Implementation of advance ticketing system in Qatar

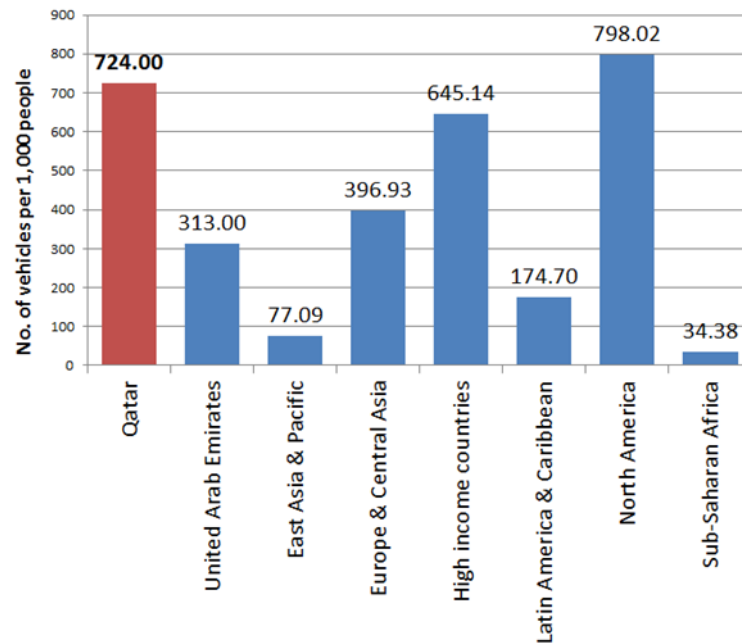## Multimodal open and closed loop payment system is being implemented for the mass transit.

Where is Doha now?

- A city that has grown around the private car
- Lack of travel choice
- Highly dependent on car travel
- Massive investment in new expressways
- One of highest levels of car ownership in the world
- Growing congestion problems evident
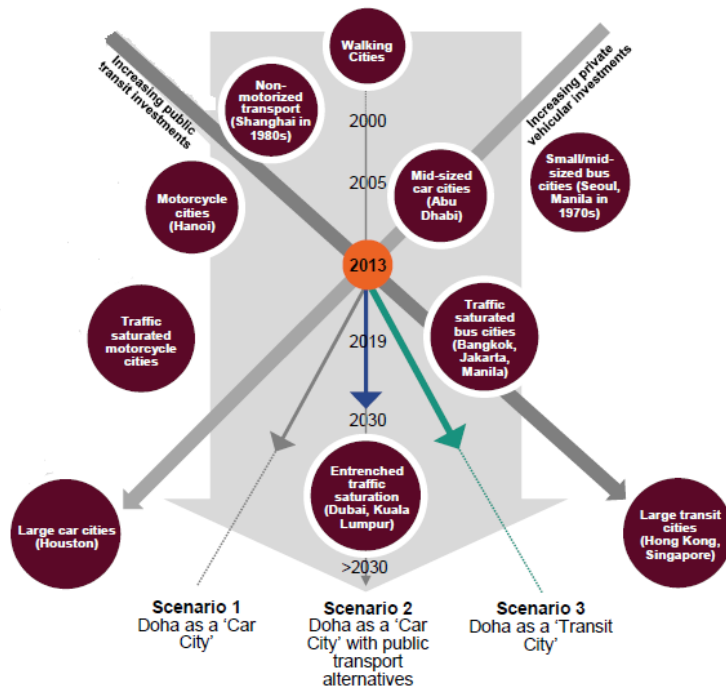

Vehicle Ownership *(World Bank 2007)*

No. of vehicles per 1,000 people

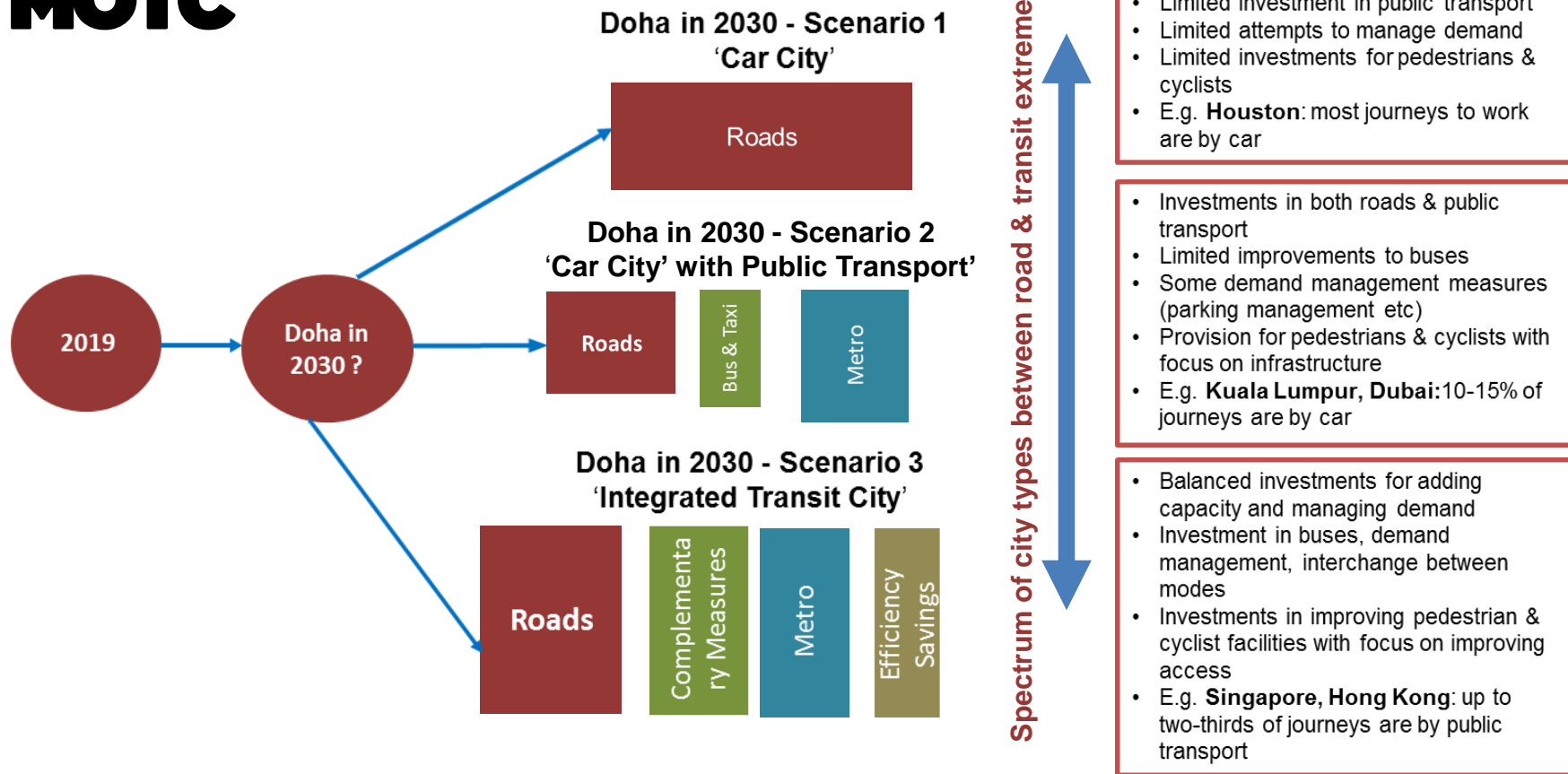| Region	Value
Qatar	724.00
United Arab Emirates	313.00
East Asia & Pacific	77.09
Europe & Central Asia	396.93
High income countries	645.14
Latin America & Caribbean	174.70
North America	798.02
Sub-Saharan Africa	34.38

Current Vehicle Ownership 1.6 Million

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- Building new major roads can offer temporary benefits
- But this comes with additional traffic growth and significant environmental and social costs

Strategic choices for Doha - car-centric city or a multi modal city?

Where is Doha heading?

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Doha in 2030 - Scenario 1
'**Car City**'

Roads

Doha in 2030 - Scenario 2
'**Car City' with Public Transport'**

Roads | Bus & Taxi | Metro

Doha in 2030 - Scenario 3
'**Integrated Transit City**'

Roads | Complementary Measures | Metro | Efficiency Savings

2019 → Doha in 2030 ?

Spectrum of city types between road & transit extremes

- Investments on improving road capacity
- Limited investment in public transport
- Limited attempts to manage demand
- Limited investments for pedestrians & cyclists
- E.g. **Houston**: most journeys to work are by car

- Investments in both roads & public transport
- Limited improvements to buses
- Some demand management measures (parking management etc)
- Provision for pedestrians & cyclists with focus on infrastructure
- E.g. **Kuala Lumpur, Dubai**:10-15% of journeys are by car

- Balanced investments for adding capacity and managing demand
- Investment in buses, demand management, interchange between modes
- Investments in improving pedestrian & cyclist facilities with focus on improving access
- E.g. **Singapore, Hong Kong**: up to two-thirds of journeys are by public transport

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Qatar's 2030 vision

It aims at transforming Qatar into a most modern country that relies on sustainable development.
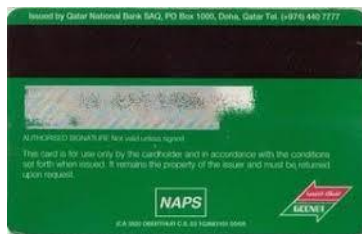
The vision has four pillars

- Social
- Economic
- Environmental and
- Human development

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Country wide Integrated automated Fare Collection System

Several Modes of Transport

With several Payment options

Benefit of having new payment modes

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Customer benefits:

➢ Faster journey through quick entry times to stations, buses, trams, taxi etc

➢ Make it easy to pay for public transport, whether on the system, online or at other convenient outlets.

➢ Make tickets available to suit a wide range of customer types and need to increase take up of public transport. This includes smartcards, bank cards, mobile phones and even retaining paper tickets if necessary.

➢ Flexible fares and ticketing, for example higher peak period fares, free fares for school children or elderly customers, discounted fare on national holidays or off-peak periods.
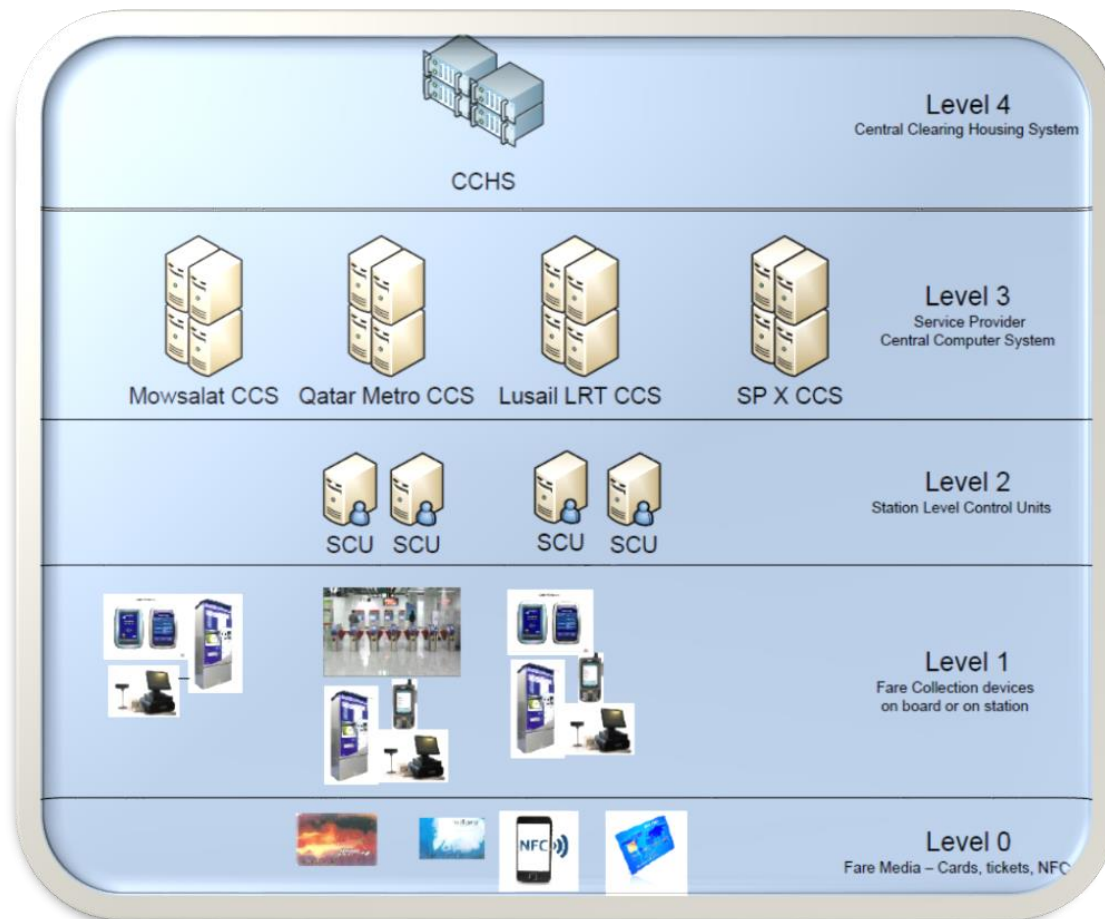
Business Benefits:

➢ Continuous provision of comprehensive data on system usages, for reporting and planning future operations or fare initiatives

➢ Minimum revenue loss through staff and passenger fraud

➢ Efficient and effective back office system through rapid delivery of data for revenue analysis and allocation

➢ Reduce need for surveys as demand data and travel pattern will be readily available
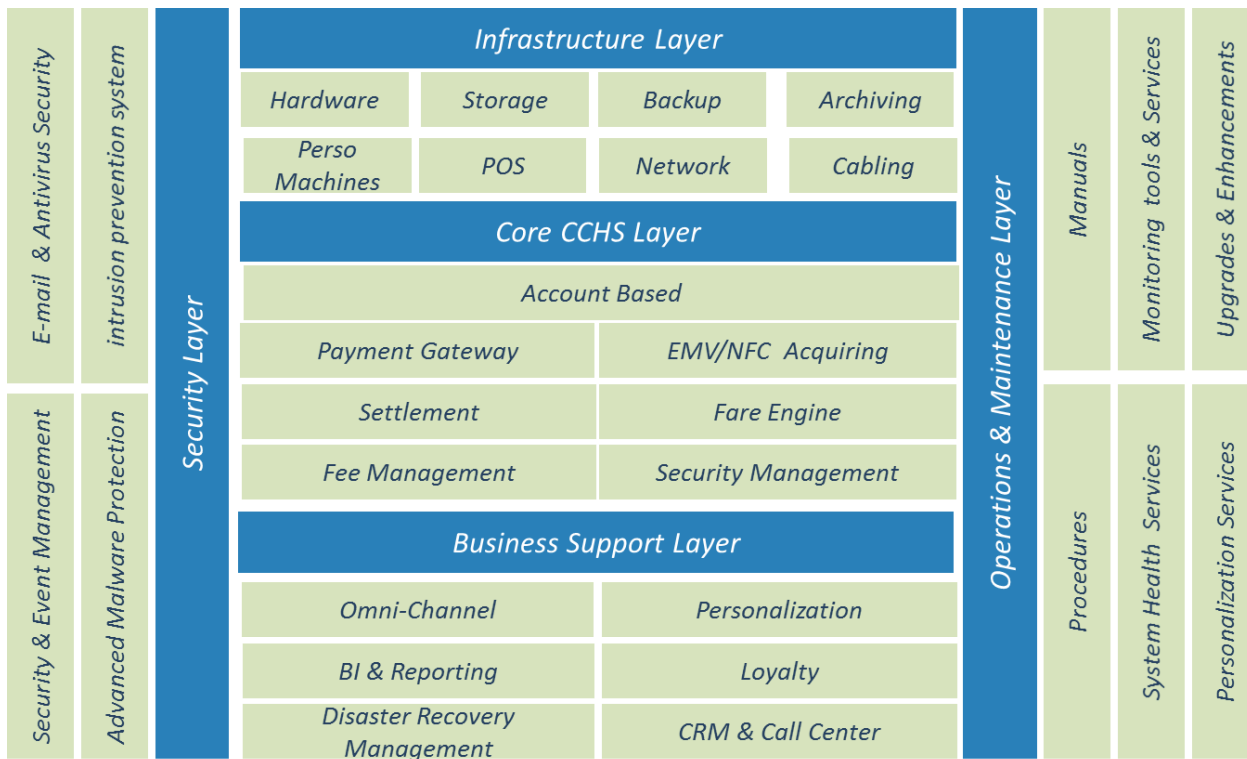
Wider Benefits:

➢ Platform to provide payment and/or permits for car parking, congestion charging (if needed) or more exclusive transport services such as Education city

➢ Provision of platform to extend the ticketing functionality to (or integrate with) e- government (for example, ID card, utility payment) and/or purchase of private sector goods and services.
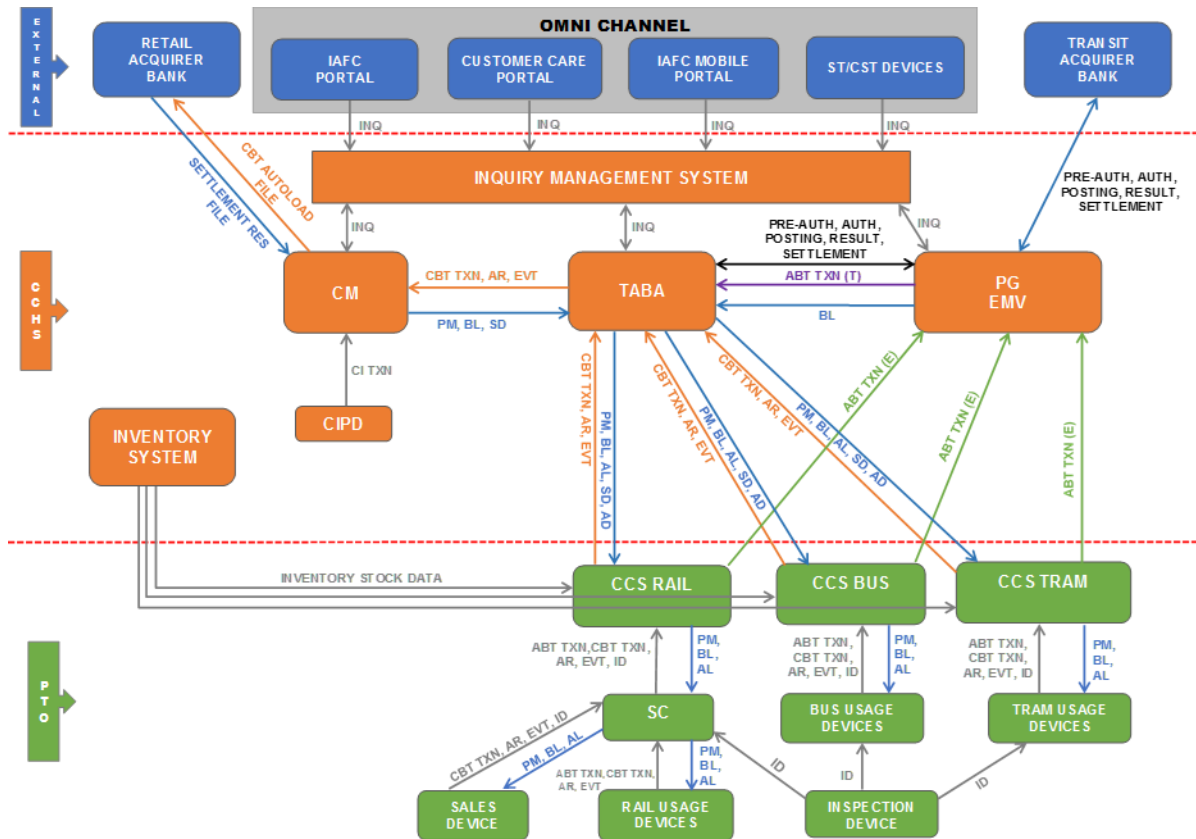
Overall Solution

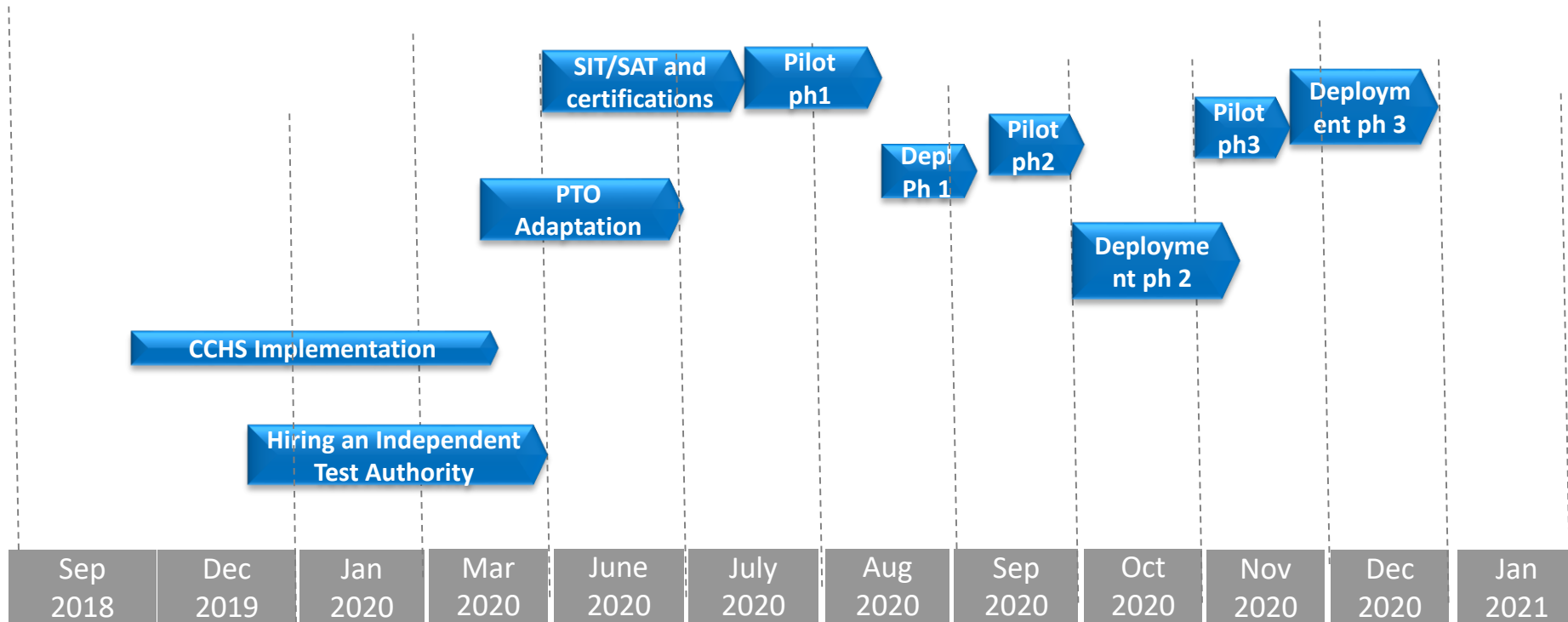| E-mail & Antivirus Security	intrusion prevention system	Security Layer	Infrastructure Layer				Operations & Maintenance Layer	Manuals	Monitoring tools & Services	Upgrades & Enhancements
			Hardware	Storage	Backup	Archiving				
			Perso Machines	POS	Network	Cabling				
			Core CCHS Layer							
			Account Based							
			Payment Gateway		EMV/NFC Acquiring					
Security & Event Management	Advanced Malware Protection		Settlement		Fare Engine			Procedures	System Health Services	Personalization Services
			Fee Management		Security Management					
			Business Support Layer							
			Omni-Channel		Personalization					
			BI & Reporting		Loyalty					
			Disaster Recovery Management		CRM & Call Center					

Project Time Line

				SIT/SAT and certifications	Pilot ph1					Pilot ph3	Deployment ph 3	
PTO Adaptation						Dept Ph 1	Pilot ph2					
							Deployment ph 2					
CCHS Implementation												
Hiring an Independent Test Authority												

| Sep 2018 | Dec 2019 | Jan 2020 | Mar 2020 | June 2020 | July 2020 | Aug 2020 | Sep 2020 | Oct 2020 | Nov 2020 | Dec 2020 | Jan 2021 |

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Requirement of hiring an Independent Test authority

https://www.motc.gov.qa/en/announcements/
hiring-3rd-party-independent-test-authority-
iafc-program

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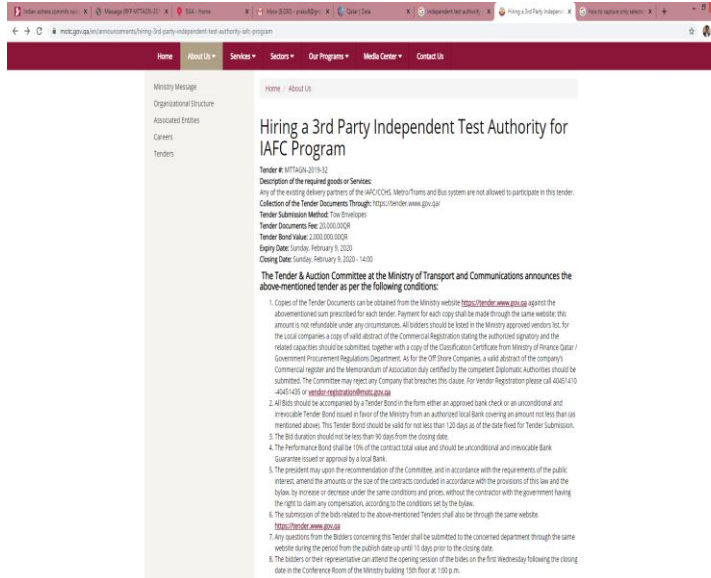
Challenges we are facing

❖ Lack of Transit model
❖ No transit payment association
❖ Adaptation by the existing vendors
❖ Test Lab preparation
❖ Centralized CRM etc