

A long-exposure photograph of Dubai's cityscape at night, showing light trails from cars and a train on an elevated track. The Burj Khalifa is visible in the background.

# Dubai Self-driving Transport Strategy *Vision & World Challenge*

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# Dubai – A Rapidly Growing City

## 1970



- Developed Area = 18 km<sup>2</sup>
- Population = 100,000

## 2016



- Developed Area = 950 km<sup>2</sup>
- Population = 2.8 Million

## 2030



- Expected developed area = 1900 km<sup>2</sup>
- Forecasted population = 5.2 Million

Dubai Area = 4114 km<sup>2</sup>

Dubai is 5% of UAE total area

Dubai population = 2.8 M | 16 Million visitors in 2016

Dubai has 30% of UAE total population

# Who are we? What transportation Modes we have?



# A Vision for the Future of Transport



Reduce transportation costs by 44 percent or AED 900 million, saving AED 1.5 billion through reduction of environmental pollution, and AED 18 billion through raising efficiency of the transport sector by 20 percent.









By 2030, **25 percent of all transportation TRIPS in Dubai will be smart and driverless.** The strategy is projected to generate economic revenues and savings of up to AED 22 billion a year.

- His Highness Sheikh Mohammad Bin Rashid Al Maktoum, Vice President and Prime Minister of the UAE and Ruler of Dubai



...and it defines 2030 targets for self-driving technology adoption for each of the public transports modes

## SDT Targets per Mode (as a % of total trips)

	2017	2030
 Metro	9%	12.2%
 Tram	0%	0.2%
 Shuttle & Cable Cars	0%	2.5%
 Marine Transport	0%	0.2%
 Taxi / Rideshare	0%	3.5%
 BRT, Rider & Runner	0%	6.4%
<b>Total Self-Driving PT</b>		<b>25%</b>

## 1. Legislation

- Testing AND Operations

## 2. Driver Behavior & Acceptance

- Driver behavior in Level 2-3 vehicles
- Driver acceptance of SDT

## 3. Driver & Vehicle Licensing/Registration

- SDT driver licensing
- SD vehicle testing, registration, renewal

## 4. Insurance/Liability

- Crash liability of self-driving vehicles
- Insurance requirements

## 5. Infrastructure Requirements

- Infrastructure improvements for SDT
- Crowd sourcing and analytics

## 6. Cyber security/Data Privacy

- Self-driving vehicle security
- On-board data recording and retrieval

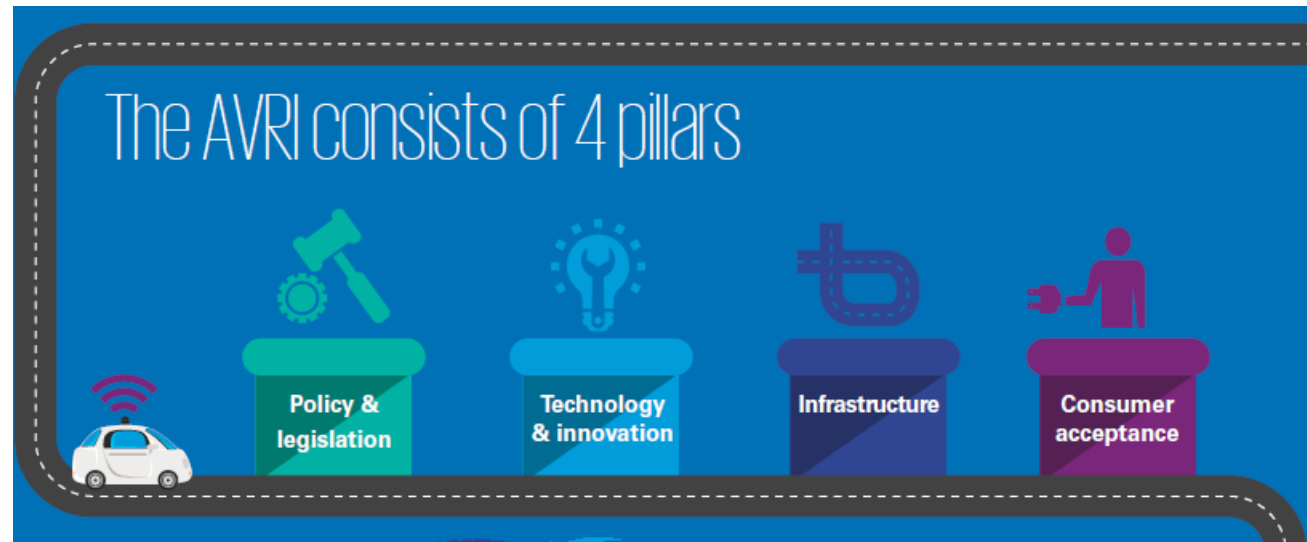
## 7. Connected Vehicle Enablers

- Communication (V2I, V2V, V2X)
- Connected cloud

## 8. HD Mapping

- Accurate HD Mapping

So where UAE stands at the moment among the world..



#UAE has ranked among the top 10 countries in the world according to @KPMG's Autonomous Vehicle Readiness Index for 2018, which shows which countries are most prepared for driverless cars.

## United Arab Emirates



The RTA Self-Driving Transport (SDT) strategy aims to make Dubai the leader in the world for SDT...

## Unique SDT – Areas of Focus

### Multimodal SDT



- Dubai is targeting self-driving transport across all 7 modes of public transport
- This will enable a harmony of SD systems across transport modes

### Worldwide SDT Challenge



- Competition will attract manufacturers, operators, researchers and academics
- Dubai will be exposed to new strengths and capabilities

### SDT Operations Policies/Legislation



- There exists a clear and significant gap in policies and legislation related to the revenue based operation of self-driving vehicles
- Dubai should lead the world in developing these policies and legislation to allow full operation of self-driving vehicles on the public streets in Dubai



# *Dubai World Challenge for Self-Driving Transport*

[www.sdchallenge.com](http://www.sdchallenge.com)

تحدي دبي العالمي  
للتنقل ذاتي القيادة  
DUBAI WORLD CHALLENGE  
FOR SELF-DRIVING TRANSPORT

2018 | 2019

## First/Last Mile Connection Applications

Connecting origins / destinations to public transport



Transporting People around Certain Locations/ development



Connecting Off-site parking to Venue Entrance



## Participant Categories

Leaders



Startups



Academia



## Challenge Focus Areas

Endurance and Reliability



Ability to Drive in Simulated Traffic Conditions



Energy Efficiency and Environmental Suitability



Safety and Cybersecurity



Consumer Experience





## Leaders

- **US\$ 1 Million** / Three finalists \$1M each for different streams /
- **Pilot operation for the 1<sup>st</sup> place** --Exclusive



## Startups

- **US\$ 1 M** for the 1<sup>st</sup> place and **Golden Ticket Dubai Future Accelerator**
- **US\$ 500,000** for the runner-up

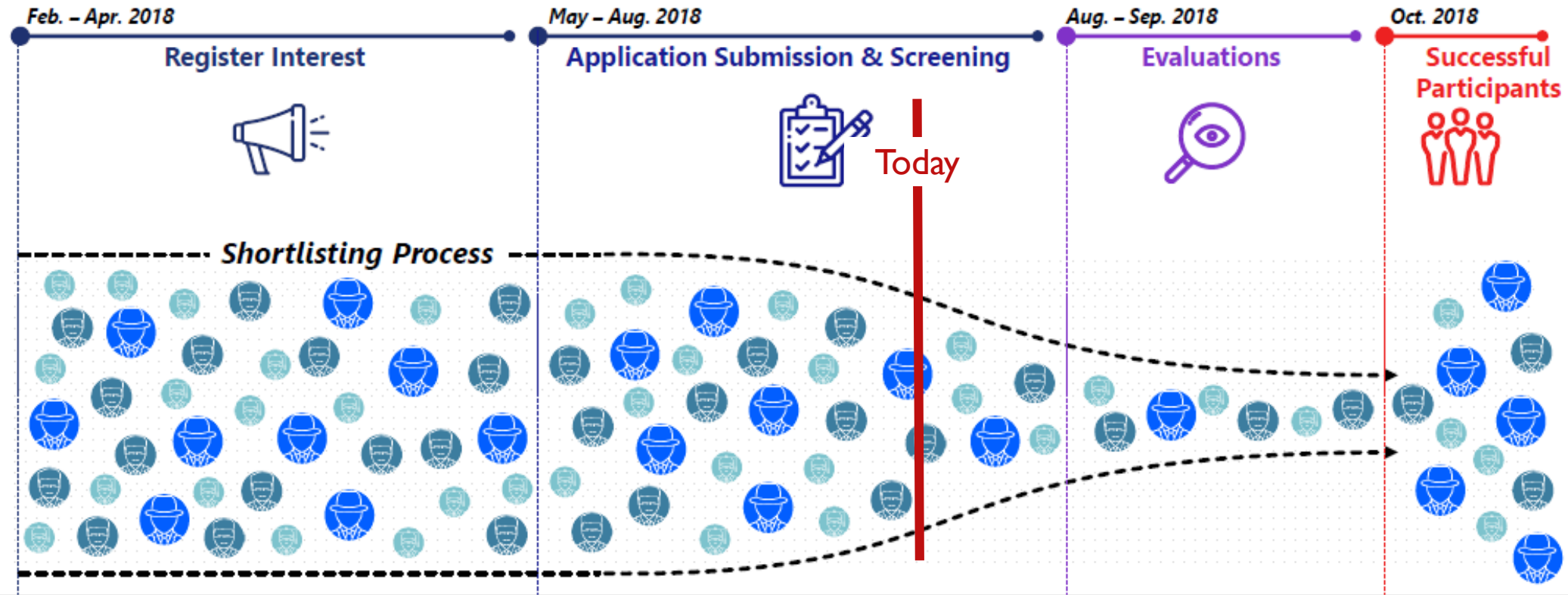


## Academia

- **Local:** 1<sup>st</sup> Place **US\$ 200,000** and runner-up **US\$ 100,000**
- **International:** 1<sup>st</sup> Place **US\$ 200,000** and runner-up **US\$ 100,000**

# Dubai Challenge Timeline for Application

## Phase I



**Awards at “Dubai World Congress for Self-driving Transport”**

# Site for First/Last Mile Connection



**Exclusive Route**  
**Loop Length: 1.65km**  
**Total Length: 3.36km**



**Repair Workshop**



# Dubai SDT..The Future

Self-driving Transport is a reality in Dubai....More to come in the Future



دبي هي الوجهة الأمثل  
لمستقبل النقل

## Dubai is the Ideal Platform for Transportation Innovations

Check these links:

[www.sdchallenge.com](http://www.sdchallenge.com)

[www.sdcongress.com](http://www.sdcongress.com)



THANK YOU

Email: [Ismail.Zohdy@rta.ae](mailto:Ismail.Zohdy@rta.ae)