

## 4.0 Vision, Mission, Goals and System Performance

### 4.1 Federal Framework

For historical reference, three previous federal transportation funding bills, the Intermodal Surface Transportation Efficiency Act of 1991 (ISTEA), the Transportation Equity Act for the 21st Century (TEA-21) and the Safe, Accountable, Flexible and Efficient Transportation Equity Act: A Legacy for Users (SAFETEA-LU) required state Departments of Transportation to carry out a continuing, cooperative and comprehensive statewide multimodal transportation planning process, including the development of a long-range statewide transportation plan. The development of the statewide transportation planning efforts in Kentucky is in accordance with Title 23 Code of Federal Regulations (CFR). This 23 CFR includes the requirements for the development and content of the LRSTP.

With its passage in July 2012, the Moving Ahead for Progress in the 21st Century Act (MAP-21) built upon these programs and policies, providing the framework for a streamlined and performance-based approach to transportation system development and maintenance. MAP-21 reforms and refocuses the federal transportation program to improve safety, create jobs and support economic growth. This performance-based program is intended to accelerate project delivery, promote innovation and strengthen America's highway and public transportation systems. It includes performance goals for increasing safety, improving system condition and reliability, reducing congestion, enhancing freight movement, promoting environmental sustainability and reducing delays in project design and construction.

### 4.2 The KYTC Mission

The KYTC is committed to meet or exceed the needs and expectations of the users of Kentucky's transportation system – residents, business owners, employees and students.

The Cabinet's mission is to **“provide a safe, efficient, environmentally sound and fiscally responsible transportation system that delivers economic opportunity and enhances the quality of life in Kentucky”** (2003 Strategic Plan). The vision which guides the work of the Cabinet in achieving this mission is “Working together to lead the Southeast in providing a transportation infrastructure and transportation services for the 21st Century that deliver new economic opportunities for all Kentuckians.”

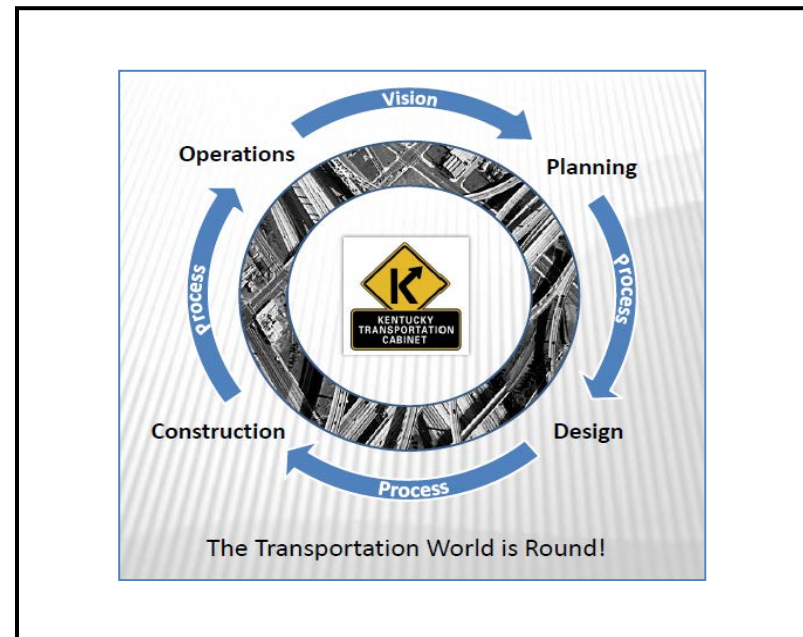


Figure 4.2 A – KYTC Project Life Cycle

As shown in **Figure 4.2 A**, the work that the KYTC conducts in pursuing its mission moves in a continuous cycle rather than a linear path. This process links the four main areas of transportation system development and maintenance -- planning, design, construction and operations -- to deliver a safe, efficient, environmentally sound and fiscally responsible transportation system that facilitates safe and efficient movement of people and goods.

A knowledge-driven process based on valid, broad-based input is essential to the effective decision-making required to address the maintenance and improvement of Kentucky's transportation system. This input comes from political, public and technical sources as graphically displayed in **Figure 4.2 B**.

Analysis of the existing system's form and function as well as the impacts of anticipated improvements is the primary source of technical input. Political input includes guidance, as well as financial support, from state and national political leadership. Public input is generated from all users of the system, including those citizens in communities which are directly affected by proposed improvements.

### 4.3 Public Input Process

The concerns of Kentucky residents and business partners were of prime importance in the development of the state's *2014 Long Range Statewide Transportation Plan*. The KYTC solicited their input to ascertain their principal transportation needs over the coming twenty years and produced a policy-based plan addressing them. The KYTC undertook an extensive engagement



**Figure 4.3 A – KYTC “Your Turn” Survey Logo**

process that included a statewide public survey and the participation of three focus groups. The association of these groups is shown in **Figure 4.2 B**.

From January 9 through February 25, 2013, the KYTC conducted its “Your Turn” survey to collect citizens’ concerns, issues and comments regarding the transportation system in the Commonwealth of Kentucky. **Figure 4.3 A** shows the KYTC survey logo associated with the public outreach effort. This survey served as the first public involvement activity for the update of the LRSTP. The survey was available in online and paper formats in both English and Spanish. An awareness campaign was conducted through print, social and broadcast media, and through direct community contacts to procure a statewide response that reflected the varying demographics of the state.

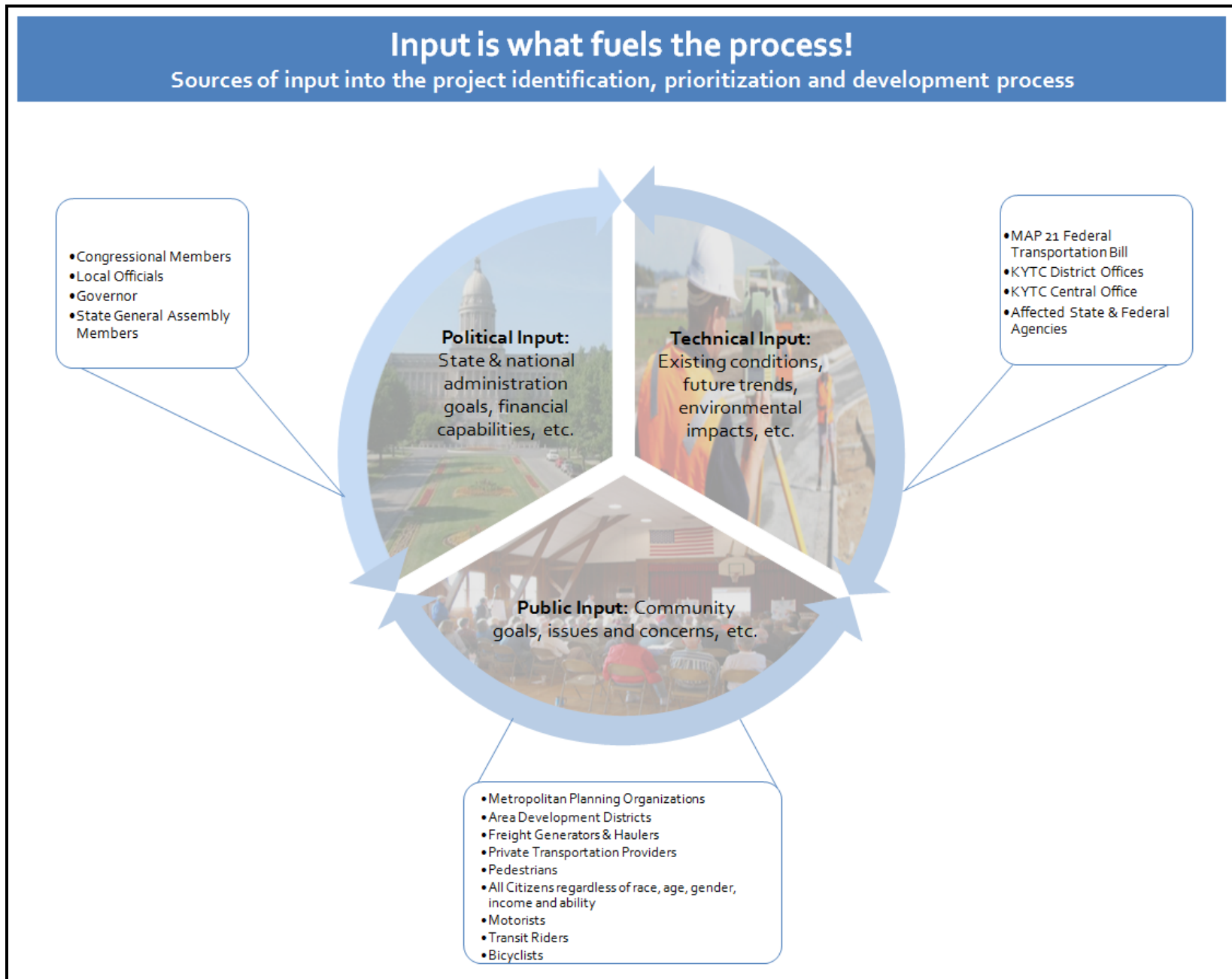


Figure 4.2 B – KYTC Public Engagement Process

*“Thank you for taking the time to collect citizen input into transportation planning. I appreciate being able to provide input through an online survey because it's difficult to get to a meeting in person at times.”*

Survey Participant,  
Warren County

Completed surveys were received from 16,185 respondents, which included responses from every county in Kentucky as shown graphically in **Figure 4.3 B**. This was the first campaign of its kind for the KYTC to achieve such a widespread participation.

The core questions of the survey were developed to identify the preferences for improvements to Kentucky's transportation system and the tolerance for increasing revenues to pay for those improvements. Survey participants were asked to rate their top issues concerning the transportation system. Responses indicated a strong preference for maintaining and improving the existing highway system, with a focus on bridges and roadway surfaces, as well as a significant interest in the development of multimodal options where possible.

When questioned about the outcome of projects to be considered, participants expressed a strong desire that these projects improve the safety of the system, support economic development, be cost effective considering the anticipated benefits, and provide congestion relief.

When participants were asked how strongly they would support a variety of funding sources for transportation improvements, government bonds was the multiple choice option selected most.

Based upon written comments, however, it is evident that the KYTC needs to better educate the public that bonds are not new sources of revenue, but loans that require repayment from existing and future funding generated from fuel and motor vehicle taxes. Survey results also indicated a growing sentiment that tolls on roads and bridges may be acceptable in certain situations.

In addition to their responses to the 19 survey questions, approximately one-third of participants provided additional comments and opinions, summarized in the form of a word cloud as shown in **Figure 4.3 C**.

Three focus groups with unique membership were formed to gain additional insight. The Vision 2035 group, created in November of 2013, comprised of present and past leaders of the KYTC, including the current and two former Secretaries of Transportation. The second group was the standing Statewide Planning Group, which includes transportation planners from Kentucky's fifteen Area Development Districts (ADDs) (See **Figure 4.3 D**), nine Metropolitan Planning Organizations (MPOs) (See **Figure 4.3 E**) and twelve KYTC District Offices (See **Figure 4.3 F**). The third group was the Transportation Stakeholders Committee, comprised of 50 representatives from a wide spectrum of transportation modes operating within the state as well as stakeholders such as economic development, military affairs and human services agencies.

*“Planning is the first step of good management. If I define where I want to be in 2035, can someone else pick it up and run with it to meet the target? This plan must define the way we do business and be so profound that someone else will not want to change it.”*

Vision 2035 Member





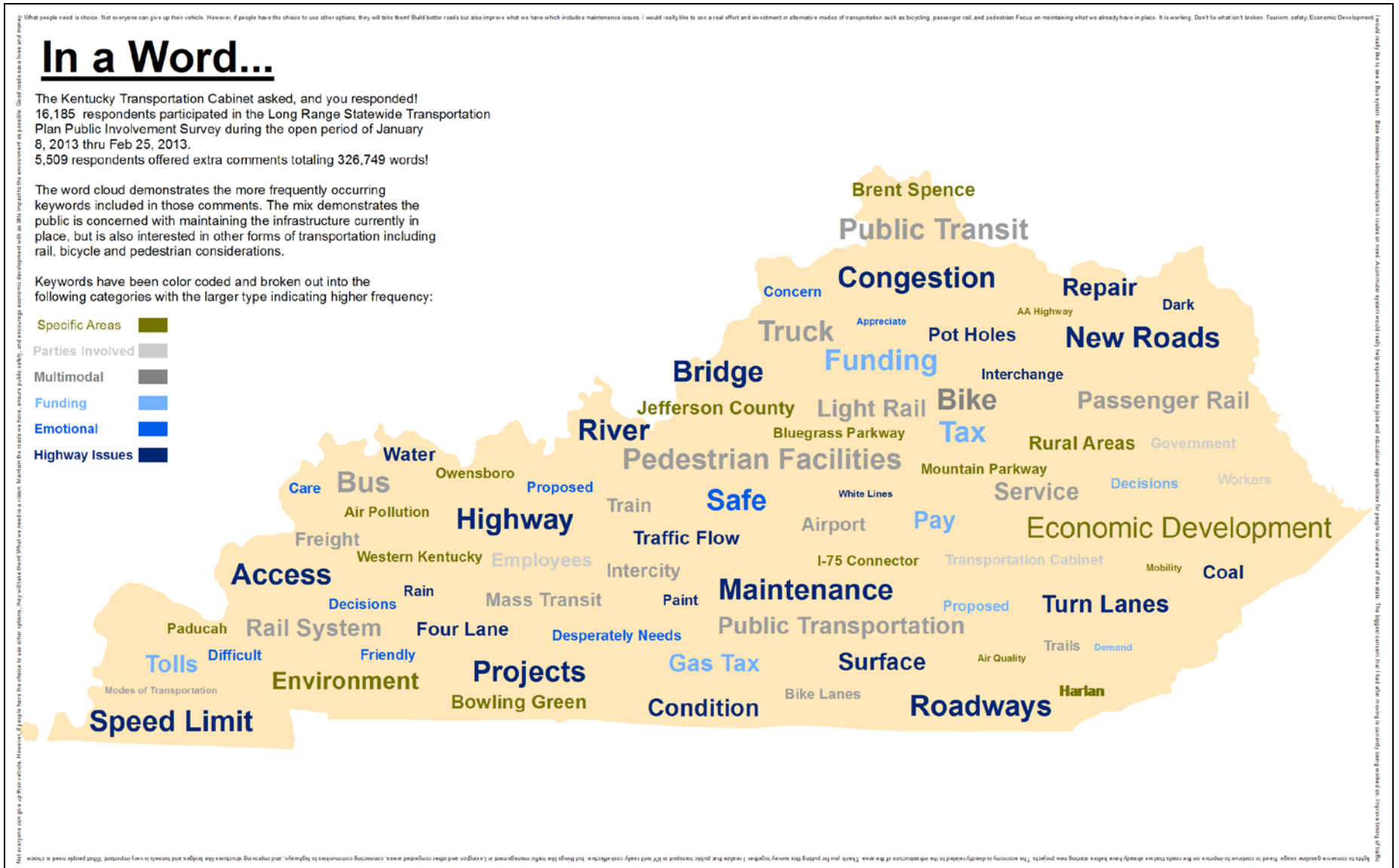


Figure 4.3 C – KYTC “Your Turn” Transportation Survey Responses -In A Word

# Area Development Districts

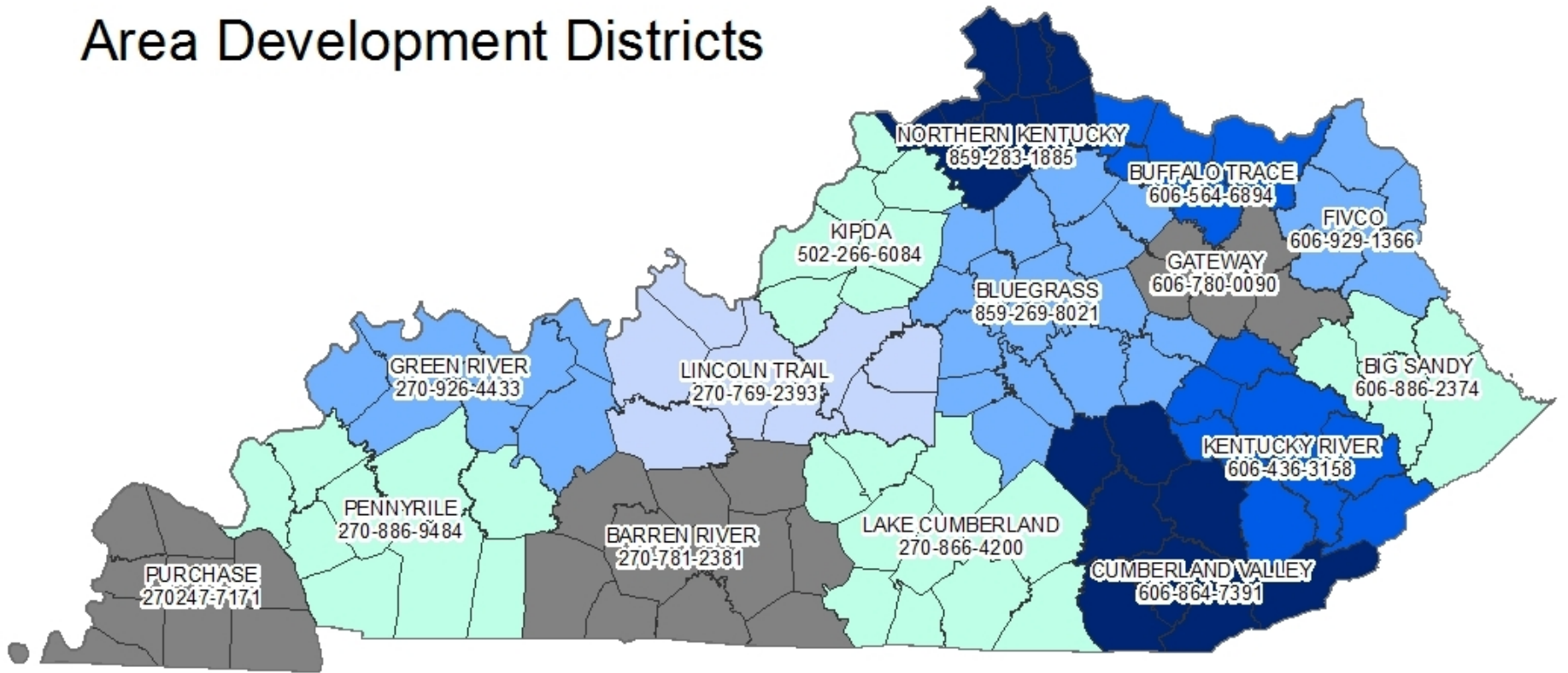


Figure 4.3 D – Kentucky Area Development District Offices and Boundary Map

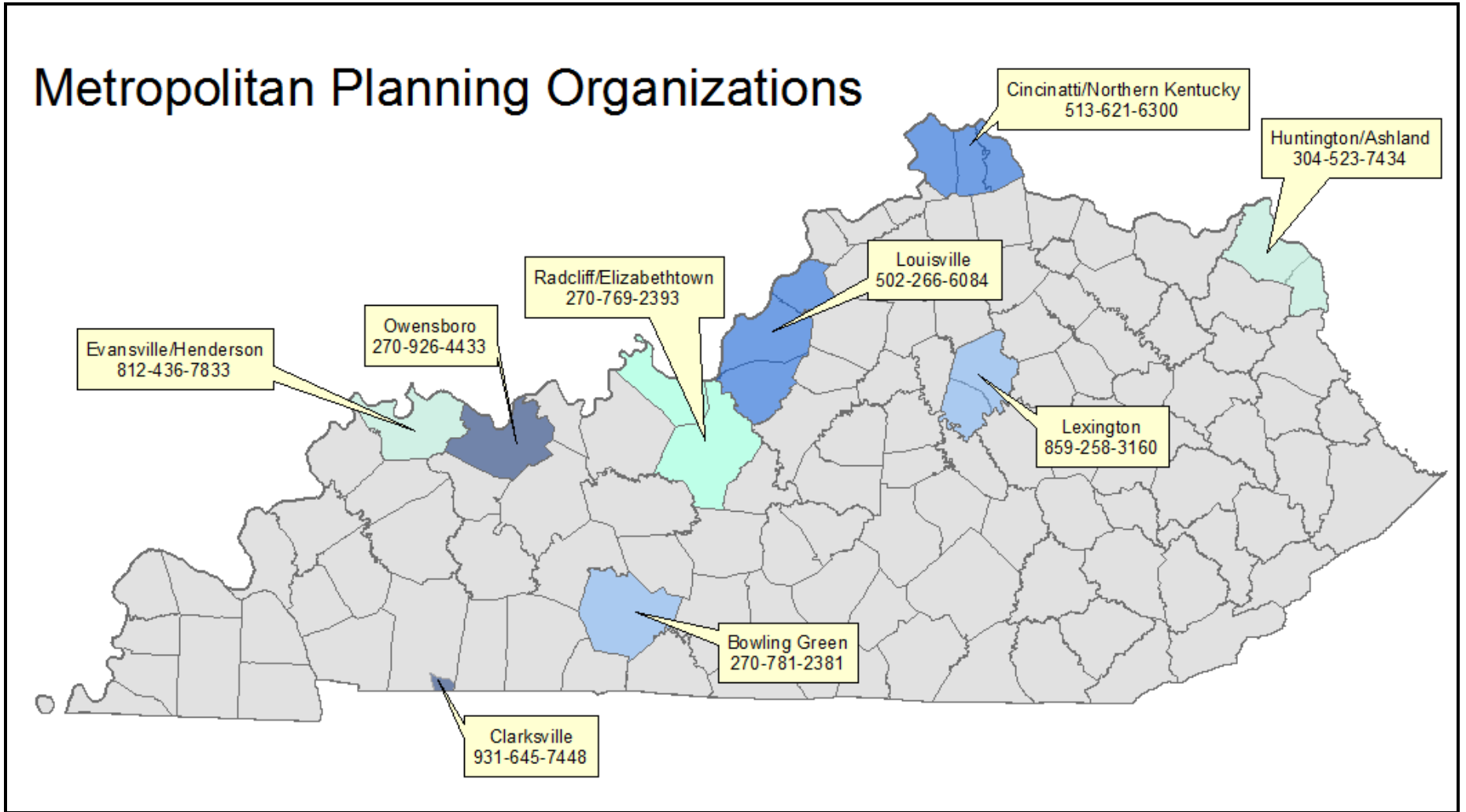


Figure 4.3 E – Kentucky Metropolitan Planning Organization Offices and Boundary Map



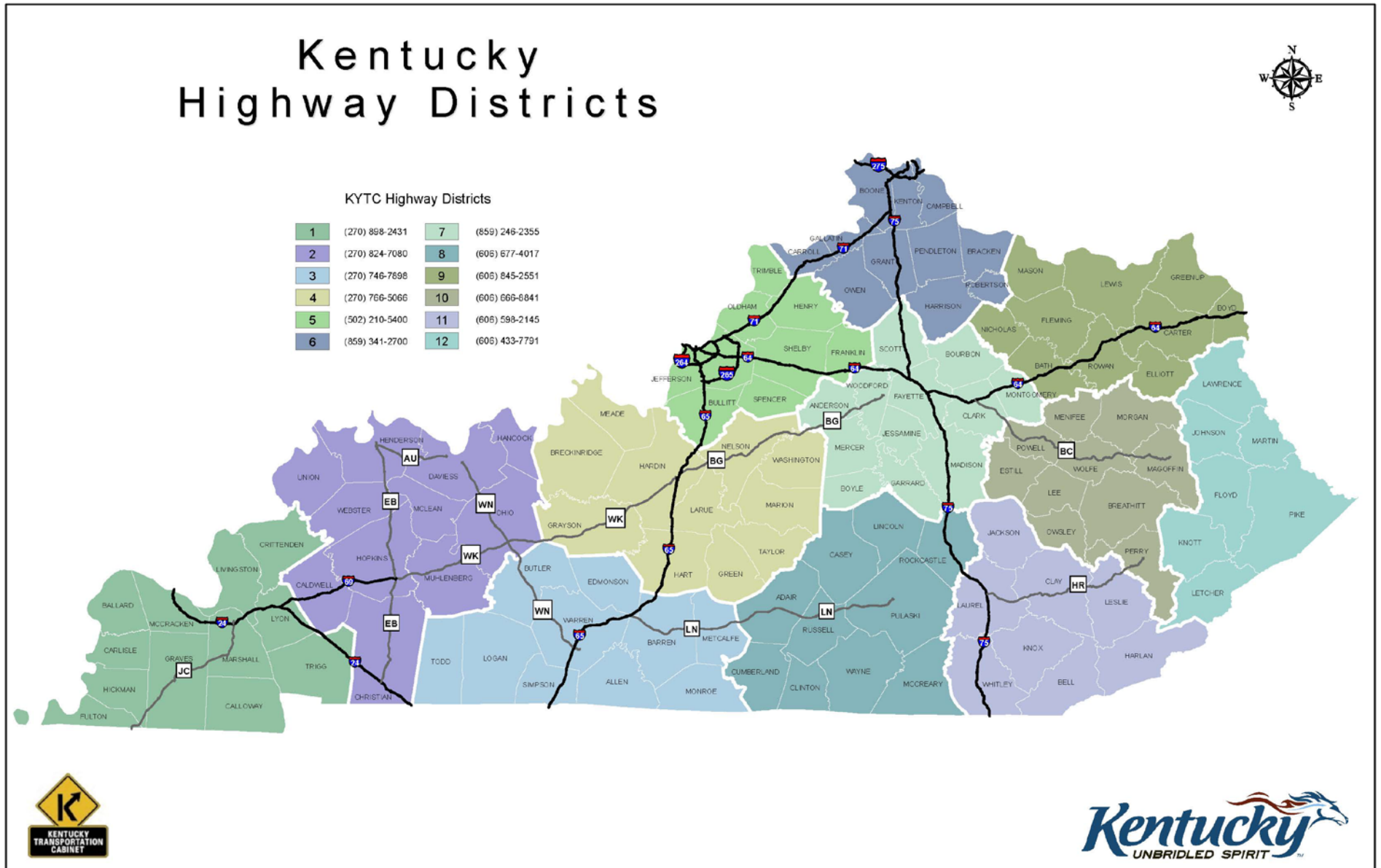


Figure 4.3 F – KYTC Highway District Offices and Boundary Map

Within their meetings, all three groups engaged in discussion of the issues and concerns regarding the current and future state of Kentucky's transportation system. Focusing on the development of the 2014 LRSTP, these groups provided input into drafting the LRSTP Vision and Goals as well as its narrative structure. During the course of the development and distribution of the "Your Turn" survey, these groups served as the proving ground for the survey instrument and provided encouragement for broad participation throughout the state. Upon development of draft sections of the LRSTP document in late 2013 and early 2014, these groups were once again engaged to provide final comments.

The overall vision for the 2014 LRSTP was created through gathering input from elected officials, residents, business owners and other local and regional stakeholders and was used by the KYTC to develop a "destination postcard" that includes the LRSTP vision. As defined by Chip and Dan Heath in their book *Switch*, a destination postcard is **"a vivid picture from the near-term future that shows what could be possible"**.

A combination of the desires of the system's users, the resources of the KYTC leadership and measureable performance outcomes are used to produce the desired outcome – or "destination" -- for the form and function of Kentucky's transportation system.

Analysis of the input from the survey and the focus groups resulted in a clear picture of the "destination postcard" that includes the LRSTP vision

*"When looking at the destination of 2035, the transportation system will have to be inclusive of all users, dependable, and sustainable in good repair. While we may be planning for tomorrow, it starts today."*

Stakeholders Committee Member

for Kentucky's future transportation system as shown in **Figure 4.3 G**.

#### 4.4 Reaching the Destination

Performance-based planning and programming (PBPP) is a system-level, knowledge-driven process that builds upon the concept of "performance management." Performance management is the strategic approach that uses data to support decisions which help to achieve the desired outcomes. The transportation system decisions of the KYTC are organized around a "Pyramid of Performance" as shown in **Figure 4.4 A**. Those desired outcomes support the overall aims of a transportation plan---the LRSTP Vision and Goals (as discussed in Section 4.5). Performance management is credited with improving project and program delivery, informing investment decision-making, focusing staff on leadership priorities, and providing greater transparency and accountability to the public.

The capstone of the pyramid is a vision for the KYTC, followed up with goals that provide the framework of the decision-making process for project identification, prioritization, development, delivery and maintenance. The specific regional objectives and priorities developed by the KYTC District Offices (see previous **Figure 4.3 F**), Kentucky's Area Development Districts (ADDs) (see **Figure 4.3 D**) and Metropolitan Planning Organizations (MPOs) (See **Figure 4.3 E**) support the Cabinet's goals and vision and all elements are supported by a foundation of performance measures and established targets for each performance measure. Ongoing communication and data collection and analysis within this structure, both upward and downward, enables adjustments resulting from ongoing analysis of the process and thereby improves the delivery of the system.



Figure 4.3 G – Destination Postcard for Kentucky



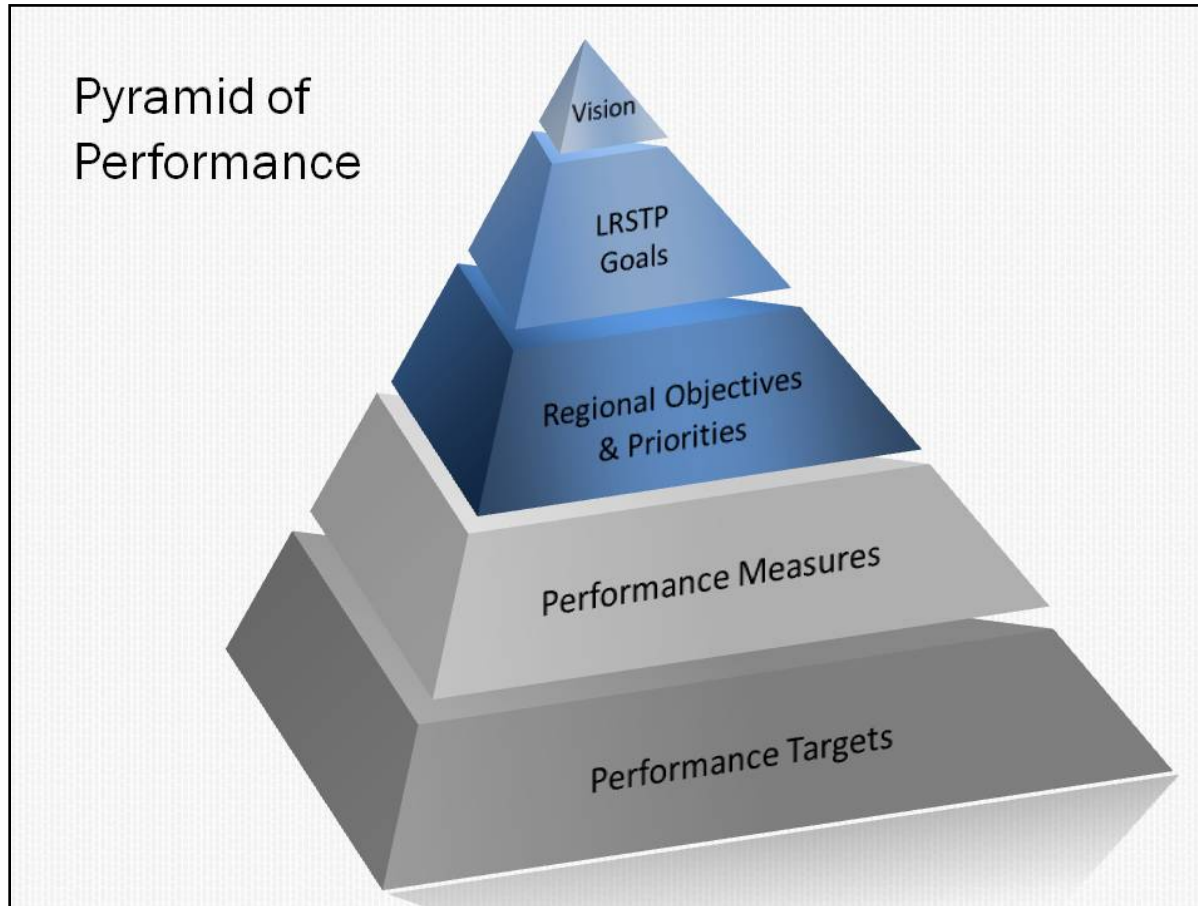


Figure 4.4 A – KYTC Pyramid of Performance

The KYTC has developed an implementable (policy - based) Long-Range Statewide Transportation Plan through the process of creating a vision, developing goals, setting objectives and priorities on a regional level, as well as creating accountability through performance measures, while setting specific performance targets.

This Plan was developed to meet Kentucky's transportation needs. These needs were expressed by the public, the local and state political leadership, the KYTC, local and regional transportation and planning professionals, and other valuable stakeholders.

#### 4.5 Creating the Vision

Through the 2014 LRSTP process as previously discussed, a vision for the transportation system was generated: **“A well-maintained, multi-modal transportation system that delivers safe and reliable trips which improve Kentucky’s quality of life.”**

#### 4.6 Setting the Goals

Goals are the guide to direct the KYTC toward its vision. Input from the “Your Turn” survey and the focus groups, along with guidance from MAP-21, were the basis for long-range goals specifically developed to address the challenges facing Kentucky’s transportation system over the next twenty years.

The process by which decisions are made, projects are funded, and how they are delivered became the central question of the goal development process. LRSTP goals of two distinct types were developed: project goals and process goals.

LRSTP Project goals are used to measure the effectiveness of proposed system improvements. These goals, for both people and freight, include:

- Providing a safe and secure system
- Maintaining and improving existing infrastructure on a continual basis
- Ensuring dependable, effective and efficient facilities
- Improving local, regional and global connectivity and access
- Including all appropriate modes of transportation within a fully-integrated system

LRSTP Process goals set performance standards for the methods and practices to be used to deliver

improvements and to maintain the system. These process goals include consideration of:

- Dependable access to markets, jobs and resources
- Consideration of human and natural resources
- Efficient and flexible use of available resources
- Transparent decision-making processes

Together these goals provide the framework of the decision-making process for project identification, prioritization, development, delivery and maintenance also known as the LRSTP Goals. **Figure 4.6 A** provides a visual interpretation of the KYTC’s implementation of

process and project goals. These goals are emphasized throughout the text of the 2014 LRSTP. The specific regional objectives and priorities developed by the KYTC District Offices, the ADDs and the MPOs support the goals and vision of the 2014 LRSTP. The vision, goals, and regional objectives and priorities are in turn supported by a foundation of performance management.

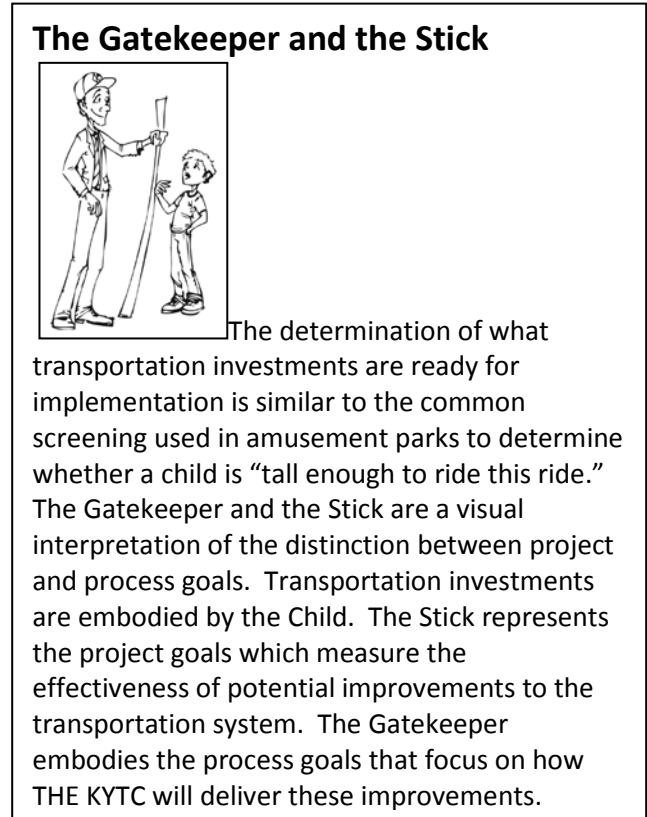


Figure 4.6 A – KYTC Goals Implementation



#### **4.7 Defining the Priorities**

Among the primary objectives and priorities established for the 2014 LRSTP, safe movement of people and goods is paramount. Access and connections from communities to existing and planned regional transportation networks will be especially important in encouraging tourism and economic development. The importance of providing opportunities for public input into the planning and prioritization processes is also specifically recognized. In fact, the growing importance of multi-modal transportation options (i.e., airways, cycling, pedestrian, public transit, rail and water) has been identified by both the KYTC staff and members of the public.

#### **4.8 Establishing the Performance Measures**

The 2014 LRSTP will operate under the guidelines and recommendations of the American Association of State Highway and Transportation Officials (AASHTO) for highway design and construction throughout the U.S. These include standards for safety, pavement and bridge conditions, management, congestion mitigation, air quality and overall system performance.

#### **4.9 Setting Performance Targets**

The KYTC will define quantitative values for specific performance measures for the state's transportation system as a whole as well as for its individual elements. Delays and reliability are the two primary factors within the system performance and freight performance categories. Safety will be evaluated by the number and rate of both fatalities and serious injuries. The pavement structural health index will be used along with the

condition of both interstate International Roughness Index (IRI) and non-interstate (IRI) pavements to monitor pavement conditions. Delays and emission reduction will be considered under standards for congestion mitigation and air quality.

#### **4.10 KYTC Organizational Framework**

The KYTC's organizational framework shown as **Figure 4.10 A** illustrates that Kentucky's modal management structure is answerable directly to the Secretary of Transportation. The State Highway Engineer leads the Department of Highways including its 12 Highway District Offices as shown in **Figure 4.10 B**. The KYTC Aviation and Transportation Delivery (Transit) functions are led by their respective commissioners. The Office of Transportation Delivery serves in close cooperation with the Kentucky Cabinet of Health and Family Services (CHFS) to dovetail transit operations with healthcare transport delivery services. Providing these services as part of the ongoing public transit program has saved the state and federal governments millions of dollars over the past decade.

The Department of Highways serves to facilitate modal collaboration through its planning function with waterway, rail, and bike/pedestrian concerns coordinated by the Division of Planning. In recent years, the Department of Highways has recognized that the long-term delivery of transportation programs is a complementary process whereby highways, transit, aviation, waterways, and bike/pedestrian issues are addressed in a non-competitive manner. As the KYTC envisions the future of freight and passenger mobility in Kentucky, the belief is that every mode has a role and there will be plenty of opportunities for all.

KENTUCKY LONG-RANGE STATEWIDE TRANSPORTATION PLAN

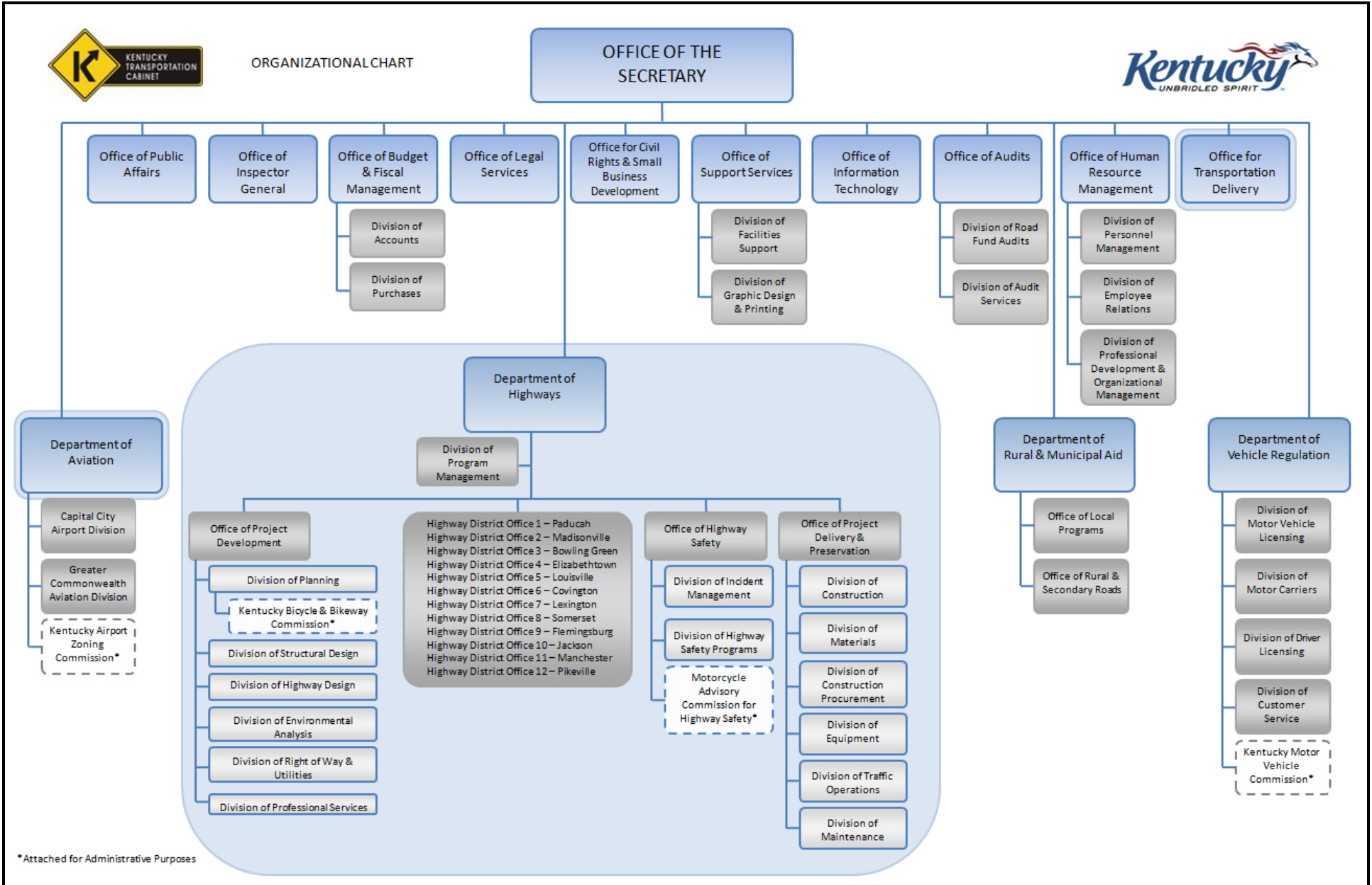


Figure 4.10 A – KYTC Organizational Chart

# Kentucky Highway Districts



KYTC Highway Districts

1	(270) 898-2431	7	(859) 246-2355
2	(270) 824-7080	8	(606) 677-4017
3	(270) 746-7898	9	(606) 845-2551
4	(270) 766-5066	10	(606) 666-8841
5	(502) 210-5400	11	(606) 598-2145
6	(859) 341-2700	12	(606) 433-7791

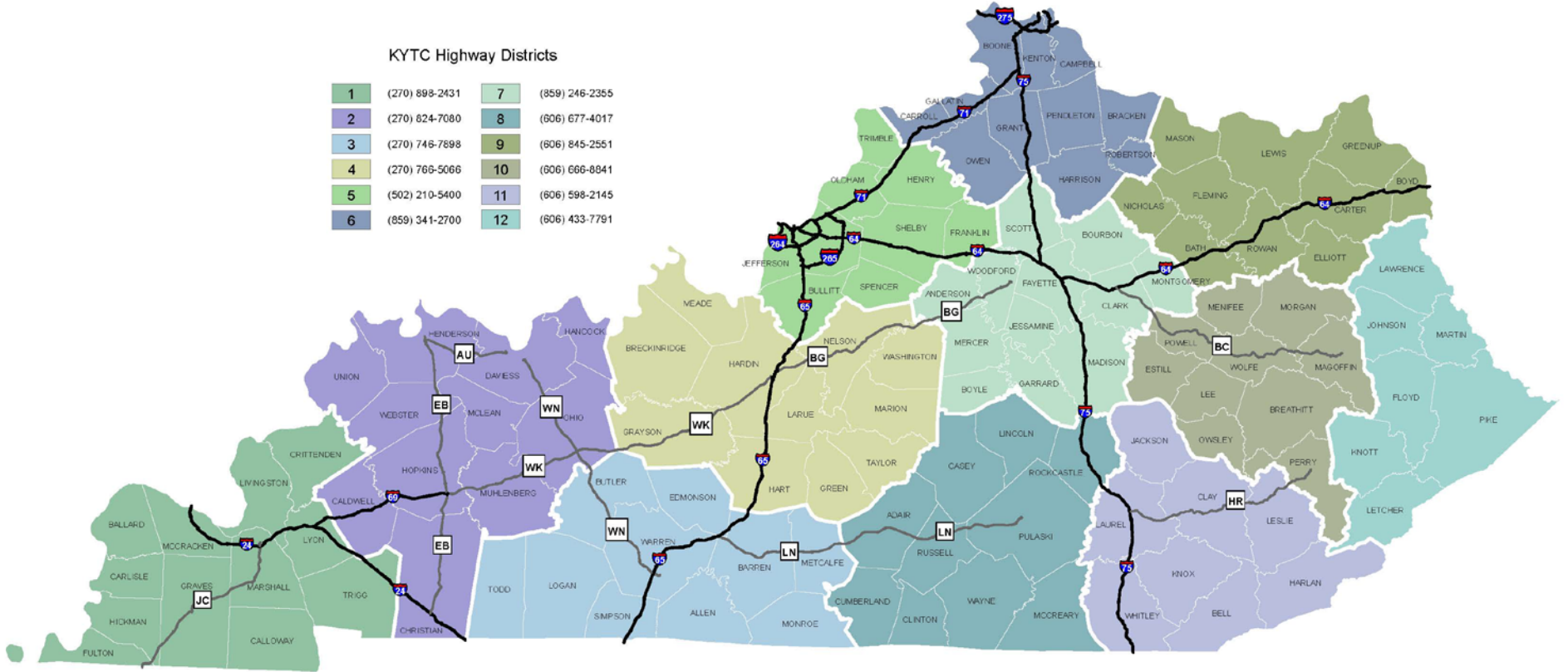


Figure 4.10 B – KYTC Highway District Boundary Map

Within the Department of Highways, the KYTC has established a performance management work group to develop performance targets against the backdrop of the KYTC long-range planning effort. The goals of the long-range planning process are embodied in the performance metrics that, in turn, feed our fledgling performance-based planning and programming activities (PBPP). The KYTC strives for these processes to work effectively together to generate Kentucky's Six-year Highway Plan, the short-range list of priority projects which is an element of the State Biennial Budget.

Within the PBPP process, the KYTC will use programmatic data and performance targets to assess basic maintenance and asset management funding commitments, with some funding dedicated to the enhancement of economic development opportunities within the state. All of this must be closely communicated with Kentucky's governor and legislature in order to develop the support necessary for successful program development and implementation.

The whole performance-based approach to highway program delivery requires the ongoing cyclical monitoring, evaluation, needs definition, needs prioritization, and funding constraint processes. This cycle is simply expressed as Plan, Do, Check, and Act (PDCA). The PDCA cycle is data-driven and its success is built upon the constant communication of the results and lessons learned at each key decision point as illustrated in **Figure 4.10 C**.

In comparison, the entire life cycle of a project, as previously discussed and shown in **Figure 4.2 A**, is in itself a PDCA cycle. The "Plan" step of the PDCA cycle encompasses the identification of transportation needs and the prioritization of improvements to meet those needs, the "Do" step involves the design and construction of those prioritized improvements, the "Check" step involves the monitored operation of the system, while the "Act" step is the link between the operations of the system to the planning for future improvements.

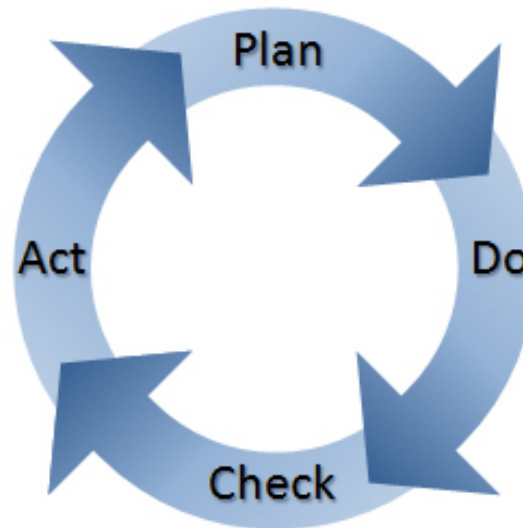
Integrated at all levels of the PBPP and as illustrated in the Pyramid of Performance shown in **Figure 4.10 D**, PDCA cycles roll continuously through all levels of the process between the outputs and the desired outcomes. Through data collection and analysis and the communication of lessons learned, the PDCA cycle is used to confirm that the outputs (improvements to the transportation system) support the desired outcomes---the goals and the vision. The KYTC is daring to use PBPP process appropriately and well in its efforts to attain the destination postcard for the 2014 LRSTP Vision.

***A well-maintained, multimodal transportation system which will deliver safe and reliable trips that will improve the quality of life for all Kentuckians.***

## The Plan-Do-Check-Act Cycle

### Plan: What needs to happen?

- Collect data to identify needs
- Develop proposed improvements
- Establish priorities for proposed improvements
- Communicate results



### Act: What needs adjusting?

- Identify lessons learned
- Improve process to reflect learning
- Communicate results

### Do: How do we make it happen?

- Develop priority improvements
- Implement targeted solutions
- Communicate results

### Check: Was it effective?

- Collect data on the effects of implemented improvements
- Analyze data
- Communicate results

Figure 4.10 C – Plan-Do-Check-Act Cycle of Performance-Based Planning & Programming



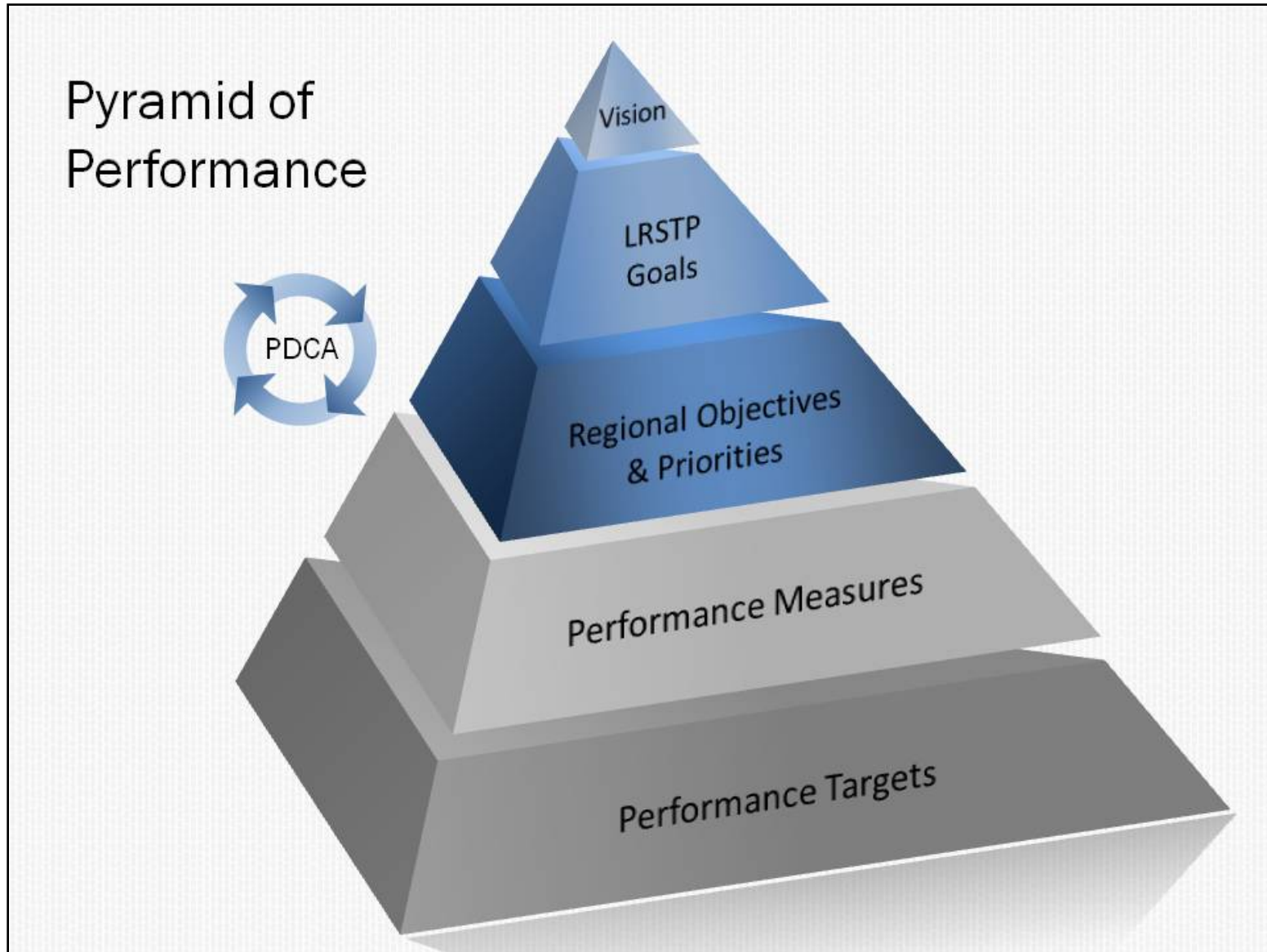


Figure 4.10 D – The Role of the Plan-Do-Check-Act Cycle in Performance-Based Planning & Programming