

The background image shows the interior of a vehicle, likely a truck or SUV, featuring white leather seats, a black steering wheel, and a dashboard. The text is overlaid on a semi-transparent dark grey rectangle in the upper center.

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Transportation Systems Management & Operations

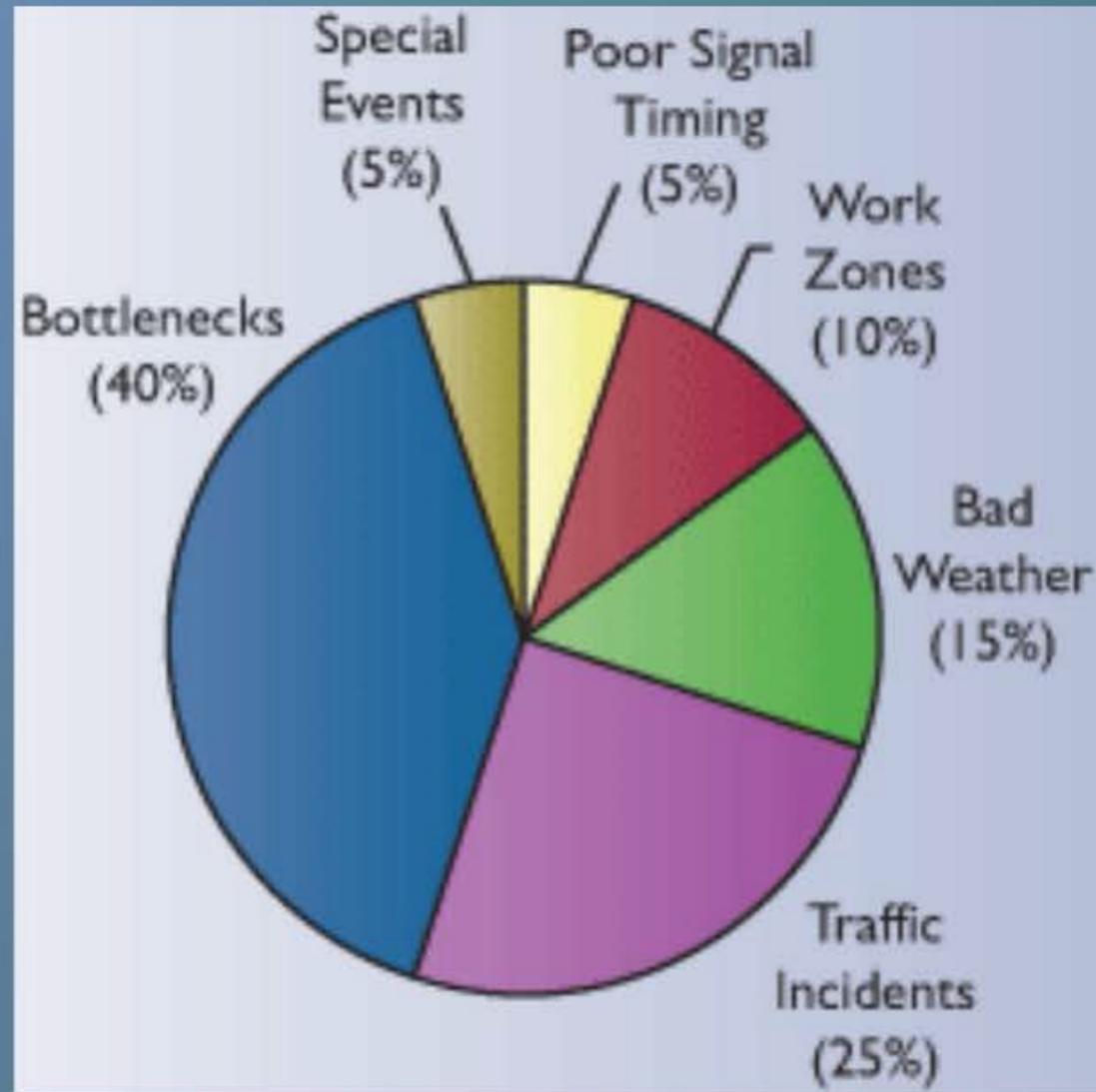
- Integrated Corridor Management (ICM)
- Active Traffic Management (ATM) / Managed Motorways
- Managed Lanes (HOV, HOT)
- Regional Coordination
- Multi-Modal Traveler Information
- Coordinated Traffic Signal Timing/ Adaptive Control
- Transit Enhancements (Bus Rapid Transit and signal priority)
- Incident & Emergency Management
- Ramp Management
- Road Weather Management

Existing & Emerging Strategies Supported by ITS Technologies

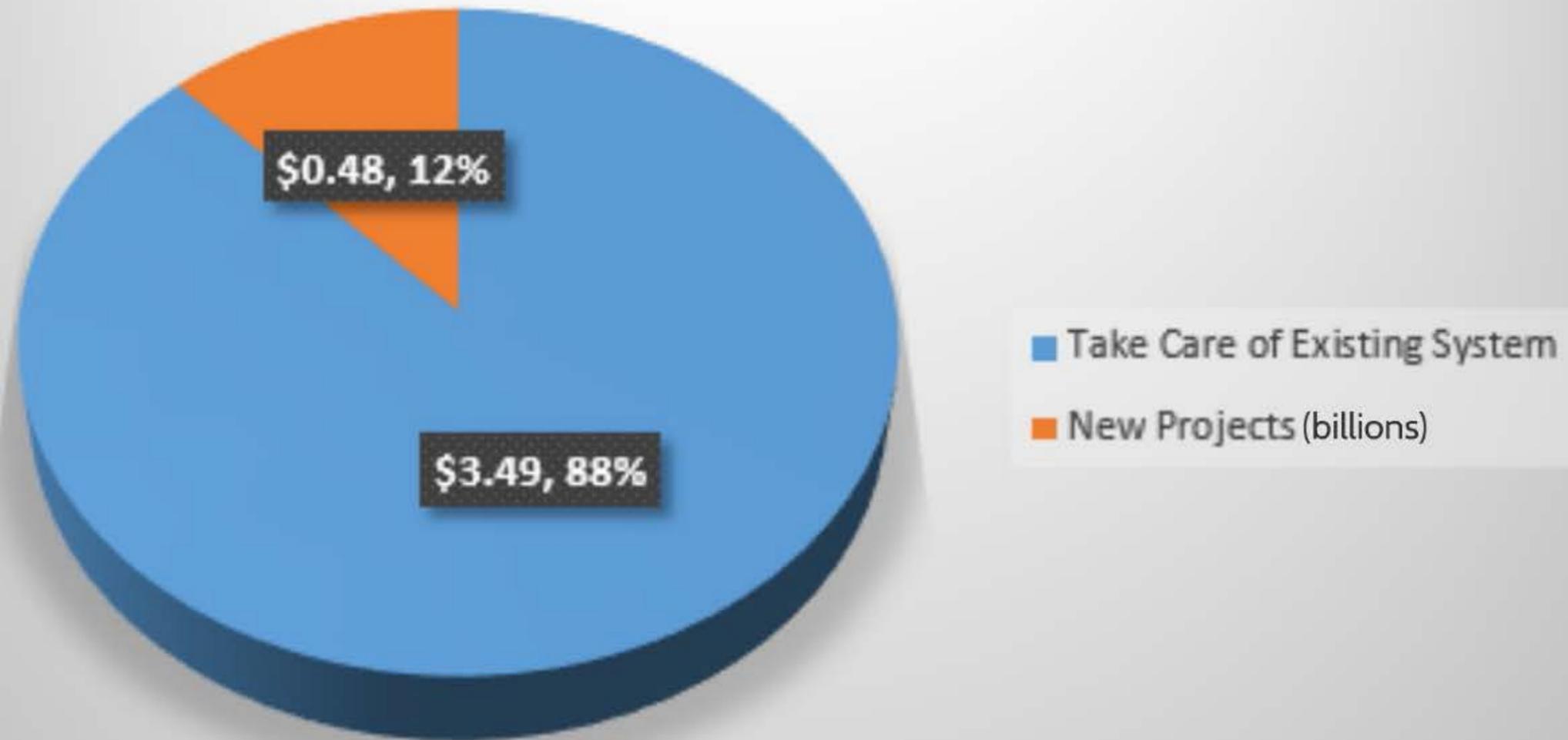
- Manage Congestion / Increase Reliability – Economic Sustainability
- Enhance Safety / Reduce Crashes – Social Sustainability
- Reduce Stops & VHT (Emissions) – Environmental Sustainability



Reliability of the Transportation System



5 Year Construction Program





- Prepare MoDOT to integrate 21st century technologies into our transportation system and services
- Enhance MoDOT's funding stream

Solar Roadways



- Produce clean renewable energy for homes, businesses and electric cars on the roadway
- Heating elements to prevent snow and ice accumulation
- Panels have microprocessors that allows the panels to communicate with each other, a central control station, and vehicles
- LED lights to create lines and signage without paint
- Test Site - Historic Route 66 Welcome Center at Conway, MO

Truck Platooning



- Safety - braking is automatic with virtually zero reaction time compared to human breaking
- Efficiency - reduces congestion by improving traffic flows
- Cleaner - Reduce CO2 emissions
- Economical - lower fuel consumption means lower fuel costs (approx. 30% of total operating costs of a truck)

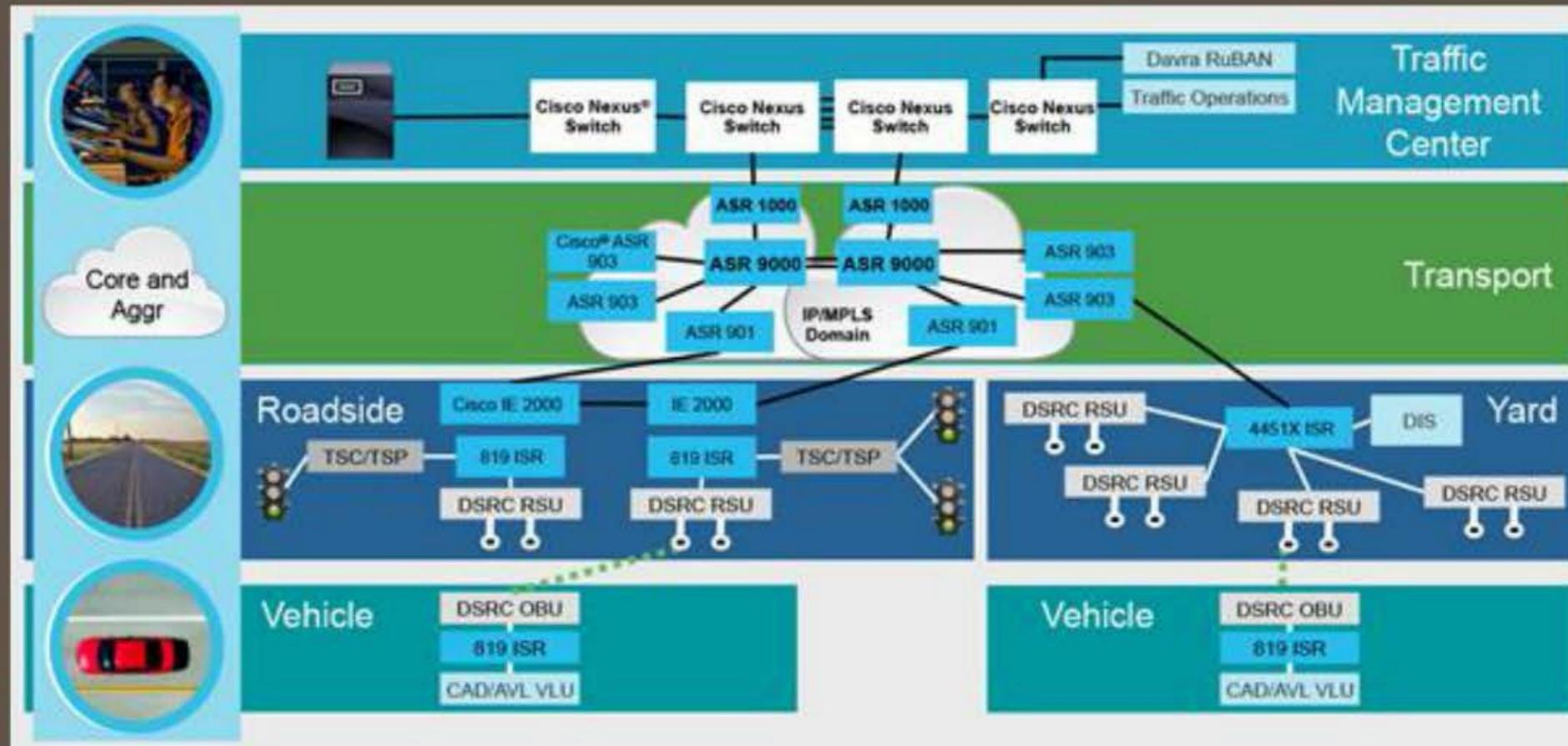
Smart Highways (MoDOT's Request for Proposal)



Purpose - Increase road safety, efficiency, and reduce environmental impacts which generating revenue

Examples

- Tiny windmills to capture wind from trucks driving by and storing energy for lighting roadway
- “Self-healing” concrete designed to produce bacteria to fill cracks
- Suite of digital, communication and information services to MoDOT, motor carriers and other commercial fleet operators and private drivers on a subscription basis



Network/Communications

- Basic understanding of terminology (switches, routers, IP addresses, fiber optics, wireless communication (bluetooth, cellular) etc...



Transportation Planning - Leading the effort Examples

- Needs Assessment
- Planning for short and long term goals
- System Evaluation
- Public Policy
- Plan Implementation

"How does vehicle to vehicle or infrastructure and autonomous vehicles affect our 25 year plan?"

To sum it all up...



“ WE CANNOT SOLVE A
PROBLEM BY USING THE
SAME KIND OF THINKING
WE USED WHEN WE
CREATED THEM.

- ALBERT EINSTEIN



MJV

“ NEVER BEFORE
IN HISTORY HAS
INNOVATION OFFERED
PROMISE OF SO MUCH
TO SO MANY IN SO
SHORT A TIME. ”

-Bill Gates

CSC

“The best
way to
predict the
future is to
create it.”



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Prezi