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Dubai Sustainable Mobility Initiative

i-Move, The Business Model for Tomorrow

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Content:

- Background about Dubai, RTA
- Initiatives
- Technology Implementations

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Dubai, RTA background

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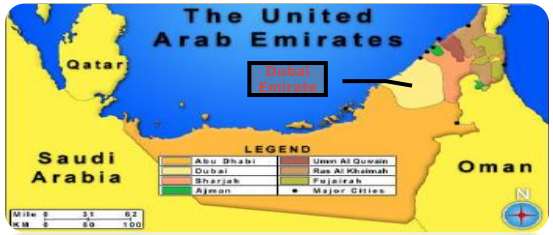
Background and about Dubai

1

- The **second** largest emirate out of seven emirates in area in the United Arab Emirates.
- Dubai is **one** of the fastest growing cities in the region.
- Dubai Emirate has a population of **2** million, and a total area of **4114** sq. Km, with **3.4**% GDP Growth



Background

Background and about Dubai

Background

- The quality of roads in UAE is ranked **2nd** from the cities around the world and **8th** in quality of overall infrastructure (World Economic Forum report, 2012).
- The Government of Dubai has invested more than AED **75** billion in transport infrastructure to become a role model for the MENA region (since 2006 through RTA).
- City Mayors International has awarded Dubai the **35th** rank worldwide considering the quality and integrity of its infrastructure.

Roads & Transport Authority, Dubai UAE

Background

The Roads & Transport Authority was established in November 2005 by the Government of Dubai.

RTA's Vision

"Safe and smooth transport for all"

RTA's Mission

"Develop integrated and sustainable transportation systems and provide distinguished services to all stakeholders to support Dubai's comprehensive growth plans through preparing policies and legislations, adapting technologies and innovative approaches, and implementing world class practices and standards".

RTA Strategic Plan 2015

Background

Dubai Strategic Plan 2015

- RTA Corporate Plan
- Roads and Transport Strategic Plan

- ITS Plan
- Traffic Safety Plan
- Policies and Legislation
- 5 YEAR Plans
- Project Portfolio Management System

- Cycling Routes Plan
- Bus Master Plan
- Road Network Plan
- Metro Station Context Plan
- Freight Movement Plan
- Rail Master Plan
- Taxi Master Plan
- Marine Transport Master Plan
- Traffic Safety Plan
- ITS Master Plan

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RTA Strategic Goals

Background

1 Integrated Dubai

- Integrate transport planning with economic and urban planning
- Improve coordination with strategic partners
- Improve legal framework for roads and public transport sector

2 Dubai for People

- Make roads and public transport more people-friendly
- Preserve Dubai heritage

3 Customer First

- Improve customer service and interface
- Listen to customers

4 From Cars to Public Transport

- Shift demand to public transport
- Provide effective and convenient road access to all Dubai
- Manage congestion
- Increase Bus/Metro Ridership

5 Safety and Environmental Sustainability

- Reduce number of accidents and fatalities
- Minimize adverse environmental impact of public and private transport
- Effective measures for employee health & safety sustainability

6 Financial Sustainability

- Increase revenues
- Increase private sector participation
- Efficiently deploy financial resources
- Reduce operating costs

7 Advance RTA

- Develop human resources
- Improve organizational efficiency
- Improve processes and systems

8 Asset Sustainability

- Effective & Efficient AM Operations
- High Performing Assets
- Optimal Asset Value

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Initiatives

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PT Enhancement

- RTA targeting to alleviate the PT share from **12** % in 2012 to **20**% by 2020, by investing **47** AED billion.

Initiatives

Metro Network
(320 km)
(34 AED Billion)

Tram Network
(270 km)
(9 AED Billion)

Bus Network
(2500 Km)
(2.5AED Billion)

Marine Transport Network
(450 Km)
(1.5 AED Billion)

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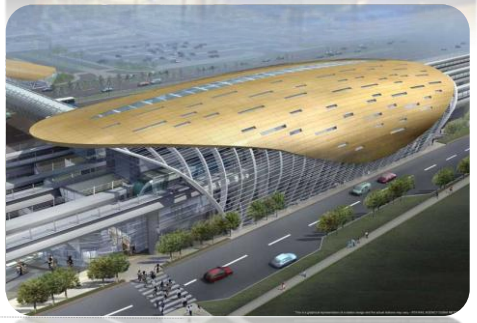
Transit Systems Metro

- **2** lines.
- **74.6** km.
- **13** km underground.
- **47** stations.
- Fully automated.



Initiatives

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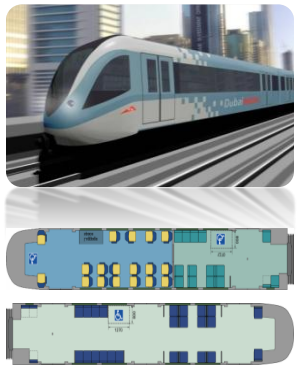
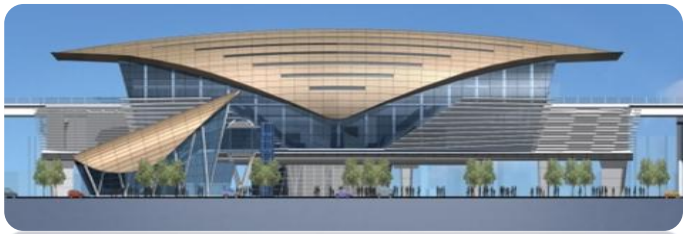
Transit Systems Metro

- Driverless System.
- Train capacity is about 643 passengers.
- Train seating includes 3 classes (Gold, Silver and Women and Children dedicated class).
- Fully A/C stations and footbridges.
- 4 different themes for stations interior design.
- Platform screen doors.





Initiatives

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Dubai Metro Stations Interior Design Themes:

Initiatives

Water Scheme

Earth Scheme

Air Scheme

Fire Scheme

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Transit Systems Buses

- Low floor.
- Automatic Multiple doors.
- Fully Air-conditioned.
- Euro **4/5** engines.
- Eco-friendly Fuel.

Initiatives

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Transit Systems Water Transport

- **10** Water taxis / **25** stations.
- **149** Abras / **7** stations.
- **9** Water Buses / **8** stations.
- **10** Ferries / **2** stations.

Initiatives

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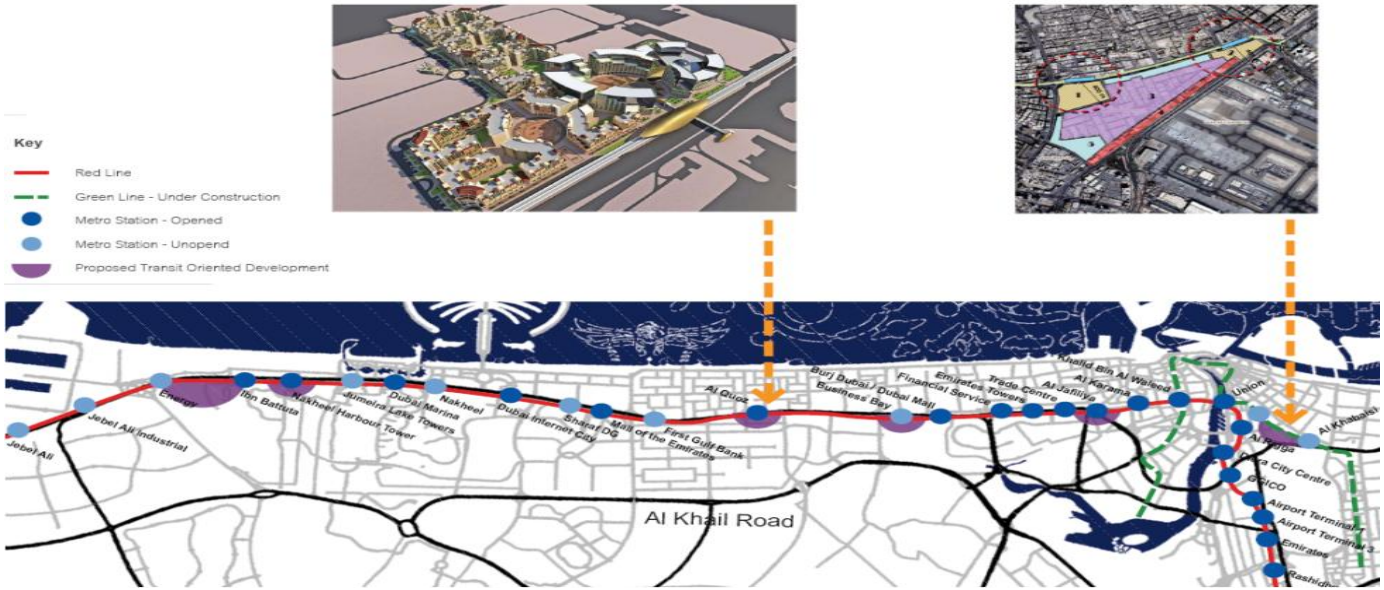
TOD Strategies

1

- TOD concept is adopted in “Dubai 2020 Urban Development Plan” as one of the fundamental bases for future urban development in Dubai.



Initiatives

TOD Strategies

Case Study: Union Square Station

The project includes developing a vacant plot next Union station as mix used development to generate increase ridership.

Project Design Masses

Environmental Canopy

Initiatives

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Dubai Metro Operation Control Centers (OCC):

Initiatives

- System includes 2 OCC facilities:
  - Main OCC located within Rashidiya Depot
  - Back-up (BOCC) located within Jebel Ali Depot.
- The OCC controls/monitors the operation of trains, as well as stations, tracks and tunnels.
- The OCC monitors all secondary systems:
  - (Tunnel ventilation, fire alarm, communication, lighting, air conditioning, environmental control and public address systems).

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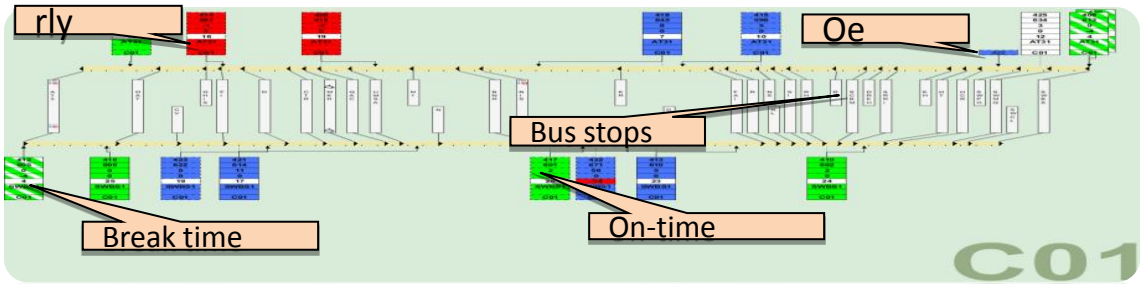
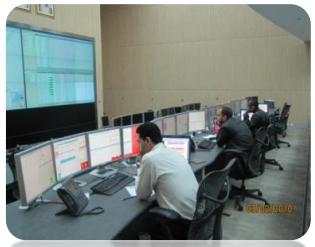
Dubai Bus Operation Control Center (OCC):

- Control & Monitor the schedule adherence (Route and Time) of buses through satellite tracking.
- Facilitate Real Time passenger information .
- Guide the drivers in case of road blocks and accidents.
- Produce Management report.
- Since system commissioned, the On-Time-Performance of buses has improved from **17.2**% to **80**% adherence.

Initiatives





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Sustainability

- Naming right to metro stations eg. Burj Khalif Station, (**82** million AED. Annually,
total contracts almost **100** Million AED.

- Advertisement on AC bus shelter.

Initiatives

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Bus Priority

- First Phase (**5** km)
  - Al Khaleej Road.
  - Al Ghubaiba Road.
  - Khaled bin Walled Road.
  - Al Mina Road.

- Second Phase (**3.2** km)
  - Al Ittihad Road.
  - Al Mussala Road.

Initiatives

- **Increase in Bus speed from 20% - 40%**
- **Reduced the journey time from 25% -45%**

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Integration With Others Systems:

Initiatives

Automated Vehicle Management

Ticketing System (NOL)

APC (Automated Passenger Count)

Journey Planner

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Technology Implementations

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Technology implementation On different Transport Modes:

Initiatives

Red Line
Green Line

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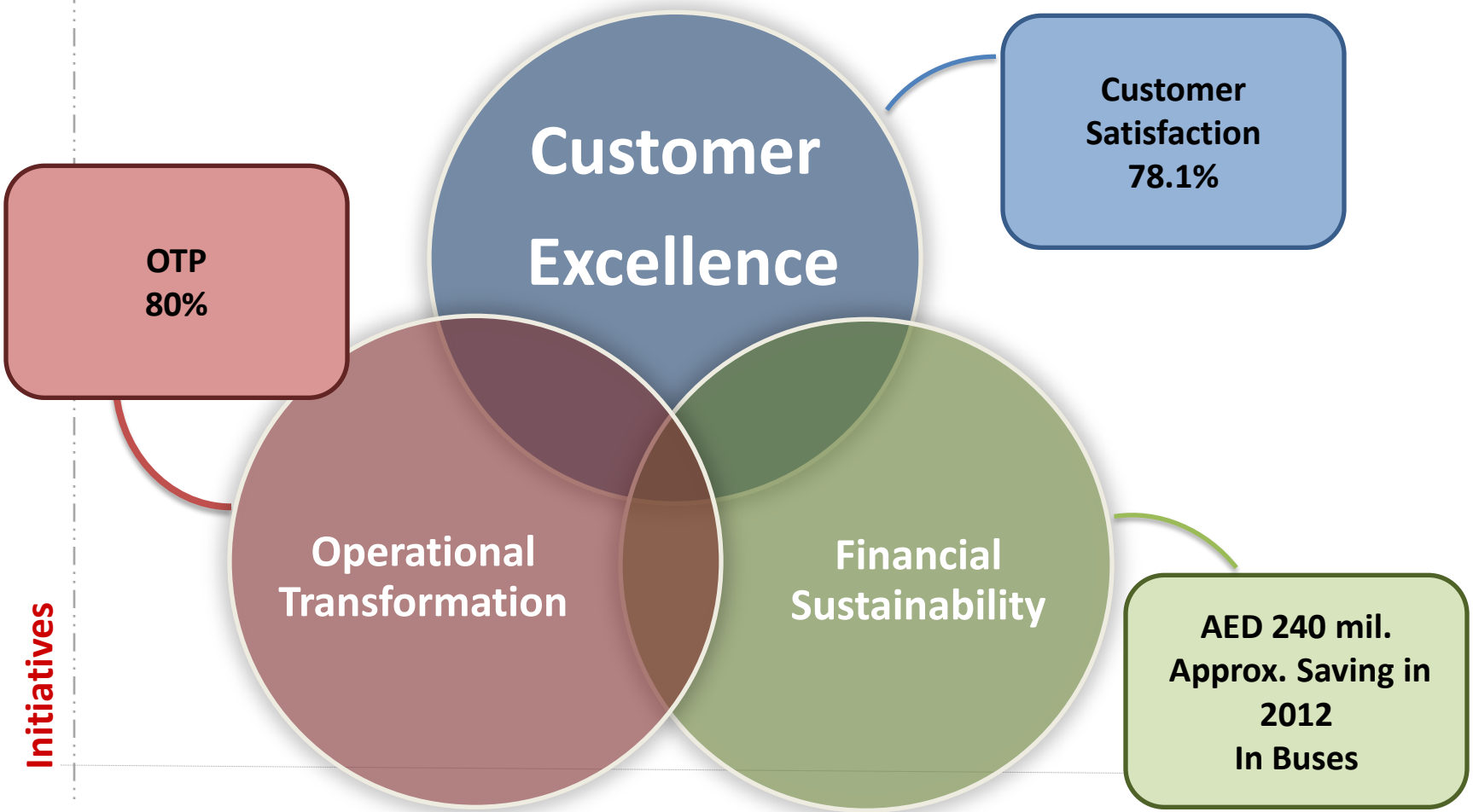
Business Impact:



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Business Impact:

Technology implementation

Customer Excellence

Automated Fare Collection

1. **Nol** card has a fare cap of AED 14 only for unlimited use in a day.
2. Discounted fares for students, seniors and people with special needs.
3. If the transfer time between modes is 30 mins or less then it is considered as 1 trip only.

Automated Vehicle Management System

1. Reduction in Complaints for 'late arriving' from 500 per day to 15.
2. **<u>On-Time Performance Management 80% OTP</u>**

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Business Impact:

Technology implementation

Customer Excellence

Journey Planner

Plan Your Journey with Wojhati

348,000 Visitors Annually

868,323 trips inquired online in 2012

وجهتي Wojhati
The Journey Planner

Real-Time Public Information

Real-time Information about Bus Arrivals and Departure

640 screen in Strategic Locations

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Business Impact:

Technology implementation

Customer Excellence

Public Transport SMS timings

Bus, Metro & Marine Transport Timing
2400 users expected monthly

Internet Bus

Free Internet for Intercity Users to Improve Customer Satisfaction
900,000 users expected Annually

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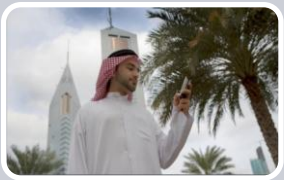
Business Impact:

Technology implementation

Customer Excellence

Taxi SMS Booking & Smart App

New addition to Taxi Booking Service
Service Contributes to 5 million Bookings Made



Near Field Communication (NFC)

Customers use Mobile Phones to Pay
5000 expected users by the end of 2013

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Business Impact:

Operational Transformation

Technology implementation

Automated Fare Collection

Cashless Transactions

Automated Vehicle Management

1. Route Optimization through Automatic Survey
2. On-time Performance: From 19% to 80%.
3. Reduction in Accidents: From **3.7** on 2009 (Per 100,000 Passengers km) to **0.48** on 2012
4. Real-time Monitoring of Buses to control drivers effectively and responsive decision making.

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Business Impact:

Operational Transformation

Technology implementation

Operational Control Center

Real-time Operations (99.7% on-time Departures from Depots)

Operational Control Center

(**Maximo**) Asset Lifecycle – from procurement to retirement

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Business Impact:

Operational Transformation

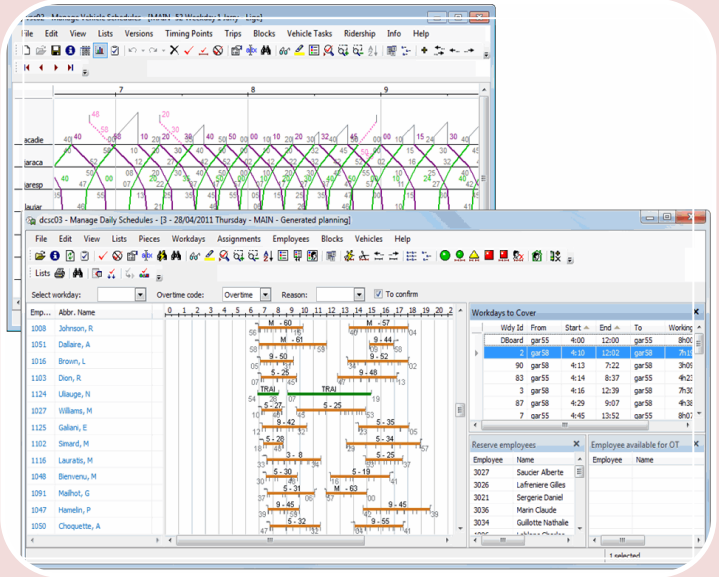
Technology implementation

Hastus

1.Public Transport Network Management, Approx. **242** routes.

2. Drivers Rosters Management Approx. **2,794** drivers.

3.Bus Scheduling.



Business Impact:

Operational Transformation

Taxi NOL/Credit Card Payments

1. New addition to Taxi payment method .
2. Integration of AFC in all Public Transport (Bus – Metro – Marine Transport – Taxi).
3. 169 million Taxi users in 2012.

Technology implementation

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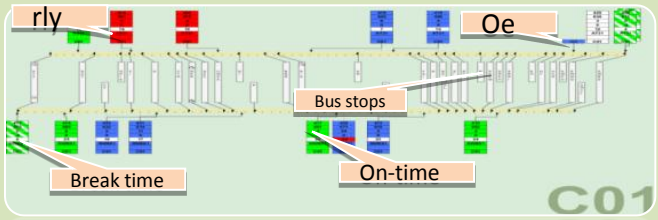
Business Impact:

Financial Sustainability

Technology implementation

Reduction in Fare fudging using Electronic Unified Cards

1. Reduction in Fuel Cost (Approximately 20 Million Monthly)
2. Optimization of operation resulting huge savings on costs (**Approx. AED 240 mil. in 2012**).



EXPO 2020 DUBAI, UAE

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The UAE is bidding to host the World Expo 2020 in Dubai

Dubai's theme for Expo 2020 is:

"Connecting Minds, Creating the Future"

which seeks to shape solutions through sustainable international partnerships to three global issues:

- Transportation and Logistics
- Economic Development
- Clean Energy and Water

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Thank you

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