

Driving Excellence in Transportation



Who We Are

Giza Systems is a leading systems integrator in the MEA region. We design and deploy industry-specific technology solutions for asset-intensive industries such as the Transportation, Telecoms, Utilities, Oil & Gas, and other market sectors.

We help our clients streamline their operations and businesses through our portfolio of solutions, managed services, and consultancy practice.

Our team of 800 professionals are spread throughout the region with anchor offices in Cairo, Riyadh, Dubai, Nairobi, Dar-es-Salaam and Abuja, allowing us to service an ever-increasing client base in over 40 countries.

What We Do

We deliver a comprehensive scope and range of end-to-end industry specific solutions that meet customer demand for streamlining operational and business efficiencies.

Our technical capabilities, extensive experience and knowledge of the market, as well as our partnership with global leaders enable us to develop integrated solutions that can work with and build on the evolving technologies, as well as meet the dynamicity of our customers' needs.

In our pursuit to constantly enhance existing resources and create new capabilities, we drive forward the growth of our company, our customers, our people, and our communities.

Capabilities

With a steady growth in our client base all over the Middle East and Africa, we have established local and regional offices to respond to the demands of our clients, as well as leverage the company's success and proven track record in the different sectors.

Target Sectors

Working with over 1,500 satisfied customers, Giza Systems is uniquely positioned to fulfill the needs of the local and regional markets due to our diversified integration and automation solutions that fulfill the various needs of the following sectors:

- Transportation
- Telecommunications
- Power
- Water
- Oil and Gas
- Real Estate and Hospitality
- Manufacturing
- Financial Services

Offices

- Headquarters: 5th Settlement, New Cairo, Egypt
- Local Branches: Alexandria, Assiut, Ismalia
- Regional Branches: Riyadh, Al-Khobar and Jeddah in KSA; Dubai in UAE, Doha in Qatar
- Offices in Africa: Nairobi in Kenya; Abuja in Nigeria; Dar Es Salaam in Tanzania

Quality

Giza Systems strives to integrate quality in all its processes to ensure adherence to the best standards and practices. Giza Systems has received the ISO 9001:2008, ISO 14001:2004, and OHSAS 18001:2007.



Transportation

Keeping It Moving

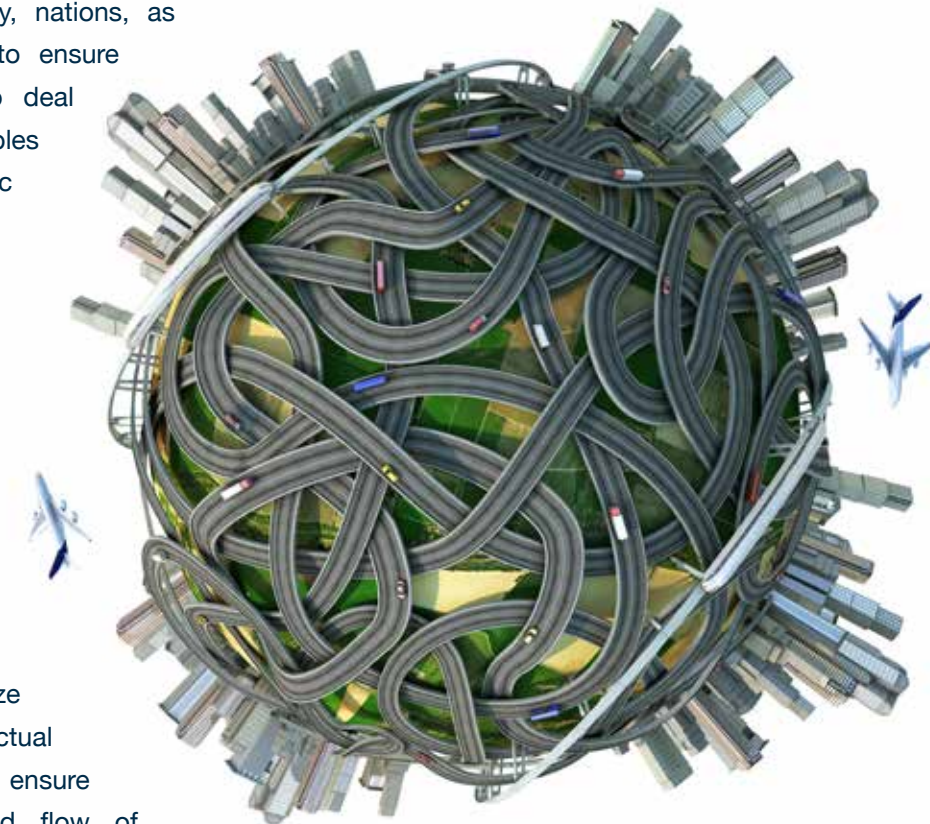
Transportation keeps our world, our people, and our goods moving. It is integral to our everyday lives and spurs us to strive towards an integrated vision for transportation. It is without a doubt a crucial driver to any nation's economy, as well as a major factor in the quality of life.

With the demand in transportation expected to increase exponentially, nations, as well enterprises, need to ensure that they are ready to deal with the different variables for sustaining economic growth and increasing business potential.

Urbanization and the consequent demands for mobility are dramatically reshaping our transportation needs. Inevitably, solutions beyond road expansions will be required to optimize and maximize the actual capacity of the roads to ensure a higher efficiency and flow of movement.

Urbanization, mobility, congestion, safety, security, infrastructure, operational efficiencies, energy are just some of the factors involved in the transportation industry.

Innovative and integrated solutions are key for the implementation of an integrated vision for transportation, infrastructure, and logistics.

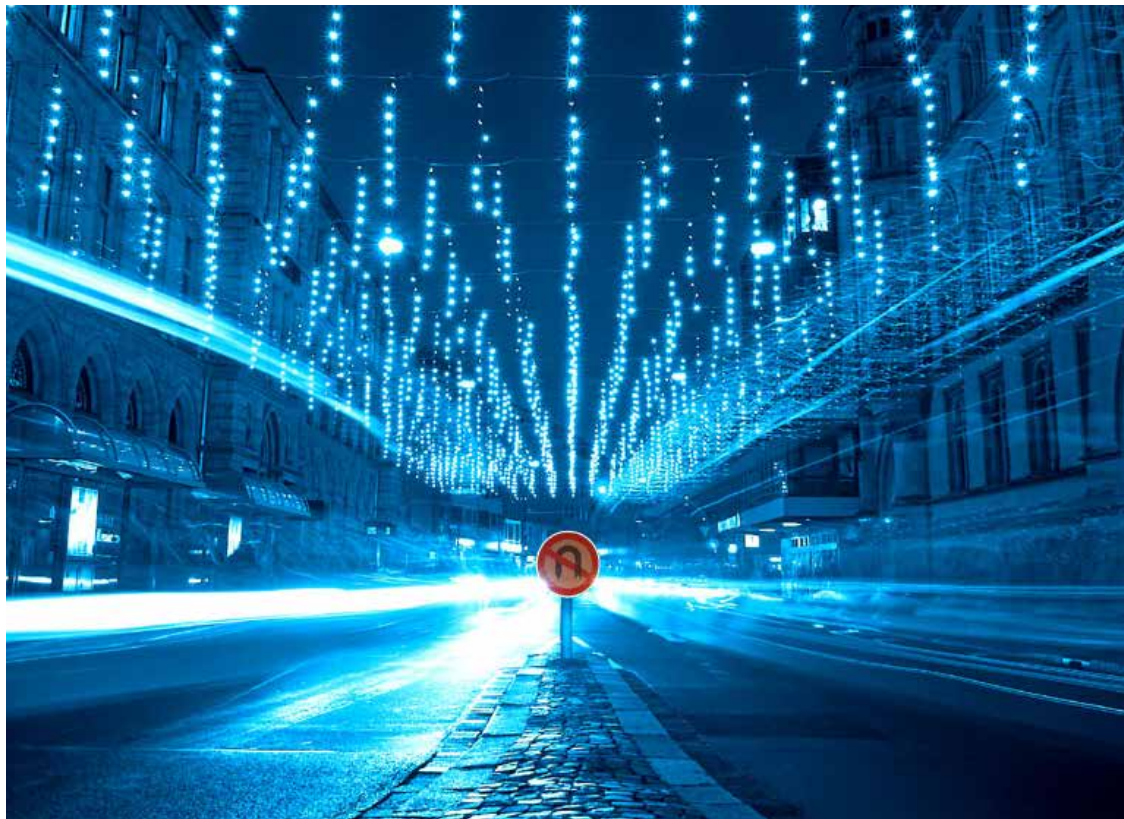


Challenges

Mobility and urbanization impact roads, transit systems, and IT deployments for all transportation infrastructures including traffic management, fleet management, integrated high-speed rail, subways, and airports. To ensure the flow of movement, investment and rehabilitation in nations' infrastructures are anticipated specifically for the power and transportation sectors.

With urbanization comes an increase in mobility and traffic, which in turn means a rise in the levels of harmful emissions to the environment. To proactively manage the anticipated growth and trends, adaptive integrated traffic management systems are essential to increase efficiency, ensure flow of movement, reduce congestion by relaying pertinent travel information, map alternative routes, regulate speed, and optimize emergency and incident management responses.

Realizing the imminent transportation and infrastructure challenges faced on a global scale with the projected growth rates in urbanization and mobility, as well the increase in cost of fuel and energy, a smart approach to transportation and technology infrastructure is becoming increasingly important for securing a sustainable future. Sustainability for our future is translated into economic growth that is strategically planned and that utilizes the available resources and infrastructure to actualize and advance the potential for social mobility, business, and commerce.



Transportation Offerings

The integration of transport management systems is becoming urgent with the increase in congestion and the relative diminishing of available road space for development and expansion. Overcoming the anticipated changes in transportation requires smart intelligent integrated solutions that are at their core adaptive and flexible.

The key drivers for an integrated vision towards smart transportation are efficiency, intelligence, safety, real-time monitoring, and protection of the environment.

With our utter dependency on transportation for all our needs, Giza Systems offers solutions to improve operational efficiencies, ensure security and safety, and work towards the integration of systems for national infrastructures.

Giza Systems' knowledge and proven track record in integrated solutions for SCADA, telecommunications, power generation and distribution, field solutions, and building automation systems enable it to deploy the most updated, state-of-the-art solutions to support complex transportation needs for critical reliability, operational efficiency, traffic monitoring and control, life safety, and property & facilities management.

Road Transport Solutions

Ground transport is crucial for our economy and our social way of life. Facing diverse challenges varying from shifts in demographic trends, demands for reduced pollution, and demands for increased flow of traffic call for advanced traffic management systems that provide road authorities and operators with the ability to manage, monitor and ensure the flow of movement, while providing travelers with real-time information for safety and convenience.

Our road transport impacts our mobility, our freight, our commerce, our logistics and our quality of life. By integrating traffic management with information solutions, traffic authorities, control centers, and road users are provided with adaptive flexible solutions that ensure the deployment of a solid traffic management system that allows for:

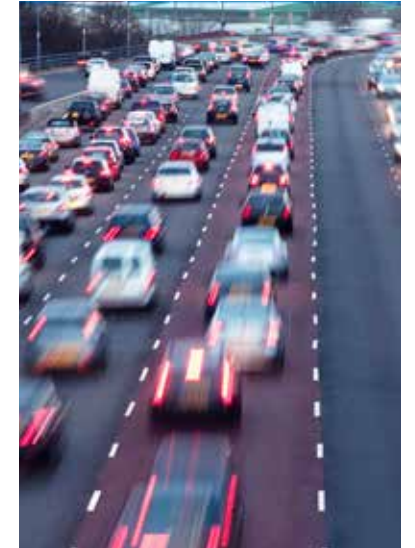
- Improvement of roads and infrastructures capacity
- Monitoring of entire road networks
- Control of traffic devices
- Strategic coordination of travel flow
- Enhancement of traffic safety
- Optimization of traffic routes
- Reduction in travel time
- Decrease in congestion
- Reduction in vehicle emissions negatively impacting environment
- Streamlining of energy efficiencies
- Improvement of mobility
- Reduction in incident and emergency response times
- Enhancement of road maintenance



Our Road Transport Offerings

Traffic Management consists of the various systems and applications used by road operators to guide and manage the flow of traffic. Traffic management is utilized to optimize road use and traffic safety.

ITS is a vital part of traffic management, as it allows road operators to quickly manage traffic without the risk of human errors, in many cases on the basis of automatic traffic monitoring. Important systems and tools for traffic management include traffic models that determine management strategies, systems for traffic signaling, systems for traffic notifications (VMS), and systems for emergency and incident response.



Toll Management assists authorities in variable road pricing to accommodate large urban areas or congestion charging in cities (City Tolling); common toll systems for freeways, roads and bridges (Single Lane Tolling); barrier-free toll systems that are implemented on motorways or as nationwide systems (Open Road Tolling).

Based on the desired outcome and environment, our advanced solutions are tailored to support the various charging schemes to account for environment, time, and distance. Giza Systems works with its clients to meet their requirements in terms of increasing toll capacity, throughput, and revenue.

Tunnel Management provides operators with extensive systems and applications to manage and secure tunnels and bridges for optimum traffic management, safety, and security. Tunnel Management Solutions include Traffic Control and Management Systems (variable signalization and traffic detection/counting), Video Surveillance and Automatic Incident Detection Systems, Emergency Telephone System, Public Announcement System, Fire Detection and Fire Alarm Systems, Rebroadcasting Systems for radio and cellular services, Data Communication Network, Ventilation Systems, Air Quality Control Systems, Lighting Systems, Electric Power Supply, Power Distribution, and Back-Up Power Systems.



Parking Management & Control Solutions organize and manage parking areas involving subsystems for parking guidance, off-street parking, and on-street parking, including access control, pay machines, barrier systems, etc.

City Surveillance Systems include overview and video-surveillance camera with built-in intelligence, which provides detailed context images for car park and traffic applications, storage. Applications encompass car park and access control, traffic monitoring, law enforcement, border control, and toll booths, etc. The system has the capacity to show live images at the same time as recording and can be easily integrated with other systems. All videos are digitally signed to prevent their possible manipulation.



Intelligent Transportation Systems

- **Variable Message Systems (VMS)** is an electronic traffic sign that provides motorists on highways with important information on routes, incidents, congestion, construction, speed limits, alternative routes, alerts, etc. VMS is essential for dynamic traffic management systems to assist in streamlining traffic flow and lessen road congestion by displaying real-time traffic information.
- **License Plate Recognition** consists in automatic number plate recognition solutions used to control traffic on motorways, roads, streets, etc. It offers high reliability for traffic surveillance, toll collection, traffic enforcement, and traffic management. As only one unit is necessary per monitored lane, the solution reduces installation costs by eliminating complex cabling, and can be combined with lighting, camera, processors, inputs and outputs into one single unit.
- **Traffic Data Collection** supports a wide range of applications in cities and motorways by employing traffic detectors such as video, inductive loop, radar, passive-infrared, etc. These solutions provide real-time traffic data and statistics, including speed, queue occupancy levels, traffic volume and density, average speed, and vehicle classification according to length.
- **Road Weather Stations** these stations measure real-time atmospheric and visibility factors. RWIS data are used by road operators to support drivers.
- **Weight in Motion (WIM)** is used as an enforcement system that consists in road sensors and a weighting system on roadways and highways for capturing information on various parameters of vehicles such as gross weight, axle loads, number of axles, as well as speed and vehicle classification.
- **Section Speed Control Systems (SCS)** provide accurate speed enforcement measurements by establishing the average speed of vehicles across entire road sections. The average speed enforcement measurement tool is suitable for urban and interurban road networks. The innovative Section Control System (SCS) uses sensor technology to monitor vehicles across an entire road section to establish average speed and detect any speeding violations. SCS utilizes radar technology closely synchronized with ANPR cameras placed at the start and end of the monitored road segment. The advantage of SCS is that speed can be enforced over an entire segment of road, which is significantly more effective than spot speed measurements.





Railways Solutions

The increasing shift towards railroads as means for transportation of passengers, freight and logistics is anticipated for its economic and environmental advantages due to a myriad of considerations such as costs of fuel, congestion, environmental concerns, vehicle maintenance and insurance costs, operational costs, etc.

The complexity of railroad networks calls for intricate SCADA, power, and telecommunication systems that provide efficiency of operations, control and monitoring, critical real-time information for operations, reliability and safety to the staff, passengers, and goods.

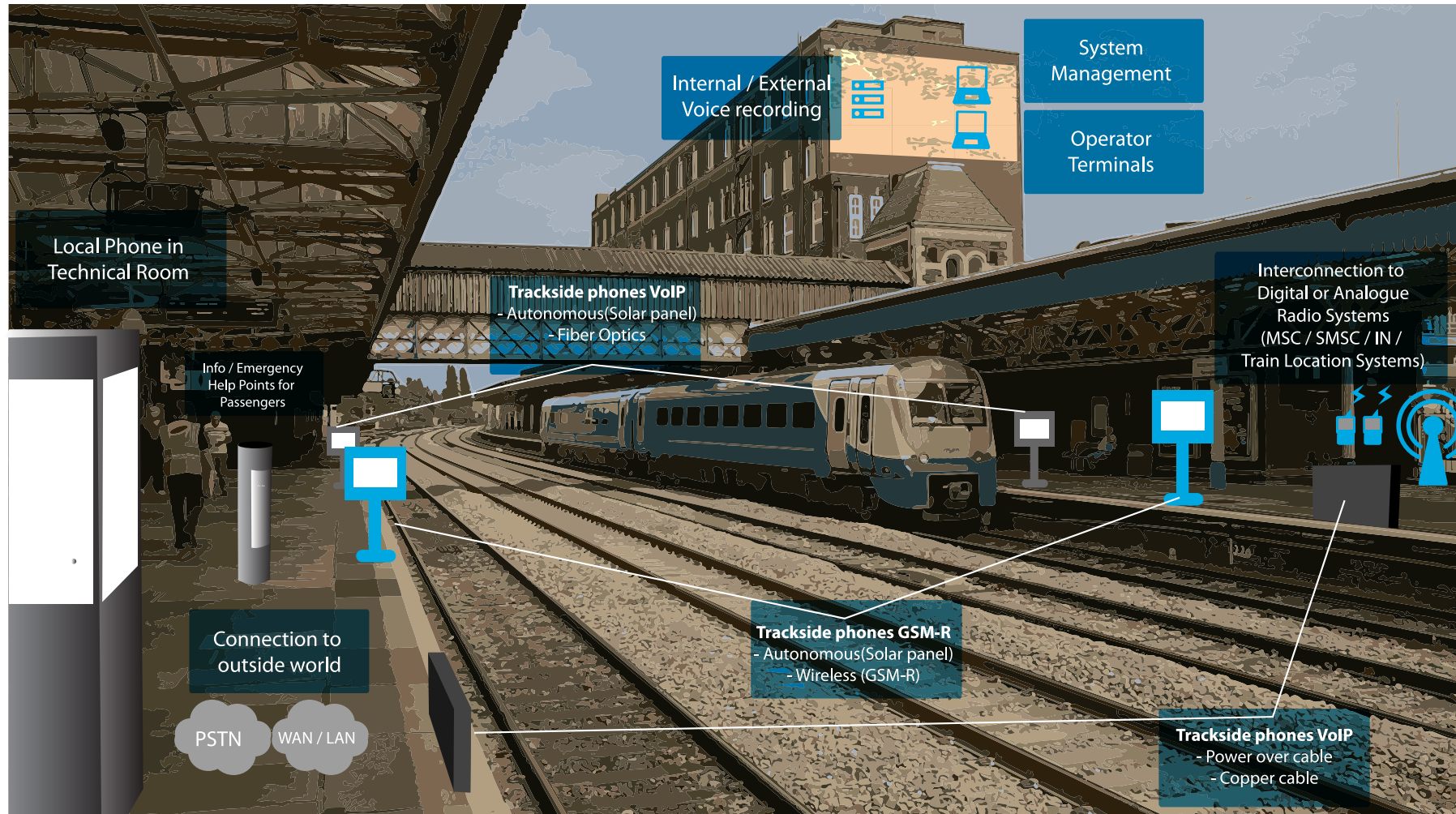
Giza Systems' expertise and track record in the various industries combine all the know-how and capabilities for technology-enabled solutions needed for the future and sustainability of railroads.

Sustainable solutions in all areas of rail transportation encompass operational and network efficiencies, as well as the enhancement and redefinition of passenger services. By leveraging technology-enabled solutions, this allows for:

- Expansion of available infrastructure
- Increased network capacity and productivity
- Increased reliability
- Real-time monitoring and control
- Improved safety measures
- Enhancement of operational excellence
- Improvement in passenger services
- Retaining of customers by meeting expectations and needs for smart services

Our Railways Offerings

Communication & Infrastructure including supply, design, engineering, installing, testing & commissioning, FAT & SAT, training, documentation, warranty & support, and establishing service of the Telecommunication Networks (SDH, LAN/WAN, Master Clock, Radio Integration).



SCADA provides the operational systems required for the monitoring and control of distributed equipment on a wide network of roads and railways. Our offerings include:

- SCADA Systems (Hardware & Software)
- Safety Systems
- Integration with other Systems
- Consultation, Operation and Maintenance Services

Low & Current Power Systems

- AFC (Ticket Vending Machines, Gates)
- CCTV Systems
- Access Control Systems
- Public Address Systems
- Passenger Information Systems (PIS/PIDS)
- Building Management Systems
- Fire Detection & Suppression Systems
- Lighting Systems
- Generators
- UPS
- Low Voltage Cables
- Lightning Systems
- Earthing Systems
- Solar Power Systems



Passenger Information System (PIS) is a multimedia and synthesized information system that disseminates information onto display terminals in station halls, railway platforms and coaches to keep passengers informed about the train schedule and other pertinent real-time information.

Passengers Fare Management automates the ticketing system for public transport networks, which is the basis for integrated ticketing including Vending Machines, Validators, Smartcard Printers, Retail Sales Equipment, Back Office Systems, and Central Clearing House.

Operational Voice Communication involves the supply, design, engineering, installation, commissioning, FAT & SAT, training, documentation, warranty & support for Metro & Railways Operational Voice Communication, Administration Voice Communication, Voice Recording and Emergency Call Systems for Metro and Railways.



Power Substations

- High Voltage Products
- Power Transformers
- Voltage Switchgears
- Protection & Control
- Ring Main Units
- Distribution Panels
- Installation, Commissioning, Testing

Telecom

- Data Transmission Systems
- Clock Systems
- Telephone Systems
- Radio Systems
- Fiber Optic Cabling

Related Solutions and Services

- **Overhead Power Conductors** supply and stringing of power conductors.
- **Fiber Optic Cables** to include laying, splicing, testing & commissioning
- **Electrical Installations and Wiring**
- **Low Voltage Works**
- **Trackside Equipment Installations**
- **Coaxial Radiating Cables** to include laying and fixing
- **Low Voltage Panels**
- **Solar Power** including design, engineering, supply, installation, testing and commissioning for the solar solutions on turnkey basis, including solar cells, inverters and batteries.



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