TATWEER

MILES OF SMART INVENTIONS

www.tatweermea.com

ACCELERATING THE FUTURE WITH NEW IDEAS

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TATWEER

Tatweer is one of the fastest-growing firms in the region that emerged from the core of Transportation, Traffic and Road Engineering Industries to offer a unique blend between Professional Engineering Services and Innovative Smart Technologies. We are geared to provide turnkey solutions that bring innovation to all our offered services and products.

We draw our strength from investing in the right expertise, which leads to the formation of highly qualified and diverse teams of professionals who deliver comprehensive and tailored services to all our clients.

Tatweer has a strong reputation as a leader of innovation among key clients across the market sectors, which enables us to take on challenges where we excel in developing advanced, sustainable solutions to current market requirements while meeting future needs and ambitions.

Vision

Leading in the provision of responsive, cost-effective and innovative professional services and solutions.

Mission

Providing a highly experienced mix of diverse professionals and innovative technology to deliver sustainable, cutting-edge solutions to all our clients.

STRATEGIC OBJECTIVES

An important part of planning our business processes is determining our clear strategic objectives translated into actionable goals leading to consistent development. Our strategic plan articulates a methodology to achieve our Mission and Vision.

We Advocate:

INNOVATION
Encourage innovation that leads to value-creation.

SUSTAINABLE GROWTH
Continue sustainable growth through unique value creation strategy.

EQUALITY RECOGNITION
Encourage equal opportunity across the organization where talents are recognized and valued.

QUALITY
Foster a quality culture in every work that we deliver.

CUSTOMER SATISFACTION
Ensure preferences and consistency to delight customers.

EXECUTIVE MESSAGES

Eng. Hussain Ahmed Ali Al-Harthi
Chairman of Board of Directors

CHAIRMAN'S MESSAGE

Tatweer is a fast-growing community which aims to be a leading specialized provider of engineering, cutting-edge smart solutions, and professional services. Tatweer has moved through monumental stages from its inception with tremendous growth which comes from consistent investment in the right human capital and sustainable solutions for safer and smarter cities, relevant technologies and futuristic innovations.

Our strengths are anchored within our ability to continuously focus on exceeding the limits to put forward unparalleled quality services, leading to consistent efforts to study and integrate the latest technologies, systems and policies in all services that Tatweer offers.

As a part of our philosophy, Tatweer continues to build fruitful partnerships with leading global market players and establish credibility in its brand to meet the organization's vision and achieve its strategic objectives.

I thank our teams and our strategic partners who are the instrumental building blocks in Tatweer's success. Today Tatweer is proud of its past, passionate about its future and looks forward to continuing the success towards sustainable growth.

Atef M. Garib, PhD
Chief Executive Officer

CEO'S MESSAGE

I feel very privileged to be writing this message as Tatweer's Chief Executive Officer. Since our establishment, Tatweer's mission was to provide turnkey solutions that bring innovation into all our service sectors. Our distinctive viewpoint comes from our expertise which combines the very best international insights with the in-depth local knowledge, enabling us to leave a tremendous positive impact with every project we execute.

We are driven towards the future, and we are also conscious of the responsibility we have today, towards our staff, our environment, our community, and our home base, the UAE. We are always mindful of our objectives which ultimately motivates us to focus on our strengths to create sustainable value for our clients.

Since our inception, we have been working tirelessly on being a wellspring of innovative leadership and technological solutions. I am proud of what Tatweer stands for and for being part of this incredible team, and pledge to continue to track the values that made us into what we are today.

SERVICES

We strive to deliver excellence. To ensure the highest quality of the work we deliver, we possess a perfect combination of domain knowledge and hands-on experiences. Our team is empowered with unmatched market knowledge enabling them to understand clients' objectives and specific requirements both from the strategic and technical perspectives, to offer the best and most efficient sustainable, innovative solutions possible.

Our key service domains are Professional Engineering Services, Innovation & Communication Technology, and Smart System Solutions.

Big Data and AI

Professional Engineering Services

Innovation & Communication Technology

Smart System Solutions

Professional Engineering Services	Smart System Solutions	Innovation & Communication Technology
Program / Project Management	Smart & Safe City Solutions	Systems Development & Integration
Master Planning / Urban Design	Smart Security Solutions	IoT Platform
Transportation Planning & Traffic Engineering	Smart Energy Solutions	Big Data & Predictive Analytics
Public Realm / Landscape	Intelligent Transportation Solutions	Artificial Intelligence Applications
Addressing & Wayfinding	Smart Mobility Solutions	Video Mapping & Remote Sensing
Infrastructure Design	Smart Vehicle Solutions	ADAS & Vehicle Embedded Solutions
Construction Supervision	Law Enforcement Solutions	GIS Data Modeling & Visualization
Highway Facility Management	Professional Training Services	Professional Training Services
Professional Training Services		

PROFESSIONAL ENGINEERING SERVICES

PROGRAM / PROJECT MANAGEMENT

- Comprehensive Project Management
- Project Management Services for Integrated Projects combining Engineering and Facility Services
- Program Management of Multiple Project Consultants/Contractors
- Developing of Program Management to include Systems and Dashboards
- KPIs Formulation and Independent Performance Monitoring on Projects
- Strategic Planning, Budgeting, and Projects Roll-out/Pipelining
- Risk Management, Quality Management, and Project Audits

MASTER PLANNING / URBAN DESIGN

- Urban Design and Master Planning
- Site Development
- Planning Policy and Land Use
- Sustainability
- Strategic Urban Regeneration
- Urban Data Surveys and Analysis
- Urban Trends Analytics
- Economic and Social Development
- Urban Landscape Architecture Design

ADDRESSING & WAYFINDING

- Addressing System Design
- Addressing Standards, Rules & Regulations
- Development of Addressing Operation & Maintenance
- Development of Addressing GIS Database
- Providing Project Management /Construction Services for Addressing System Integration
- Managing Addressing System Integration within our Government Services

TRANSPORTATION PLANNING & TRAFFIC ENGINEERING

- Transportation Master Planning
- Transportation Studies
- Intelligent Transportation Systems and Toll Highways
- Traffic Surveys/Data Collection
- Traffic Modeling/Simulations
- Traffic Impact Studies
- Traffic Signal Warrants
- Traffic Signal Design, Optimization and Management
- Parking Studies
- Parking Management Plans
- Access and Circulation Plans
- Real-time Traffic Conditions Assessment

- Interchange Justification Reports
- Roadway Capacity Analysis
- Traffic Safety/Crash Analysis
- Pedestrian and Cycling Studies
- Traffic Control Plans
- Traffic Calming
- Congestion Management
- Traffic Management
- Freeway Operations
- Access Management
- Work Zone Management Studies
- Traffic Safety Studies
- Road Safety Audits for Stages 3, 4

INFRASTRUCTURE DESIGN

- ROAD/HIGHWAY DESIGN

- Highways and Roads Geometric Design
- Geometric Design of Interchanges and all types of At-grade Intersections
- Design of Profiles for all Roadway Elements and Grading of Intersections
- Pavement Design & Pavement Condition Assessment
- Development of Traffic Control Devices Design
- Design Review Services
- Design Support Services during Construction
- Traffic Management Plan (Detour Plan)
- Design for Maintenance and Rehabilitation of Existing Roads including Condition Surveys, Investigations, Assessment, and Remedial Actions Straggles
- Value Engineering Services
- Road Safety Audits During Design Stages (RSA Stages 0, 1 and 2)

- STRUCTURAL DESIGN

- Highway's Structures Design - Overpasses, Underpasses, Flyovers, Free Interchanges, Culverts, Tunnels
- Tunneling Design through Mountains/Rock
- Retaining Walls, MSW and Soil Improvement Design
- Design for the Structural Upgrade of Existing Bridges
- Large Drainage Facilities Structure Design
- Underground Tanks Design
- Slope Stability Structural Design
- Shallow, Raft and Deep Foundations Design
- Providing Design Technical Support for Work During Construction

- WET UTILITIES DESIGN

- Preparation of the Demand Calculations, Identifying Connection Points, Planning, Modeling and Design of the following Wet Utilities Networks
- Drainage Studies and Hydraulic Modeling
- Stormwater Networks
- Sub-Surface Drainage Networks
- Sewerage Collection Networks
- Potable Water Transmission Lines
- Potable Water Transmission Networks
- Fire Fighting Networks
- Recycled Water and Irrigation Networks – Primary, Secondary & Tertiary
- Reservoirs, Lift Stations, Wet Wells and Pump Stations

- DRY UTILITIES DESIGN

- Power Distribution Network
- Power Transmission Network
- Street Lighting Network
- Tunnels and Bridges Lighting
- Telecommunication Network Design
- Fire Detection & Alarm Systems
- CCTV & Security Systems
- Monitoring, Control, and Security Systems

CONSTRUCTION SUPERVISION

- Project Preparation and Planning
- Field Surveys and Investigations
- Construction Materials/Resources Management
- Quality, Environmental and Safety Management
- Construction Risk Management/Inspection
- Interface Coordination
- Program and Budget Control
- Contract Administration and Claims Management
- Pre-opening and Post-opening Road Safety Audits (Stages 3 and 4)

PUBLIC REALM / LANDSCAPE

- Site Analysis including Existing Elements, Soil Conditions and Surrounding Land Use
- Creating Landscape Master Plans and Site Context Key Plan
- Landscape Design for Attractive Public Realms, Waterfront, Open Space, Community Parks, Commercial and Residential Communities
- Creating Detailed Landscape Layouts and Schedules including Softscape and Hardscape along with Scaled Sections and Elevations
- Access and Circulation Strategies for Pedestrians and Cyclists by introducing Multimodal Transportation Methods
- Landscaping Improvement for Existing Schemes
- 3D Landscape Modeling

HIGHWAY FACILITY MANAGEMENT

- Roadway Assets Management
- Operations & Maintenance Strategies
- Intelligent Traffic Safety Management
- Roadway Emergencies & Crises Management
- Real-Time Traffic Simulations & Analysis
- Road Operation Cost/Investment Planning & Management
- Network Security/Enforcement
- Predictive Analysis/Network Planning
- Roadway Network Sustainability Management

INNOVATION & COMMUNICATION TECHNOLOGY

SYSTEM DEVELOPMENT & INTEGRATION

- Business Process Analysis & Reengineering
- Design Enterprise Solution Architecture
- Systems Integration Services
- Building UI, UX and Front-end Services
- Achieving an Elusive Enterprise Digital Transformation
- Real-time Reports & Live Data Visualization
- Developing a Customizable & Interactive Dashboard
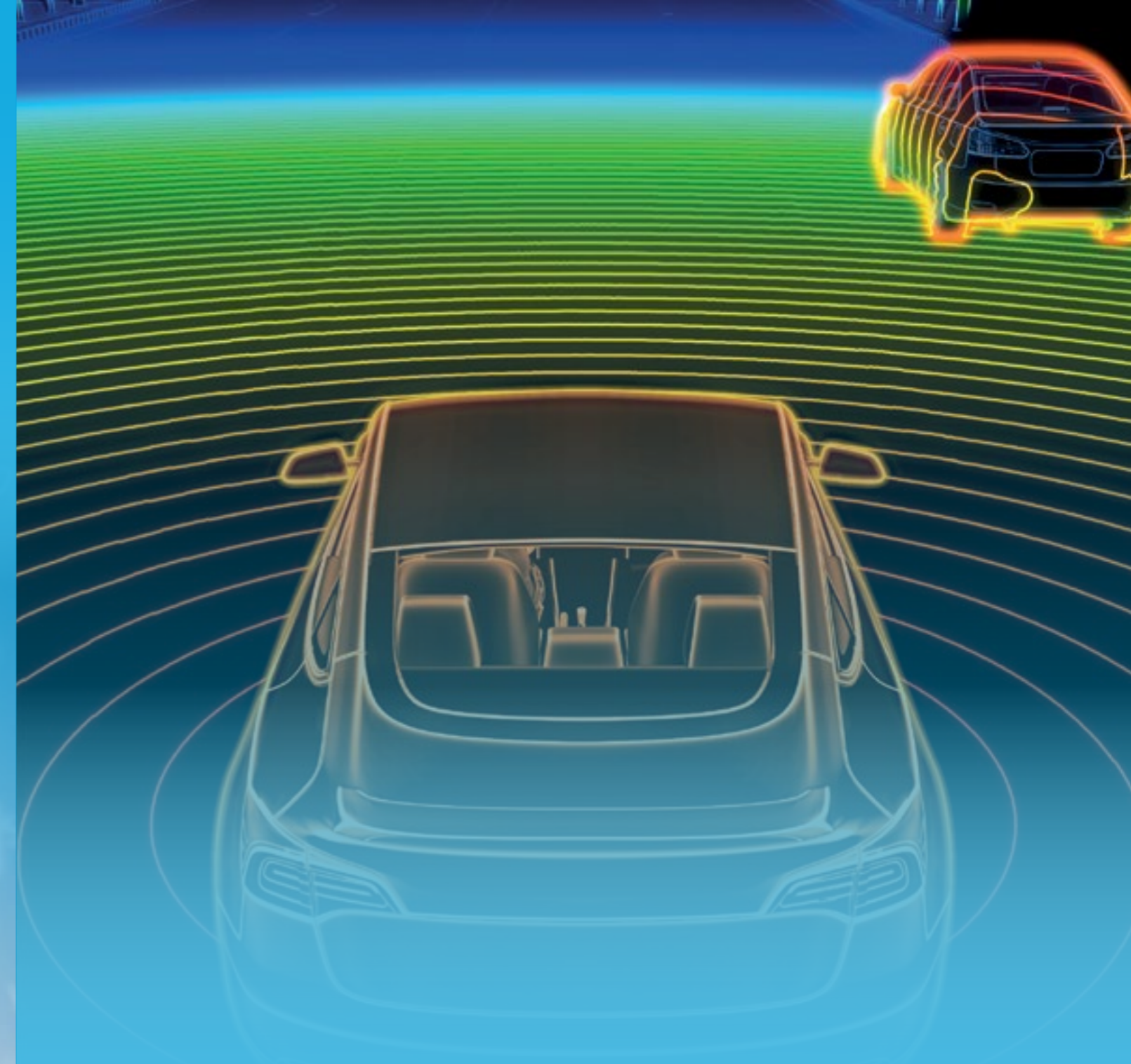- Following Agile & Scrum Methodology within SDLC

IoT PLATFORM

- **Providing a Turnkey Solution for different domains:**
  - Transportation & Parking
  - Roads Traffic Business
  - Utilities (Smart Water, Electricity)

- **Comprehensive Smart City Applications:**
  - Smart Metering
  - Street Light Management
  - Smart Parking
  - Smart Buildings
  - Environmental Monitoring (Noise, Weather, Pollution, Containers Level)

BIG DATA ANALYTICS & PREDICTIONS

- Experience with Distributed Processing Solutions
- Designing a Big Data Architecture
- Dealing with different Data Formats & Volumes
- Provide Reliable, Scalable & Maintainable Platform
- Enabling Greater Responsiveness to the Line of Business (LOB)
- Moving from Historical Reporting to Predictive and Prescriptive Analytics

ARTIFICIAL INTELLIGENCE APPLICATIONS

- Reduce Manual Processes using AI Applications
- Provide Physical Security Solutions
- Applying Video Analytics and Image Processing Applications
- Computer Vision Algorithms for Enforcement Solutions
- Identify Abnormal Behavior to Detect Security Issues
- Finding Patterns in Historical Data to Predict Issues (Predictive Analytics)

VIDEO MAPPING / REMOTE SENSING SERVICES

- Scanning Objects 360 Degree for Inspection and Analysis
- Remote Sensing using LiDAR Technology
- Data Calibration with Cameras & Sensors
- Geo-reference DB for the Collected Data
- More Efficient Automated Solutions
- More Accurate Data Collection & Analytics
- Reduce Operational Cost and Increase Efficiency

ADAS & VEHICLE EMBEDDED SOLUTIONS

- Enhance Driver's Performance and Experience
- Build Consumer Trust in Advanced Driver Assistance Systems
- Make Journeys Safer for Drivers, Pedestrian and Road Assets
- Enable All Levels of Automated Driving and Enhance Road Safety
- Capture Vehicle Telematics & Dashboard Data in Real-time to Support Different Safety and Enforcement Applications

GIS DATA MODELING & VISUALIZATION

- Development of GIS Applications (Desktop, Web & Mobile)
- Enterprise GIS Architecture Design
- Geo-processing, Data Analysis & Reporting, Cartographic Design
- Data Extraction, Transformation, Loading (ETL) and Migration
- Spatial Data Integration of Complex Datasets into a Powerful Decision-making GIS System
- Integration Big Data Analytics with GIS
- Enable LiDAR Mapping Solutions for different applications
- Providing 3D Visualization Services Working with different Technology Stack (ESRI & Open Source)

SMART SYSTEM SOLUTIONS

SMART MOBILITY SOLUTIONS

- Real-time Passenger Information (RTPI) Systems
- Parking Management and Guidance Systems
- Automated Fare & Toll Collection Systems
- Traffic Signals and Urban Traffic Control (UTC) Systems
- Incident Management Systems (IMS)
- Weigh-in-Motion Systems (WIM)
- Overweight Vehicle Detection Systems (OHVD)
- Freeway Management Systems (FMS)
- Tunnel Management Systems (TMS)
- Road Weather Information Systems (RWIS)
- Variable Message Signs (VMS)
- Traffic Management Platform
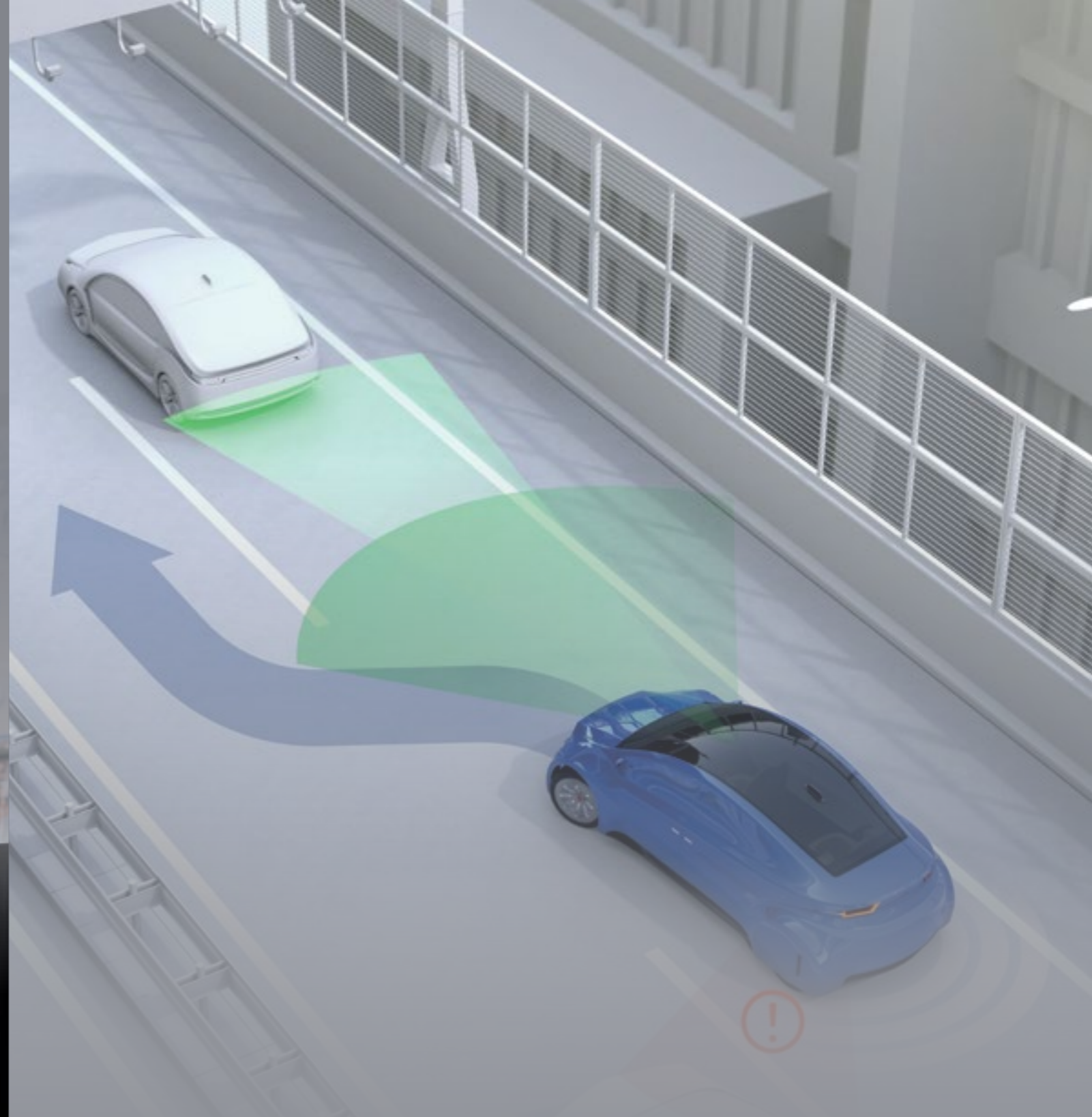
SMART SECURITY SOLUTIONS

- Face Recognition Systems
- Under Vehicle Detection Systems (UVDS)
- Closed-Circuit Television (CCTV) Systems
- Automatic Number Plate Recognition (ANPR)
- Access Control Systems (ACS)

SMART ENERGY SOLUTIONS

- Smart LED Lighting Systems
- Smart Solar Grid
- EV Charging Systems
- Building Energy Management Systems (BEMS)

SMART & SAFE CITY SOLUTIONS

- Emergency Command & Control Center
- Road Safety & Security Monitoring Features
- Traffic & Road Incidents Management System
- Red Light Violations & Speed Detection
- Weather Monitoring and Traffic Congestion Detection
- Standards Operational Procedures
- Vehicle Classification & Traffic Counting
- Patrol Car Allocation & Dangerous Drivers Triggering
- IP Video Surveillance and Video Analytics
- Dispatching Features & Response Time Monitoring
- Dynamic Messages Signage
- Automated Public Awareness Features
- Efficient Decision-making Dashboard, KPIs & Reports

SMART VEHICLE SOLUTIONS

- Fleet Management Systems (FMS)
- Vehicle Identification & Tracking
- Smart Driving Test Systems (SDTS)
- Smart Vehicle Impounds Systems (SVIS)
- Intelligent Patrol Vehicle System (IPVS)
- Connected & Autonomous Vehicle

LAW ENFORCEMENT SOLUTIONS

- Fixed Speed Systems
- In-Vehicle Enforcement Systems
- Mobile Radar Systems
- Red Light Violation Systems
- Pedestrian Crossing Violation Systems
- Tailgating and P2P Systems
- Seatbelt & Distracted Drivers Systems
- Enforcement Management Platform

INTELLIGENT TRANSPORTATION SOLUTIONS

- AI-based Advanced Traffic Management System Platform
- Urban Traffic Control (UTC) Systems
- Incident Management Systems (IMS)
- Weigh-in-Motion Systems (WIM)
- Over Height Vehicle Detection Systems (OHVD)
- Tunnel Management Systems (TMS)
- Road Weather Information Systems (RWIS)
- Road Security Systems
- Variable Message Signs (VMS)
- Traffic Management Platform

TRAINING

As part of our vision and commitments to our clients, we recognize elevating the market's enterprises operational performance and efficiency as one of our mandates. We believe that this can be accomplished by transferring the knowledge of our operations and professional staff to our clients by offering tailored, high-quality and cost-effective training programs designed to promote the latest state of the art innovative solutions and technologies to advance and elevate the individual and the organization's productivity and efficiency.

Tatweer designed and is offering comprehensive and advanced training programs structured to enforce our mission and to bridge the technological and smart solutions' gaps within the various market sectors which we operate within. Tatweer provides a unique mix of **In-house Training** and **Public Training**. Through our training programs, we provide specialized tailored courses for corporate clients and individuals aiming to advance their knowledge and operational performance to the new technological edge.

Tatweer training programs are affiliated, approved and accredited by one of the top highly recognized universities in the United States. In addition, Tatweer provides training programs structured and accredited by one of the top global Roadway Federations. Our training programs offer specialized courses in a variety of fields including, but not limited to, Intelligent Transportation Systems, Data Analytics, Artificial Intelligence Machine Learning, and many others.