



TIG/m, Inc. Company Overview

TIG/m, Inc. is a California limited liability company formed in 2005 for the **sole purpose of designing and building leading-edge, zero-emission, and carbon-neutral public transportation systems.**

Since that time, we have designed dozens of systems and have built projects in 5 countries around the world. Our groundbreaking research has led to several “world’s first” milestones:

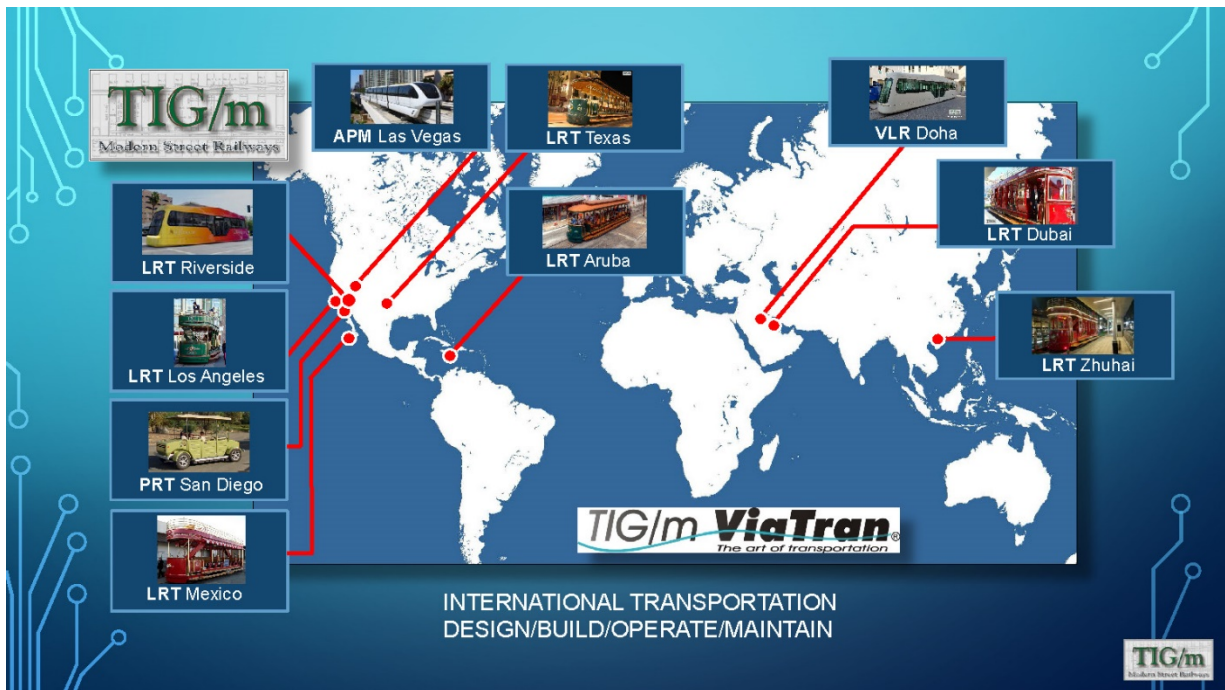
- First solar-powered wireless streetcar system (US, 2011)
- First use of a hydrogen fuel cell in a passenger rail vehicle (Aruba, 2013)
- Installation of the first hydrogen fueling station in the Emirate of Dubai (UAE, 2014)
- First fully self-powered streetcar (tram) capable of 20 hours of passenger service without recharging. (Qatar, 2016)
- First public operation of a hydrogen/electric passenger rail vehicle in North America (US, 2021)

TIG/m, Inc. manufactures **self-powered electric vehicle systems** (trams, trolleys, people-movers) which require no overhead wire or continuous wayside power systems of any kind. Our vehicles can be configured with range-extending power generators which allow them to operate for up to 20 hrs. per day without stopping to recharge the battery systems. Heritage-style and Modern type vehicles are available. Our newest models, being manufactured for the countries of Qatar, Aruba, Mexico, China, and the United Arab Emirates, are zero-emission ultra-green streetcars which utilize hydrogen fuel-cells to charge the batteries while they are in passenger service. Our rail vehicles run on standard gauge track (1,435 mm) and they are custom designed, and hand crafted to the highest standards of excellence while at the same time adhering to all international standards for LRT vehicles.

Because our vehicles are self-powered, construction of the track and infrastructure is substantially simplified and, by elimination of overhead wire systems, most projects will see a reduction in capital cost of infrastructure construction of up to 50%.

We offer full service in each of the following scopes of work:

- Demand Analysis (feasibility studies)
- Alignment design
- Civil and track engineering
- Operations and maintenance planning
- Maintenance facility design
- Streetcar design and fabrication
- Track and special-work construction
- Depot fit-out
- System commissioning
- Operations & Maintenance



TIG/m is a full-service street railway designer, vehicle manufacturer, and infrastructure builder. Our offices and factory at 9160 Jordan Ave, Chatsworth, CA, USA include Departments of Civil, Track, Structural, and Electrical and Mechanical Engineering, as well as state-of-the-art Fabrication Departments for the following disciplines:

- metalworking (machining, forming, welding)
- plastics (machining, forming, joining)
- composites (engineering, forming, lay-up)
- electronics (engineering, fabrication)
- hydraulics and pneumatics
- woodworking
- assembly
- finishing (painting, glazing)

A separate facility in Valle Crucis, North Carolina, USA provides the following discipline:

- Ferrous and non-ferrous metal working, forming, and casting foundry

TIG/m provides on-site services which include:

- Construction Administration
- QCR (Quality Control Review)
- Construction and installation of track, special-work, signalization equipment, maintenance facility infrastructure, and operations equipment.
- Delivery, test and adjust, and Commissioning of rolling-stock.
- Operations & Maintenance.

Please refer to Appendix A for a referenced GCC Project.



TIG/m Assembly Hall #2, July 11, 2019

Heritage Trolleys



Modern Trams



TIG/m Bogie Shop

Systems Testing on the TIG/m, Inc. Test track



APPENDIX A

Company Name	TIG/m, Inc.	
Project Name	<u>Mshiereb Downtown Doha Tramway System</u>	
Client Information	Name	Msheireb Properties
	Number of Employees	N/A
	Country	Qatar
	Sector (Public/Private)	Public/Private
Client Contact	Name	James Henry Vineau
	Phone Number	+ 974 7706 2828
	Email	jvineau@msheireb.com
Project Description	Situation	Downtown Development
	Approach	Feasibility/Demand Analysis Design/Build/Operate/Maintain
	Results	Delivery of operational Tramway System Client satisfaction
Project Volume	Budget	113,000,000 QAR
	Person-days	Total Company/ 8 years
Project Duration	Phase 1 Dates	2009 - 2010
	Phase 2 Dates	2014 - 2023

