA § 7-86-306(a)(9)-(10)² and submit their COOP plans annually• The AT&T PSAP Console solution was presented to the Operations Committee; the Committee decided to table the effort• TECB completed the radio inventory data collection to have radio information readily available for PSAPs in need of support and collaboration during a major event or outage situation |
| 2020 | <ul style="list-style-type: none">• The TECB has made updates to everbridge® notification service• ECDs have been asked to follow TECB Policy 9 and TCA § 7-86-306(a)(9)-(10) and submit their COOP plans annually<ul style="list-style-type: none">– When impacts of the COVID-19 pandemic subside, the TECB plans to work with ECDs around COOP planning and submission of plans. |

Geographic Information System (GIS)

Tennessee maintains excellent quality GIS data, which is possible as a result of vendor and PSAP engagement; TECB actions have included:

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| 2018 | <ul style="list-style-type: none">• Many ECDs maintained a GIS data match rate of 98 percent or greater |
| 2019 | <ul style="list-style-type: none">• GIS data quality remained high, and True North Geographic Technologies (True North) remained engaged, providing strong support and training to the PSAPs |
| 2020 | <ul style="list-style-type: none">• TECB and True North are working with AT&T/Intrado to understand GIS requirements as they help prepare for transition to the AT&T nationwide solution• Preparations are being made to ensure GIS data management services continue in 2021 after the expiration of Comtech contract which currently provides for True North's support |

FirstNet Integration

The TECB has worked to coordinate and advance the First Responder Network Authority (FirstNet) integration with the following activities:

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| 2018 | <ul style="list-style-type: none">• Held Initial discussions with Tennessee Advanced Communications Network (TACN) personnel |
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¹ <https://www.tn.gov/content/dam/tn/commerce/documents/e911/posts/E911-Policies.pdf>

² <https://www.tn.gov/content/dam/tn/commerce/documents/e911/posts/TECB-Law.pdf>

FirstNet Integration

The TECB has worked to coordinate and advance the First Responder Network Authority (FirstNet) integration with the following activities:

2019	<ul style="list-style-type: none"> TECB was engaged with and informed of the progress of FirstNet updates in the state, and participated in road show meetings with AT&T to remain informed and understand PSAP needs and questions
2020	<ul style="list-style-type: none"> N/A

Additional Data, Location-Based Call Routing, and Location Data Management

Location accuracy and additional data repository (ADR) are an important area of focus for the ECDs. The TECB also remains focused on this issue in discussion with vendors; actions taken include:

2018	<ul style="list-style-type: none"> TECB made a formal request to AT&T for support of these additional services; AT&T supported this request by providing a roadmap discussion in late 2018
2019	<ul style="list-style-type: none"> With the transition to the AT&T nationwide solution, ADR was a roadmap item; however, no date had been set TECB planned to use a portion of the grant funds to provide a sub-grant to PSAPs and enable them to upgrade their customer premises equipment (CPE) or computer-aided dispatch (CAD) software to accept ADR solutions
2020	<ul style="list-style-type: none"> Due to the change in timing with grant funds and reprioritizing the use of the funds, this project is no longer a part of the grant project plan ADR and Location Database (LDB) will be important functionality included in the upcoming NG911 RFP due to be released in the summer of 2020

Interoperability Framework

Interoperability with neighboring emergency services IP networks (ESInets) is important for state-to-state operations; actions taken include:

2018	<ul style="list-style-type: none"> TECB followed the activities of the National 911 Program's Interstate Playbook and assessed the requirements for interoperability with neighboring states
2019	<ul style="list-style-type: none"> AT&T supported other neighboring regions on its nationwide solution As the state transitions, the TECB planned to have interoperability discussions with AT&T
2020	<ul style="list-style-type: none"> TECB had planned to host a meeting with neighboring states at the National Emergency Numbering Association (NENA) to discuss state-to-state ESInet interoperability but the Covid-19 pandemic cancelled the event. Alternative meetings are being coordinated The 2020 NG911 RFP will include requirements for voice and data interoperability with all neighboring states that are on transitional NG911 or i3 ESInets

Cybersecurity	
Cybersecurity requires continual focus, especially with the transition to NG911.	
2018	<ul style="list-style-type: none"> TECB recommended adding cybersecurity as a new focus area in the Plan
2019	<ul style="list-style-type: none"> A new cybersecurity section was added to the Plan As part of the transition to the AT&T nationwide solution, the TECB asked the PSAPs to revisit and sign updated cybersecurity policy agreements
2020	<ul style="list-style-type: none"> TECB has authorized up to \$1.5 million in NG911 federal grant funds to make cybersecurity assessments available for each ECD

2.3 Communication

Communication with ECDs	
The TECB strives to communicate frequently with ECDs using the following methods:	
2018	<ul style="list-style-type: none"> The TECB developed a plan that supports communications initiatives with ECDs, the Board, and staff (e.g., a newsletter, live streaming of Board meetings, planned webinars, and road shows)
2019	<ul style="list-style-type: none"> The TECB provided monthly newsletters, live streams of board meetings and committee meetings, visits PSAPs, and offers quarterly webinars
2020	<ul style="list-style-type: none"> The TECB continues to provide monthly newsletters, live stream board meetings and committee meetings, visit PSAPs, offer webinars, and participate in local conferences such as the Tennessee Emergency Number Association (TENA)

Educational Toolkits	
The TECB works to keep ECDs informed using different tools:	
2018	<ul style="list-style-type: none"> The TECB developed infographics to support ECD communication and provide project updates The Board, with the support of its vendors, began developing text-to-911 deployment, training, and public relations materials
2019	<ul style="list-style-type: none"> The TECB provided quarterly one-page project updates for the four primary projects that are being tracked: NG911, Text-to-911, CHaaS, and Training The TECB offered a “Board Member 101” course to educate local board members on the history of the TECB and board member responsibilities

Educational Toolkits

The TECB works to keep ECDs informed using different tools:

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| 2020 | <ul style="list-style-type: none">• The TECB continues to provide quarterly updates to one-pagers, and offers tools, resources, and courses that keep the ECDs and board members informed of project activity and focus areas• The TECB website³ includes access to past board and committee meetings, newsletters, and many other important materials that help keep ECDs informed |
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NG911 Status Updates

Various methods are used to keep ECDs informed of NG911 updates, including:

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| 2018 | <ul style="list-style-type: none">• Technology and NG911 updates were provided via the monthly newsletter• The TECB completed road show meetings in each Grand Division to provide NG911 and other project updates• Infographics were drafted that included quarterly project updates |
| 2019 | <ul style="list-style-type: none">• The TECB provided NG911 project updates via the one-page project updates, quarterly webinars, and Board meetings• In June of 2018 (FY2019), the TECB conducted its second set of bi-annual road show meetings• In September 2019, the TECB provided updates via a presentation at the TENA conference |
| 2020 | <ul style="list-style-type: none">• Initiating vendor updates as a part of the quarterly Board meetings• Hosting a NG911 update at the TENA conference in September 2019 (FY2020)• Hosting a requirements-gathering road show in four cities to enable ECD participation in sharing needs that should be addressed as part of the 2020 NG911 RFP• Providing an annual webinar in December 2019 (FY2020) |

Anonymous Satisfaction Surveys

Every other year, the TECB surveys ECDs to better understand ECD needs and collect feedback on the TECB's service; activities include:

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| 2018 | <ul style="list-style-type: none">• The 2018 Satisfaction Survey was anonymous, based on ECD feedback after the 2016 survey requesting that the next survey be non-attributional |
| 2019 | <ul style="list-style-type: none">• The TECB decided to continue keeping the satisfaction survey anonymous for conducting the next survey in 2020 |

³ <https://www.tn.gov/commerce/emergency-communications.html>

Anonymous Satisfaction Surveys

Every other year, the TECB surveys ECDs to better understand ECD needs and collect feedback on the TECB's service; activities include:

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| 2020 | <ul style="list-style-type: none"> The 2020 satisfaction survey will be issued in the third quarter of 2020 (assuming COVID-19 is no longer impacting operations) |
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2.4 Training

Training Standards

The TECB maintains training standards and works to understand any outstanding gaps; activities include:

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| 2018 | <ul style="list-style-type: none"> The Training Committee reviewed the current Tennessee standards and provided suggested edits to the Board in 2018 |
| 2019 | <ul style="list-style-type: none"> The Training Committee reviewed the comparison of the Tennessee standards and Minimum Training Guidelines |
| 2020 | <ul style="list-style-type: none"> The Training Committee has not yet met in FY2020 |

Professional Development

Continued development for ECD employees is important to the TECB, which it has offered the following:

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| 2018 | <ul style="list-style-type: none"> The Board offered in-person courses focused on all aspects of 911 call-handling, including one-day courses (e.g., customer service, quality assurance, cyber-threats) and multi-day courses (Communications Training Officer, Supervisor, GIS, Center Manager) This model has been replicated in the online learning management system for continuing education |
| 2019 | <ul style="list-style-type: none"> The TECB offered in-person courses focused on all aspects of 911 call-handling, communications, supervision, management, and GIS The online training platform, Virtual Academy, went live for all districts; the TECB saw continued growth in the number of users (200 to ≥ 1,900 users) The TECB, supported by Virtual Academy, launched the <i>Degree Advantage for 911 Professionals</i>, an alliance that assists 911 professionals in obtaining their Associate, Bachelor's, or Master's degree online |
| 2020 | <ul style="list-style-type: none"> The TECB supported six in-person classes offered to ECDs statewide The user count on Virtual Academy grew to more than 2,000 users Over 14,000 hours of content were delivered using Virtual Academy, nearly double the number of hours of training delivered in 2019 |

Training Topics

The TECB works with ECDs to understand what training is important; actions taken include:

2018	<ul style="list-style-type: none"> The TECB Training Coordinator performed a gap analysis for the Board in November 2017 that highlighted areas in need of additional in-person training The Training Coordinator also worked with the online learning management system to identify and provide content focused on current standards and emerging trends in the 911 industry
2019	<ul style="list-style-type: none"> MCP webinars were added to the online platform to provide industry-related content via Virtual Academy Online training delivery grew to more than 7,600 hours (an average of 500 per month) of content delivered from launch in June 2018 through April 2019 Additional course content was regularly added to Virtual Academy
2020	<ul style="list-style-type: none"> The TECB supported PSAPs by helping with the development of PSAP training plans The TECB continues to support PSAP needs, and added two new courses to Virtual Academy The number of users, amount of content, and hours of training delivered through Virtual Academy continues to grow substantially

2.5 Funding

Stability

The TECB continues to support ECDs with financial matters; actions taken include:

2018	<ul style="list-style-type: none"> TECB formed a Financial Study Committee to examine financial issues Staff distilled budgetary and audit information to present the committee with a full view of the financial health of TECB and the ECDs
2019	<ul style="list-style-type: none"> The Financial Study Committee proposed best practices and changes for the Chart of Accounts to the Comptroller's office
2020	<ul style="list-style-type: none"> The TECB completed research (an ECD survey and analysis) to better understand PSAP revenue, expenses, and reserves The Board voted to submit a request to legislation to restore the 911 fee to \$1.50 The Policy Advisory Committee is in the process of reviewing required expenses and looking to recommend adding new expenditures to this list

Cost Study	
The TECB continues to evaluate costs; actions taken include:	
2018	<ul style="list-style-type: none"> Costs were identified for those items in progress; this will be a continual process to update as plans progress with the strategic objectives
2019	<ul style="list-style-type: none"> TECB evaluated the costs required to match the federal NG911 grant
2020	<ul style="list-style-type: none"> The TECB has taken measures to reduce NG911 expenses by: <ul style="list-style-type: none"> Modifying the contract with the current NG911 vendor to remove services that will not be put into production as a result of the transition to the AT&T nationwide solution Using NG911 grant funds to pay for the NG911 system during transition The TECB has also identified the estimated costs required as a result of the upcoming NG911 RFP due to be released in the summer of 2020 <ul style="list-style-type: none"> The TECB anticipates that this will result in both a non-recurring project expense as well as an increase in monthly fees

3 Conclusion

The initial Plan, developed in 2017, was a result of feedback and input from the ECDs, the TECB staff, and evaluation of public-safety technology advancements and best practices. The TECB continues to demonstrate progress towards the focus areas (Policy, Technology, Communication, Training, and Funding) included in the Plan and the initiatives that were developed to support the focus areas. In the coming year, the TECB anticipates additional progress on these initiatives, and will continue to remain focused on the needs of the ECDs and enhancing the systems and services available in Tennessee.