



Vermont Long Range Transportation Business Plan

EXECUTIVE SUMMARY

The 2009 Vermont Long Range Transportation Business Plan (LRTBP) is a comprehensive, 25-year plan for the state's multimodal network. The LRTBP complies with federal legislation enacted in 2005 titled, "Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users" (SAFETEA-LU). The 2009 plan is an update of two previous plans from 1995 and 2002.

The LRTBP builds on and guides statewide multimodal and modal/topic plans and regional and local transportation system plans. Although the LRTBP does not identify specific projects for development, it provides a framework for prioritizing future transportation improvements and developing funding alternatives. It also takes into account various alternative future scenarios that will guide the choice of strategy implementation.

Who Helped Develop This Plan?

The Vermont LRTBP reflects the work of numerous groups and individuals who participated throughout the plan development process, including:

- Advisory Committee of key stakeholders representing other state agencies, regional planning commissions and the Metropolitan Planning Organization (MPO), local governments, and business and environmental groups
- Vermont public opinion survey commissioned by the Vermont Agency of Transportation (VTTrans) in 2006 regarding transportation issues
- Interviews with VTTrans, national experts, and Vermont "Big Thinkers," as well as four focus groups
- Public meetings were held across the state during fall 2007 and 2008 to obtain comments on the draft LRTBP
- Vermont planning and transportation specialists who participated in a Scenario Planning Session

For more information, visit the VTTrans website at <http://www.aot.state.vt.us/>

[Click on the Long Range Transportation Business Plan link.](#)



Vermont's Multimodal Transportation System

Vermont has a large and varied transportation system. It includes aviation and rail facilities, bicycle and pedestrian paths and trails, public transit, roads and highways, and other associated facilities and services. The LRTBP is built in part upon the findings and recommendations of Vermont's modal policy plans. Recent plan updates focus on the development of and continuing refinements to a performance-based approach to programming, planning, and asset management.

AVIATION

Vermont has 17 public airports of varying sizes, 10 of which are state-owned. VTrans forecasts that commercial air operations will grow about 32% by 2025.



RAIL

Both rail passenger ridership and rail freight tonnage in Vermont are increasing, meaning VTrans and others will need to upgrade key rail bridges/tunnels to maintain the levels and quality of service.



BICYCLE & PEDESTRIAN

Vermont contains hundreds of miles of bike lanes and routes, shared-use paths and trails, and sidewalks. In the last year, about 40% of Vermonters used bike paths, trails, or shared use paths.



PUBLIC TRANSIT

Vermont has 12 regional public transit providers who serve many important community needs, providing fixed and flexible routes, as well as commuter services. Public transit use is growing, with a recent survey finding that Vermonters see it as one of the highest transportation funding priorities.



PARK & RIDE

VTrans operates 26 Park-and-Ride facilities across the state, with 23 more owned by municipalities. Use is increasing statewide, with some lots now over capacity.



HIGHWAY

Vermont contains more than 14,000 miles of public roads, of which the state owns 19%, or 2,704 miles, including 320 miles of Interstate, 2,370 bridges, more than 40,000 culverts, and 64,000 signs. As of 2003, about 1/3 of state highway pavement was in poor or worse condition and most bridges needed repairs.



INTELLIGENT TRANSPORTATION SYSTEMS (ITS)

VTrans' ITS initiatives include the 511 Traveler Information service, variable message signs, the Tri-State Advanced Traveler Information System (TRIO), and "ConnectVermont," which will provide a comprehensive information portal for all travelers.



VTrans' Vision, Mission, and Goals

The current guiding principle for VTrans is “The Road to Affordability” with a focus on realigning priorities and rethinking areas of focus. Vermont must preserve its existing assets so that they do not deteriorate to the point that they require major reconstruction and become a financial drain on the entire system.

Vision

A safe, efficient, and fully integrated transportation system that promotes Vermont's quality of life and economic well being.

Mission

To provide for the movement of people and commerce in a safe, reliable, cost-effective and environmentally responsible manner.

Goals

Safety: Make safety a critical component in the development, implementation, and maintenance of the transportation system.

Excellence: Cultivate and continually pursue excellence in financial stewardship, performance accountability, and customer service.

Planning: Optimize the future movement of people and goods through corridor management, environmental stewardship, balanced modal alternatives, and sustainable financing.

Preservation: Protect the state's investment in its transportation system.



Vermont Transportation System Challenges and Opportunities

Vermont faces many challenges, yet also has several key opportunities as it moves forward to meet the transportation needs of the state. Over the next 25 years, there will be many changes on local, state, national, and global levels that affect our transportation system. Our ability to respond and address rising challenges will depend on how well we do the following things: efficiently manage the transportation system; integrate land use, transportation, and economic activities; fund a sustainable transportation system; and work together. It also depends on our ability to adapt to ever-changing economic and environmental impacts, turning challenges into opportunities.

CHALLENGES

- Aging Infrastructure
- Changing Demographics and Economy
- Land Use
- Funding
- Energy Constraints, Environmental Impacts, and Climate Change
- Freight Movement and Trade Globalization
- Security Needs and Issues

OPPORTUNITIES

- Leveraging The Road To Affordability Framework to Make Cost-Effective Transportation Investment Decisions
- Building a Sustainable Multimodal Transportation Network
- Building and Maintaining Vermont's Infrastructure to Be Compatible with Regional, National, and International Standards and Services
- Enhancing Environmental Quality, Facilitating Energy Conservation, and Addressing Climate Change
- Integrating Land Use and Transportation Planning
- Evolving to Corridor Management Planning

Possible Long Term Scenarios

Integral to the LRTBP process was a scenario planning process. This process included a full-day session engaging 75 participants from around the state in examining alternative future scenarios that could play out in Vermont regarding demographic, economic, and environmental changes. Participants at the event developed policies and actions to guide the State in the face of alternative futures to meet the plan's objectives. These objec-

tives were also used to develop the seven LRTBP goals and implementation strategies.

VTrans identified four possible long term scenarios based on input from national experts, Vermont "Big Thinkers," focus groups, and VTrans staff. Scenario planning session participants identified appropriate policies and strategies that VTrans could pursue to take the agency and state into the future.

Long Range Transportation Business Plan

To address the many challenges that Vermont's transportation system will face, the LRTBP is founded upon a series of policy-level goals and strategies for VTrans. These strategies, shown in Table 1, were developed with input from VTrans—including its goals and objectives and modal policy plans; and from the process of developing the LRTBP, including the scenario planning session,

public opinion survey, focus groups, a Study Advisory Committee, national and state experts, and the consultant team (see Figure 1).

The strategies will enable VTrans to be adaptable, innovative, sustainable, collaborative, and efficient managers of Vermont's transportation system as we move ahead.

Figure 1. LRTBP Inputs

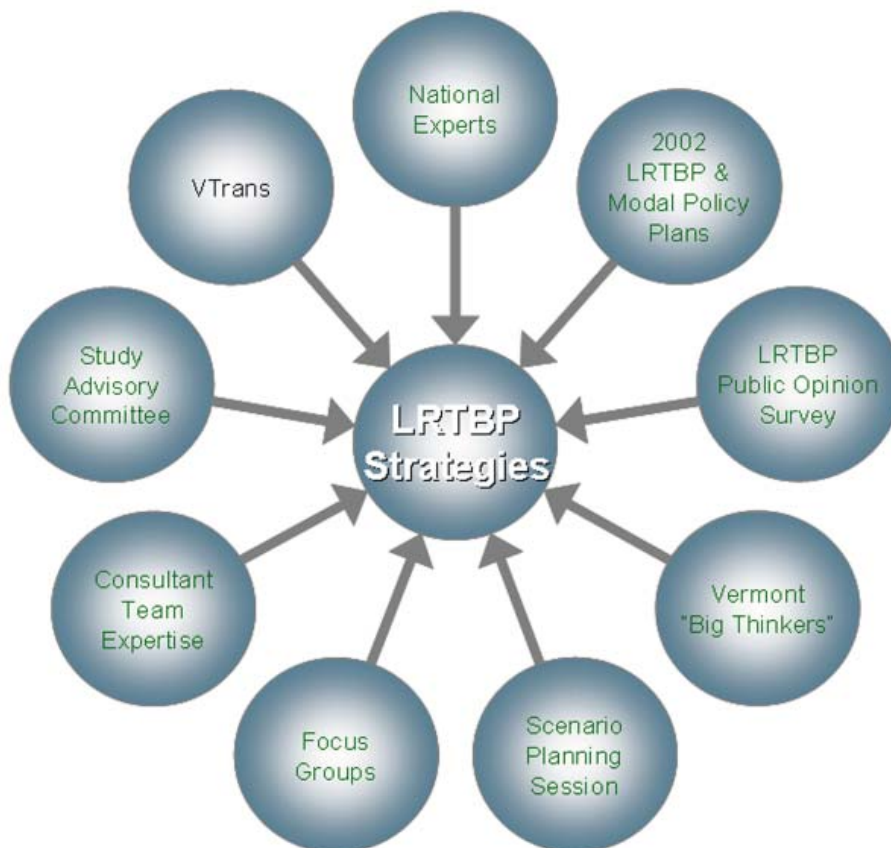


Table 1. VTrans’ Policy Goals and Strategies

POLICY GOAL	STRATEGIES
<p>1. Secure Sustainable Funding & Finance Sources</p>	<ul style="list-style-type: none"> ■ Pursue debt financing (bonding) as a cost-effective means of supplementing pay-as-you-go revenue for critical current needs. <i>(ST)</i> ■ Explore indexing the Motor Fuel Tax to keep pace with the rate of inflation. <i>(ST)</i> ■ Explore/assess the need to increase motor vehicle-related fees and sales taxes. <i>(ST)</i> ■ Consider concessions and tolls on Vermont’s highways. <i>(ST)</i> ■ Monitor studies at the national and state levels regarding various mileage-based tax options as an alternative to the gas tax. <i>(ST)</i> ■ Publicize existing federal tax incentives for employers to invest in employee transportation and consider similar state incentives. <i>(ST)</i> ■ Explore the potential for VTrans to use impact fees to pay for future transportation improvements and encourage increased use of impact fees at the local level. <i>(LT)</i> ■ Consider leasing of elements of all rights-of-way to appropriate lessees (e.g., fiber optic firms, automobile service/gas stations, data/communications firms, etc.). <i>(LT)</i> ■ Evaluate existing partnerships with other states that hold potential for developing projects or initiatives of sufficient financial scale that may attract public-private partnerships to Vermont and northern New England, New York, and Canada. <i>(ST)</i>
<p>2. Optimize Transportation System Management & Operations</p>	<ul style="list-style-type: none"> ■ Use the priority facilities and networks identified in modal policy plans to define a statewide, multimodal strategic transportation network as the principle focus of state funding. <i>(ST)</i> ■ Continue to work with Regional Planning Commissions on developing a value-added methodology for prioritization of projects. <i>(ST)</i> ■ Place emphasis on developing long-term multimodal corridor management plans and intergovernmental corridor management and development agreements in cooperation with local governments and regional planning agencies. <i>(ST)</i> ■ Expand intelligent transportation systems (ITS) to facilitate more efficient transportation operations, including variable message signs, real-time highway and transit information, etc. <i>(ST)</i> ■ Facilitate the ability of the transportation system to safely and efficiently accommodate both freight and person movement by collaborating with public and private entities to understand and address multimodal freight access needs for major destinations & economic hubs. <i>(LT)</i> ■ Consider consolidating the planning and operations of publicly assisted transit services throughout Vermont. <i>(ST)</i> ■ Continue funding and technical assistance for regional transportation planning and implementation through the Transportation Planning Initiative (TPI). <i>(ST)</i> ■ Continue to streamline and expedite the project development and permitting process through early consultation with resource agencies, greater reliance on consultant support services, and by exploring alternatives such as “design-build,” “design-build-maintain,” and comprehensive management service contracts for implementing a collection of projects. <i>(ST)</i> ■ Continue to emphasize long range modal and multimodal planning and the development of new strategies and policies. <i>(ST)</i>

ST = short term (0–5 years)
 LT = long term (>5 years)

Table continues on p. 6

POLICY GOAL**STRATEGIES****3. Provide a Safe & Secure Transportation System**

- Continue to implement, monitor, and report on progress of the Vermont Strategic Highway Safety Plan (SHSP). *(ST)*
- Develop and maintain safety plans for all modes of transportation in a manner relevant to each mode's safety issues. *(ST)*
- Assess the need to maintain security plans for all modes of transportation, including prevention, detection, and response across all entities. *(ST)*
- Broaden connections with Vermont Emergency Management, Department of Public Safety, and FHWA to improve the ability of the transportation system as a whole to handle disasters and emergency events of local, regional, and national scale. *(ST)*
- Ensure VTrans can handle emergency events and maintain provision of its services under the State Continuity of Operations Plan. *(ST)*

4. Preserve, Manage, & Operate the State's Existing Transportation System to Provide Capacity, Safety, Flexibility, and Reliability in the Most Effective and Efficient Manner

- Give priority to funding for maintenance and preservation of transportation infrastructure. *(ST)*
- Assess design and engineering standards necessary for transportation infrastructure to accommodate climate change impacts (e.g., extreme weather conditions) and evaluate inventory of facilities to determine vulnerabilities and adaptation priorities. *(LT)*
- Use lowest life-cycle cost methodology to determine the appropriate schedule and intervals for upkeep of transportation infrastructure. *(ST)*
- Review and modify where appropriate design standards and best practices to facilitate cost-effective maintenance. *(ST)*
- Expand the use of asset management systems for roadway pavement, bridges, right-of-way, public transportation facilities and equipment, safety features, and other infrastructure to prioritize expenditures. *(ST)*
- Consider development of a "strategic disinvestment" policy for transportation infrastructure and services whose maintenance, preservation, and/or operating costs significantly exceed the value of their economic and social benefits. *(ST)*

5. Improve & Connect All Modes of Vermont's Transportation System to Provide Vermonters with Options

- Emphasize and promote transportation system management (TSM), Intelligent Transportation Systems (ITS), and transportation demand management (TDM) strategies for addressing congestion and mobility. *(ST)*
- Plan and support intermodal transportation facilities to provide multimodal options that reduce personal vehicle use and reduce Vermont's reliance on fossil fuels for meeting transportation needs. *(LT)*
- Accommodate non-motorized transportation within the transportation system. *(ST)*
- Conduct ongoing assessments of non-single occupant vehicle (SOV) modes to determine their economy, efficiency, and effectiveness relative to other transit opportunities to ensure mobility and accessibility. *(ST)*

POLICY GOAL

STRATEGIES

6. Strengthen the Economy, Protect & Enhance the Quality of the Natural Environment, Promote Energy Conservation, & Improve Vermonters' Quality of Life

- Implement the June 2008 VTrans Climate Change Action Plan. *(ST)*
- Monitor and participate in, as appropriate, research on climate change impacts that identify changes or improvements necessary to maintain system operability and statewide mobility. *(ST)*
- Integrate transportation planning and investments with state and local economic development strategies and plans. *(LT)*
- Coordinate with Agency of Commerce and Community Development (ACCD) to evaluate the impacts of local planning and development decisions on the operations, physical condition, capacity, safety, and cost of state transportation facilities. *(ST)*
- Increase the use of, and support additional access to and development of, alternative fuels that could reduce Vermont's reliance on fossil fuels. *(ST)*
- Encourage the development and use of transportation construction and operations technologies that reduce emission of greenhouse gases (support work of UVM Transportation Research Center in this regard). *(ST)*
- Enhance coordination of policy development between the Agency of Natural Resources (ANR) and VTrans. *(ST)*
- Promote transit services as a tool to support tourism and economic development. *(ST)*
- Monitor and plan for the possibility of Vermont's designation as a non-attainment area for federal air quality standards, including training staff on policy, planning, and programming issues that would result from that designation. *(ST)*

7. Support & Reinforce Vermont's Historic Settlement Pattern of Compact Village and Urban Centers Separated by Rural Countryside

- Support transportation improvements and services assessed as critical to enhancing, stimulating, and connecting vital urban and village centers. *(ST)*
- Work with the Department of Buildings and General Services to encourage and support the siting of public-use state and local government facilities and services in multimodal access areas to the extent possible. *(LT)*
- Design, build, and maintain transportation facilities with consideration given to scenic, aesthetic, historic, and environmental resources, while respecting financial constraints and maintaining safety and mobility. *(ST)*

Implementing the LRTBP and Monitoring Progress

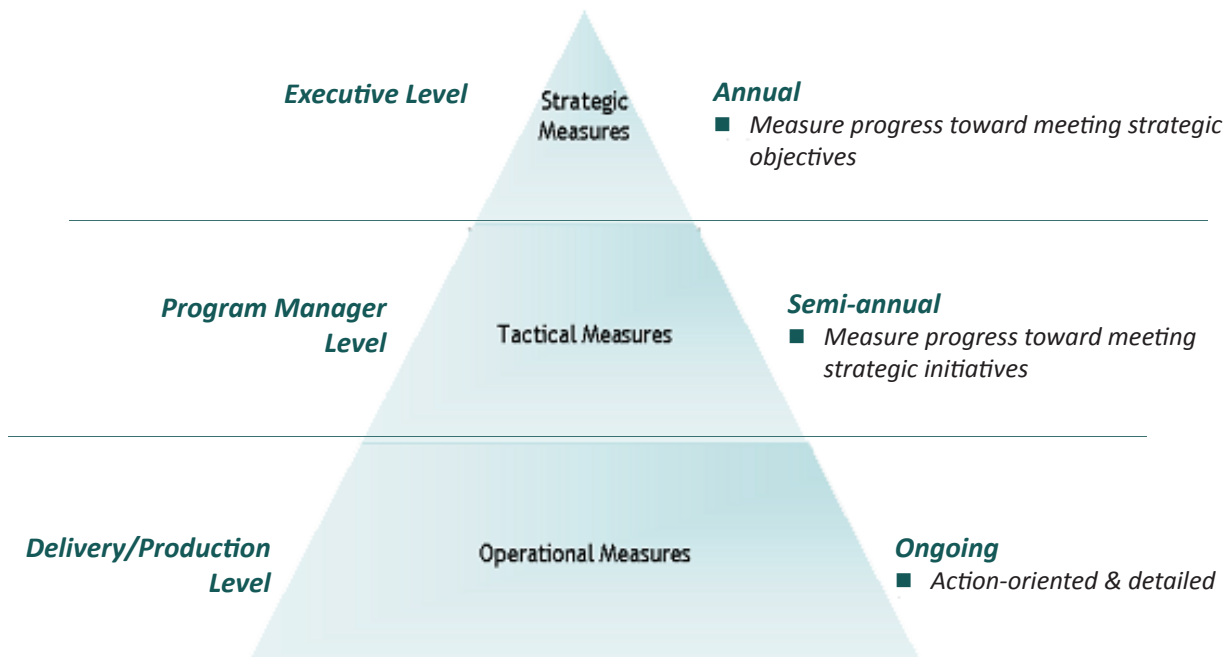
LRTBP implementation can build on the existing opportunities in Vermont's planning structure, planning organizations, partnerships, and public involvement practices. The critical foundations of successful implementation will include:

- Public involvement and consultation
- Legislative action
- Vermont's statewide multimodal planning and management of funds
- Cooperation between VTrans, RPCs, and the MPO
- Continue to develop VTrans asset management practices
- Federal, state, and local coordination and partnerships
- Public-private partnerships
- VTrans' role in multimodal connectivity

VTrans will also adopt different ways of doing business, including continuing its shift to Corridor Management for many planning and investment situations and embracing an Agency-wide Strategic Management approach.

- The Corridor Management approach offers the opportunity for state and regional agencies, municipalities, and communities to collectively plot a future strategy for a corridor, allowing a system-wide approach that considers multi-modal and intermodal connections.
- To ensure that the LRTBP goals and strategies can be effectively implemented over time, VTrans is adopting a strategic management approach, which will help VTrans ensure that it effectively links its day-to-day work to its overall goals and vision. Strategic management and planning identifies what is important for VTrans to be doing, in what priority, and by whom. A critical aspect of a strategic management process is for VTrans to continuously track progress and performance against goals and objectives and identify strategic changes on a regular basis. Performance measurement tells VTrans and its stakeholders what it is doing to address the state's transportation needs and how efficiently it is accomplishing its goals. Performance monitoring and reporting may be viewed as a hierarchical relationship among three categories: strategic, tactical, and operational (see Figure 2).

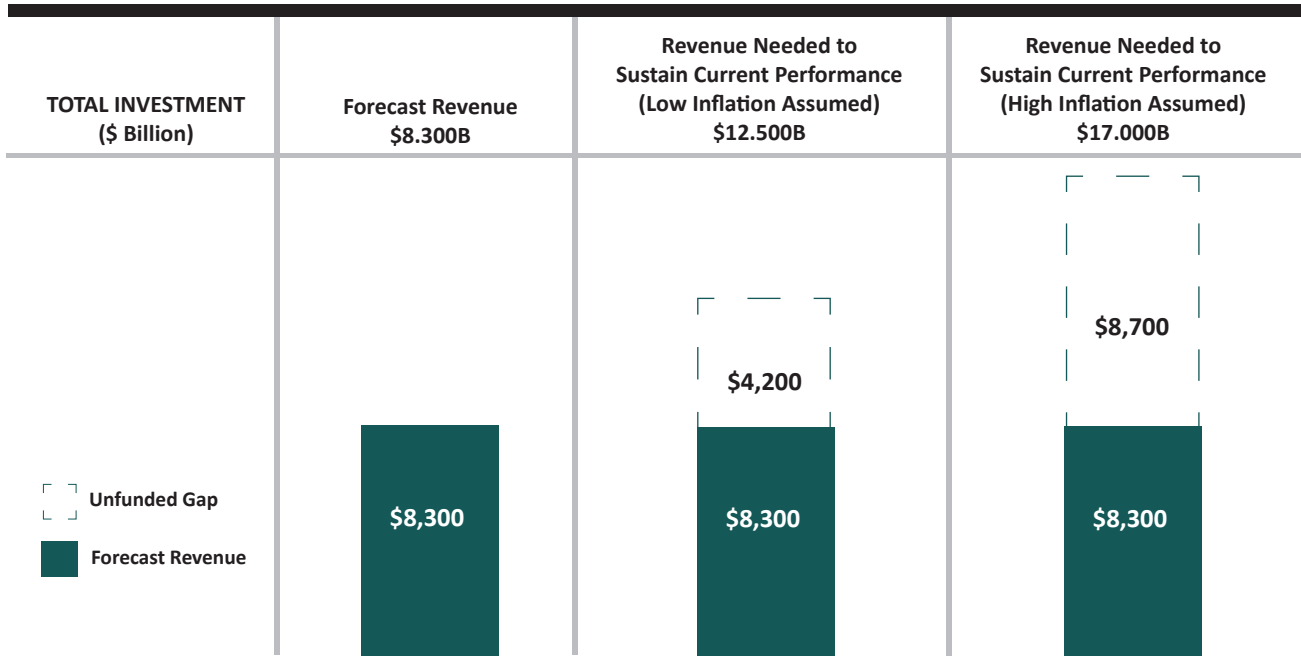
Figure 2. How Performance Measures Help VTrans Monitor LRTBP Implementation Progress



Financial Outlook

The greatest challenge to meeting Vermont’s transportation needs will be finding the money to pay for them. Vermont is facing the challenge of revenue not keeping pace with the demand to maintain and improve transportation infrastructure. Cumulative transportation revenue shortfalls for Vermont could be as high as \$8 billion over the next 20 years, depending on the rate of inflation (see Figure 3).

Figure 3. Estimated 2025 Funding Gap by Investment Scenario



NOTE: As with all long-range forecasts, the level of funding available for VTrans may vary significantly from the \$8.3 billion figure used in this Plan. Many factors, including changes to federal funding streams, will affect the actual funding level. (Source: VTLRTBP Working Paper 3, “Financial Analysis,” February 2007.)

Faced with the challenge of preserving its existing and deteriorating infrastructure, as well as funding strategic enhancements to the transportation system across the state, VTrans will need to determine the probability of current funding patterns continuing and the implications of future changes

to those patterns. New funding sources, including the American Recovery and Reinvestment Act and the next federal surface transportation act, could reduce Vermont’s future funding gap. By pursuing the LRTBP strategies in light of possible changing scenarios, long-term strategies can be implemented to increase the resources available in the transportation system and use available resources as cost-effectively as possible in the near term. In addition, as that return is realized in the form of a more efficient and cost-effective transportation system, Vermont can move toward making the large-scale transportation investments it will need in order to maintain the state’s economic vitality and quality of life in coming years.

For comments, questions, or copies of the full Plan, please contact:

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To view the LRTBP, working papers, and other related information, visit the VTrans website at:

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