Updating Qatar's School Transportation System

In light of the many challenges associated with Qatar's continued growth and demographic changes, the government of Qatar wants to update its school transportation system (STS). Stakeholders, including school administrators and the Supreme Education Council, have voiced a variety of concerns about the current state of school transportation, ranging from safety and traffic congestion to efficiency and service quality. The government of Qatar asked the RAND-Qatar Policy Institute (RQPI) to assess stakeholder perspectives on school transportation, help identify a vision and goals for the STS, identify international norms for school transportation, and highlight strategies for Qatar to achieve better alignment with international norms.

Developing a Vision and Goals

To develop the vision, RQPI researchers reviewed key planning documents for Qatar,[1] interviewed school administrators at several schools, and surveyed parents at those schools to identify the characteristics that the STS should embody. Armed with this information, researchers drafted a vision comprising the following four elements:

- Provide **safe**, **efficient**, and **high-quality** transportation for Qatar's students.
- Support educational options by enabling **mobility** and **access**.
- Provide a transportation experience that supports Qatari **values** and **culture**.
- Minimize the impact on **traffic** congestion and the **environment**.

The researchers next identified the goals necessary to realize the four elements of the vision. For example, to achieve the safety portion of the first vision element, they identified "Effective safety standards and measures are established and enforced" as a goal. To minimize the effect

Key findings:

- In light of challenges associated with continued growth and demographic change, Qatar wants to update its school transportation system.

- RAND-Qatar Policy Institute (RQPI) researchers formulated a vision for Qatar's school transportation system and specific goals to realize the vision.

- Researchers identified 20 strategies to achieve the goals and realize the vision.

- RQPI recommends 13 strategies that will help bring Qatar's school transportation system in line with international norms.

on traffic congestion, they identified "Transportation operations minimize delays and traffic around schools" as a goal. Having defined the vision and goals, the researchers then turned to developing strategies that would achieve the goals and thereby realize the vision.

Strategies to Achieve the Goals and Vision

Researchers identified a number of strategies for achieving the proposed vision. Many of the strategies would bring Qatar's school transportation system into closer alignment with international norms. The researchers also identified a few strategies that, while not commonly practiced, may interest Qatar because of stated preferences of administrators and parents. The strategies fall into five major categories:

- school zone management
- bus design and operation
- fleet operations and management
- information, communication, and analysis
- student management.

[1] These included the Qatar National Vision 2030, the Qatar National Master Plan, and the Transportation Master Plan.

The table lists the strategies identified within the five categories and the elements of the vision that each strategy supports. Many of these strategies carry little risk and can be implemented with modest investments. The researchers specifically recommend strategies for which (1) implementation obstacles appear to be modest and (2) anticipated costs appear to be modest. For example, the development of a school transportation policy manual, standardized student loading procedures, and bus driver training can yield significant benefits without large investments. Some potential strategies emerged that may offer benefits but also raise important issues related to cultural concerns, uncertain cost-effectiveness, or inconsistency with international norms. Those strategies are not currently recommended but may warrant future consideration.

Candidate Strategies for Updating Qatar's School Transportation System

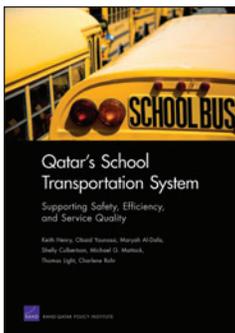| Strategy	Supported Vision Elements
School Zone Management	
Establish clearly marked school zones	Safety, Traffic
Use traffic laws, education, and enforcement to improve safety	Safety, Traffic
Bus Design and Operation	
Institute school bus standards	Safety, Quality
Establish bus driver standards, training, and evaluation	Safety, Quality, Values
Standardize driver checklists and reporting	Safety, Quality, Efficiency
Integrate Radio Frequency Identification (RFID) tags into buses	Safety, Efficiency
Establish maintenance standards and monitoring	Safety, Quality
Fleet Operations and Management	
Optimize bus routes	Efficiency
Institute pick-up/drop-off points	Efficiency
Stagger school start times	Efficiency, Traffic
Alter fleet size and composition	Quality
Information, Communication, and Analysis	
Create a policy manual	Safety, Quality, Efficiency
Conduct an awareness campaign	Safety, Access
Elicit stakeholder feedback	Safety, Quality, Efficiency, Values
Gather and assess safety data	Safety
Establish and monitor efficiency metrics	Efficiency, Quality
Student Management	
Enhance bus monitor requirements	Values, Quality
Establish student loading and unloading procedures	Safety
Manage student behavior	Values, Quality
Provide access to media on buses	Quality

Recommendations

Qatar's STS does not conform to international norms in a number of areas. To better align Qatar's STS with common international practices, researchers recommend that Qatar consider pursuing the 13 strategies explained in further detail below. The recommended strategies carry little implementation risk, and most can be implemented with modest investments:

- Establish clearly marked school zones with standardized safety and traffic management features around schools.
- Use traffic laws, education, and enforcement to control the behavior of private drivers near schools and school buses.
- Adopt international standards for school buses.
- Establish universal standards for licensing and training bus drivers.
- Make drivers responsible for completing daily standardized checklists and reports to ensure adherence to standardized processes.
- Establish maintenance standards and a process for monitoring compliance.
- Publish a systemwide policy manual.
- Conduct awareness campaigns to reinforce practices, policies, and laws.
- Provide school administrators and parents a mechanism for giving transportation officials feedback about issues with school transportation.
- Maintain and track safety data to properly evaluate safety and formulate targeted responses to safety problems.
- Establish performance metrics and develop a system to gather data to measure systemwide performance.
- Ensure that trained school staff are available to supervise bus loading and unloading during peak hours.
- Enforce greater discipline on buses. ■

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