5G in Healthcare Webinar

TM Forum in partnership with GIO Global Industry Organisations

April 28th 2021

TM Forum in partnership with GIO hosted the Digital Health Webinar on April 28th, titled 5G in Healthcare where communications service providers from around the globe shared their insights into their health strategy and business growth.

Link to the recording here:

https://inform.tmforum.org/webinars/the-5g-healthcare-ecosystem-opportunity/

Session Chair:

Joann O'Brien, Vice President, Digital Ecosystems, TM Forum

Speakers:

Martin Curley, Head of Digital Transformation of the Healthcare Service, Ireland

Saud A. Alsheraihi, *GM, New Business Development, Enterprise Business Unit,* **STC**

Dr. Sharlene Thiagarajah, *CEO,* **TM Research & Development**

Russel Duncan, *CTO,* **Telstra Health**

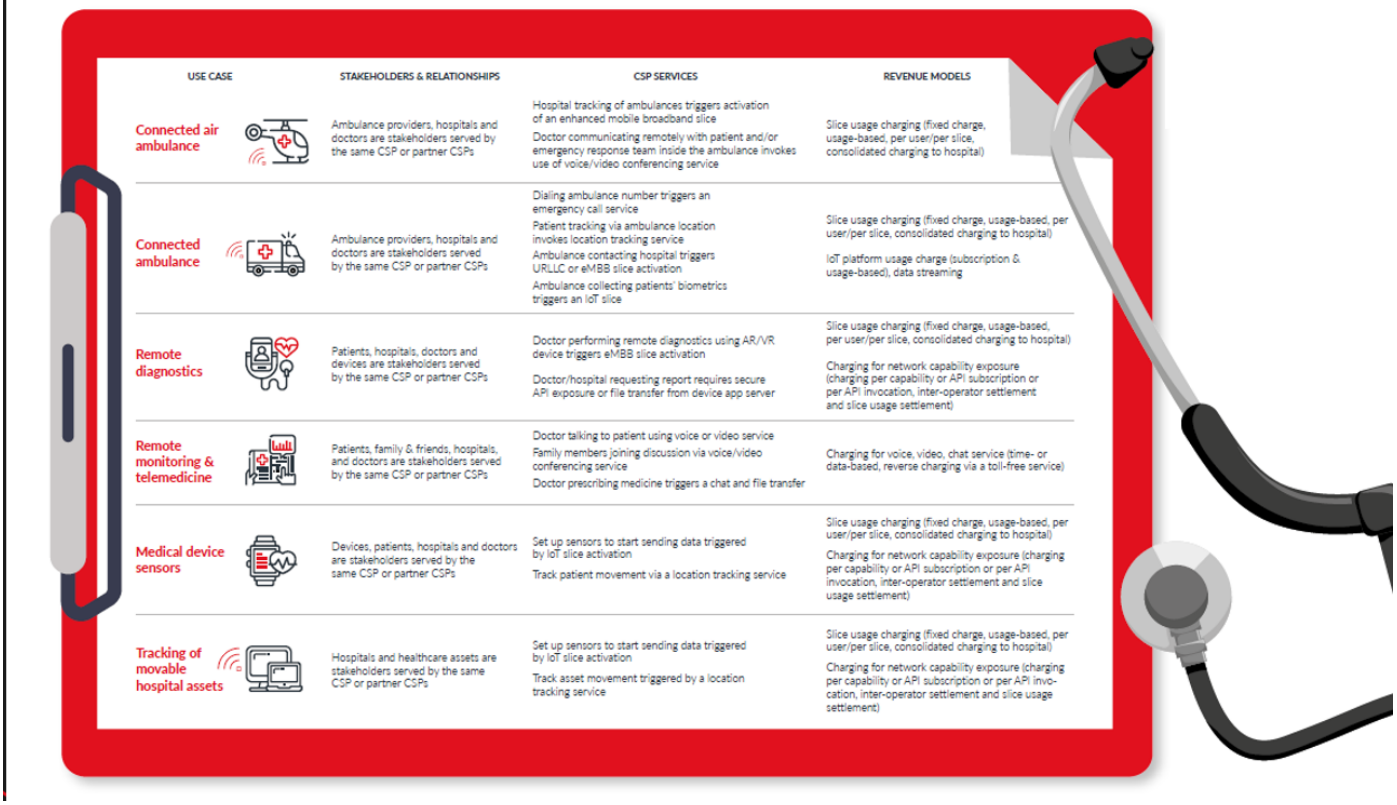
David Smith, *Head of Ecosystems*, **Huawei**

David Mohally, *Business Innovation,* **Huawei**

Joann O'Brien opened the session with a presentation based on the recent research report titled, 5G for Healthcare published by TM Forum in partnership with GIO.

Here new opportunities for Telco in the Digital Health space were explored with particular emphasis on where the critical capabilities of Telco overlap with the needs of the Healthcare industry.

A variety of use cases were explored and the role of 5G as well as some indepth use cases from communications operators.



USE CASE	STAKEHOLDERS & RELATIONSHIPS	CSP SERVICES	REVENUE MODELS
Connected air ambulance	Ambulance providers, hospitals and doctors are stakeholders served by the same CSP or partner CSPs	Hospital tracking of ambulances triggers activation of an enhanced mobile broadband slice Doctor communicating remotely with patient and/or emergency response team inside the ambulance invokes use of voice/video conferencing service	Slice usage charging (fixed charge, usage-based, per user/per slice, consolidated charging to hospital)
Connected ambulance	Ambulance providers, hospitals and doctors are stakeholders served by the same CSP or partner CSPs	Dialing ambulance number triggers an emergency call service Patient tracking via ambulance location invokes location tracking service Ambulance contacting hospital triggers URLLC or eMBB slice activation Ambulance collecting patients' biometrics triggers an IoT slice	Slice usage charging (fixed charge, usage-based, per user/per slice, consolidated charging to hospital) IoT platform usage charge (subscription & usage-based), data streaming
Remote diagnostics	Patients, hospitals, doctors and devices are stakeholders served by the same CSP or partner CSPs	Doctor performing remote diagnostics using AR/VR device triggers eMBB slice activation Doctor/hospital requesting report requires secure API exposure or file transfer from device app server	Slice usage charging (fixed charge, usage-based, per user/per slice, consolidated charging to hospital) Charging for network capability exposure (charging per capability or API subscription or per API invocation, inter-operator settlement and slice usage settlement)
Remote monitoring & telemedicine	Patients, family & friends, hospitals, and doctors are stakeholders served by the same CSP or partner CSPs	Doctor talking to patient using voice or video service Family members joining discussion via voice/video conferencing service Doctor prescribing medicine triggers a chat and file transfer	Charging for voice, video, chat service (time- or data-based, reverse charging via a toll-free service)
Medical device sensors	Devices, patients, hospitals and doctors are stakeholders served by the same CSP or partner CSPs	Set up sensors to start sending data triggered by IoT slice activation Track patient movement via a location tracking service	Slice usage charging (fixed charge, usage-based, per user/per slice, consolidated charging to hospital) Charging for network capability exposure (charging per capability or API subscription or per API invocation, inter-operator settlement and slice usage settlement)
Tracking of movable hospital assets	Hospitals and healthcare assets are stakeholders served by the same CSP or partner CSPs	Set up sensors to start sending data triggered by IoT slice activation Track asset movement triggered by a location tracking service	Slice usage charging (fixed charge, usage-based, per user/per slice, consolidated charging to hospital) Charging for network capability exposure (charging per capability or API subscription or per API invocation, inter-operator settlement and slice usage settlement)

Fig 1: Extract from 5G for Healthcare report showing use cases, CSP services and potential revenue models.

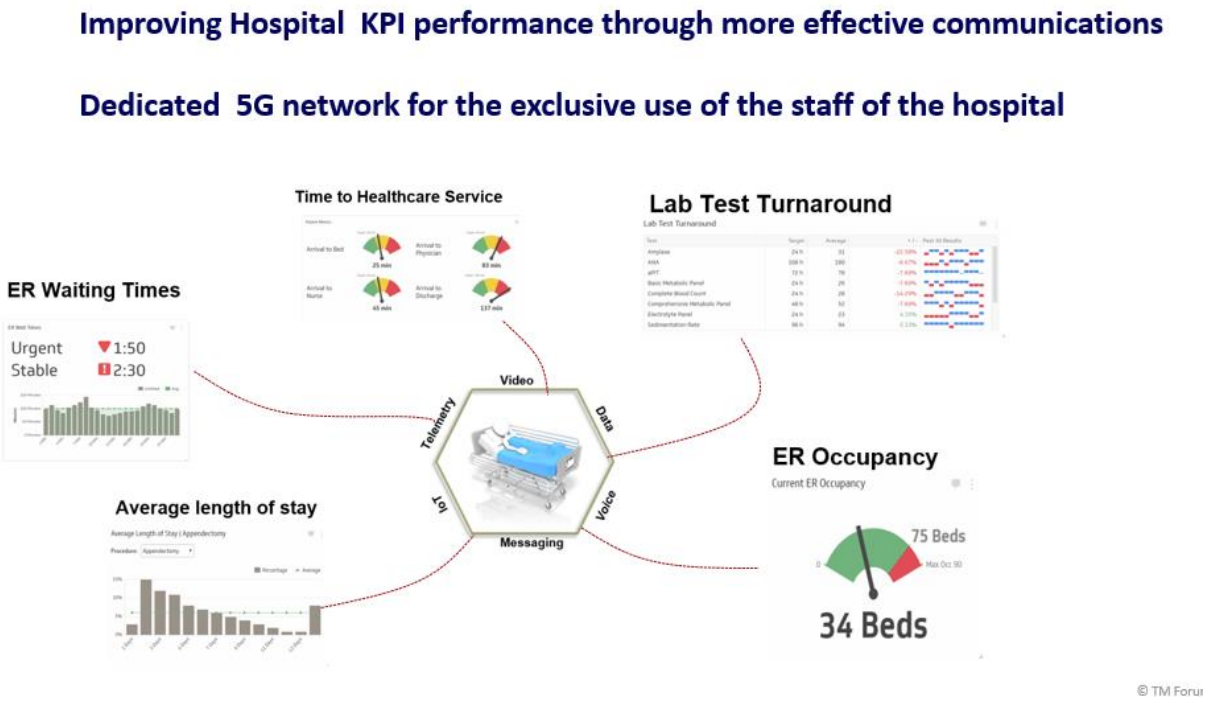
Next Speaker:

Martin Curley, Head of Digital Transformation for the Healthcare Sector in Ireland

Martin outlined the state of play regarding digital transformation in healthcare across the country:

- How it is a decade behind other industries
- How there is a need to shift left, reduce the amount of time in acute care, shifting left to community care, which in turns shifts left to home care, which in turn shifts left to preventative care. Ultimately, citizens taking better and more responsibility for own care and reducing strain on the healthcare services.
- The leapfrog opportunity to home and community-based care, remote monitoring, proactive and predictive health, which is cloud based, open source, integrated, social, mobile and AI enabled.

- Outline how remote care was accelerated during Covid-19, managing oxygen saturation, temperature, and disease progression with regard to cough and dyspnea with rapid adoption across the country.
- In turn improving overall hospital performance leveraging 5G.

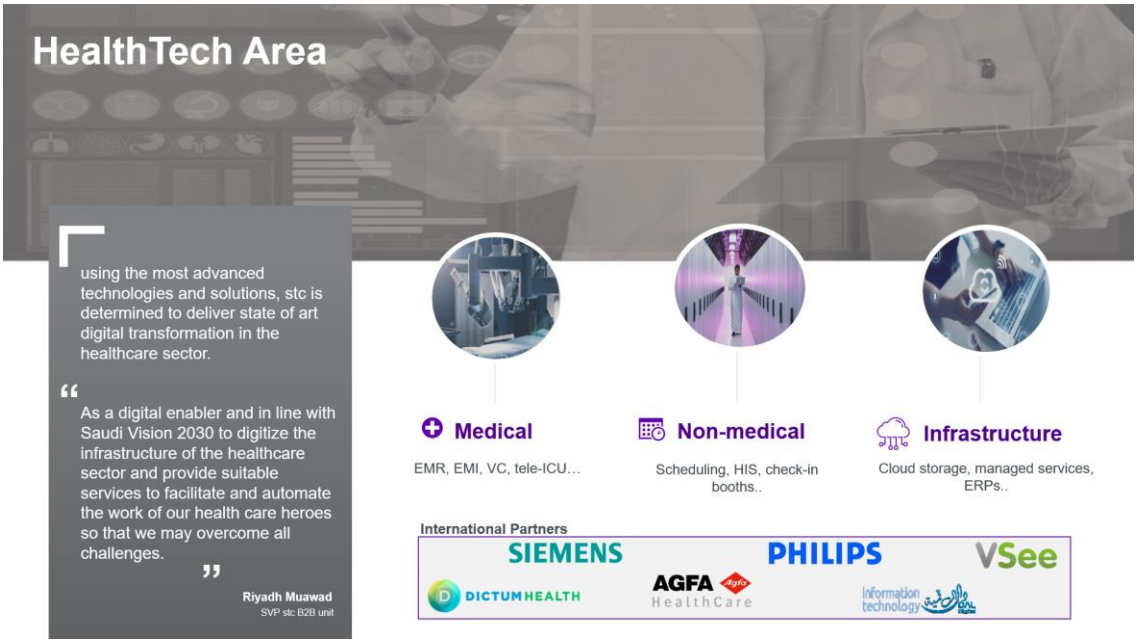


Slide provided by Martin Curley, Health Service Executive, Ireland

Next speaker:

Saud A. Alsheraihi, *GM, New Business Development, Enterprise Business Unit,* **STC**

Saud outlined the scope and objectives of STC's Digital Health Strategy including successes to date. A very broad scope covering medical, non-medical and infrastructural technology for the health sector. This was a very insightful presentation and demonstrated how STC is positioned well to grow their business beyond connectivity in Saudi into the future.

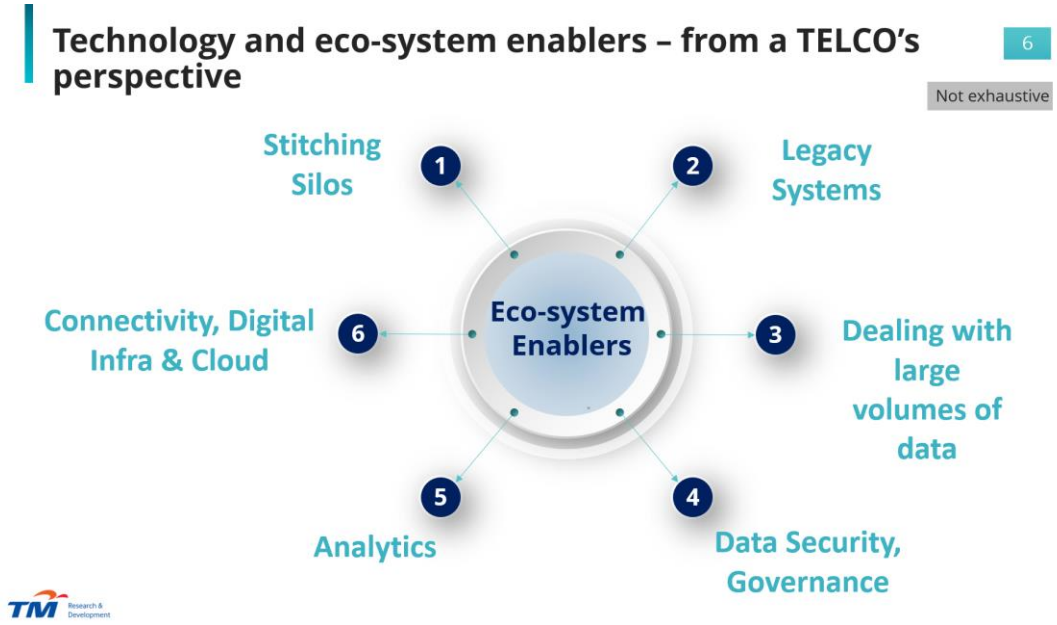


Next Speaker:

Dr. Sharlene Thiagarajah, *CEO,* **TM Research & Development**

Spoke about the AI-driven themal camera scanning solutions developed rapidly during the pandemic to help the fight against the virus. She also provided insights into how technology can provide awareness and early warning alerts for future pandemics and the key role technology can play in the prevention as central theme in individuals own healthcare journey, recognizing that the global health budget is over $7.8 trillion this needs to become more efficient and holistic to gain the value that is needed.

Then looking at digital health and ecosystem enablers from a telco perspective she identified the following key areas where Telco's can add value to the ecosystem with a focus on enriching humanity and progressing nations.



Next Speaker:

Russel Duncan, *CTO,* **Telstra Health**

Russel provided a comprehensive overview of the Digital Health business of Telstra. Where they built up the business through the acquisition of 18 companies and are now fully profitably and a growing arm of the Telstra business.

The diagram here shows all the areas of business where Telstra operates, demonstrating the comprehensive nature of the business and the trusted relationship it has with both patients and government. Along with Telus health whom they have a partnership with, this is one of the most comprehensive business growths beyond connectivity of telco.

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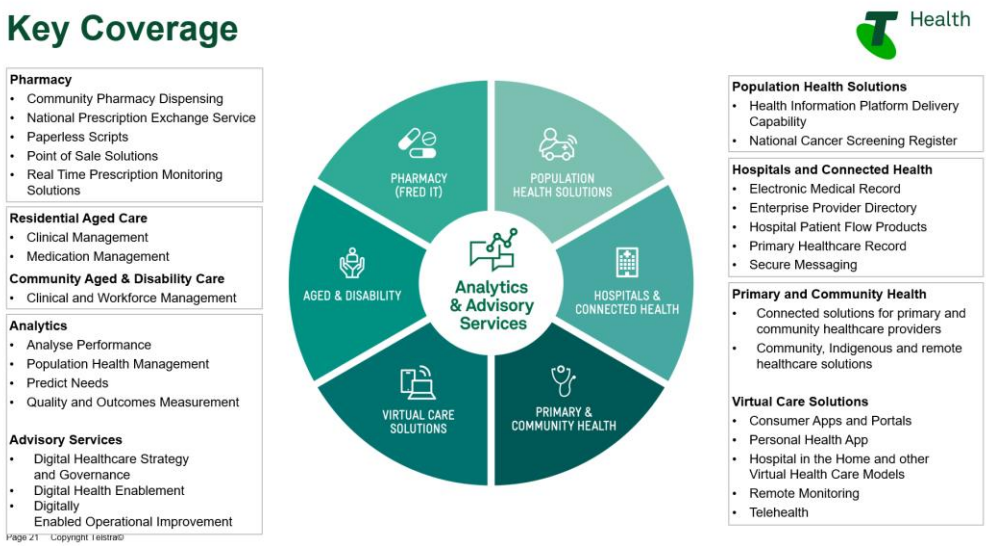
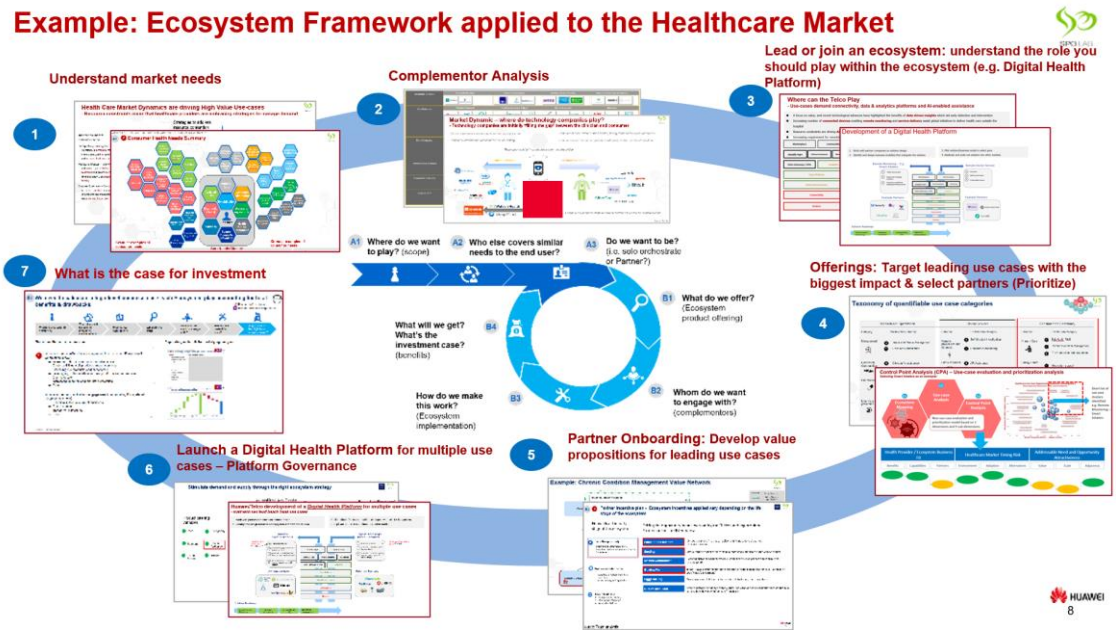


Next Speakers:

David Smith, *Head of Ecosystems*, **Huawei**

David Mohally, *Business Innovation,* **Huawei**

Then David Smith & David Mohally presented on Huawei SPO Ecosystem insights based on the digital health research of Tim Croy. This was considered a high-level light touch view of the ecosystem modelling work of that team in collaboration with Martin Creaner and the London Business School, UK. The work was very well received, and it was agreed to focus the following round table scheduled for May 18th on this topic to help understand and explore further the role of the Telco in enabling Digital Health Transformation globally.



Conclusions:

The webinar was vey well attended and very interested. It demonstrated that it is not just possible for CSPs to grow their business beyond connectivity, but that there are key strengths and capabilities of the Telco that align with the needs of the healthcare industry. This along with the fact that the operators are indeed trusted partners in their region offer great promise for new growth of the CSP business.

The modelling of the digital health ecosystem was a very popular topic and as a result became the core focus for the follow up round table to be hosted on May 18th.

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Appendix Marketing Report:

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Who attended

554
Pre-registered

148
Attended live broadcast

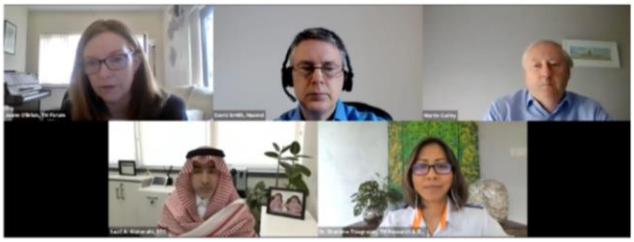
21
CSPs attended live

20
Director level & above attended live

137
TMF recruited registrants attended live

79
Unique companies attended

*reported numbers do not include sponsor affiliated staff



Click here to view:
Attended the live broadcast (tab 1)
Registered but could not attend live (tab 2)
Viewed on-demand (tab 3)

*Data from the last 30 days

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Service provider companies in attendance

axiata
altice labs
T-Mobile LIFE IS FOR SHARING.
Dialog
du
ethio telecom
LG U+
mobily
tmcel MOÇAMBIQUE TELECOM, SA
OPTUS
orange
PLDT
Jio
robi
stc
TM
TM Research & Development
TELSTRA
u mobile
vodafone
ZTE

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Outreach and visibility

180,000+
total emails sent

100+ personal invitations

100+ personalized reminders

2 follow ups sent per contact

75+ individuals reached via LinkedIn

Social media at-a-glance

7 posts

3,939 post impressions

57 clicks/engagements

Our channels

12,205 followers
214,000+ impressions
1,403 link clicks, RTs & likes

26,021 followers
153,000+ post impressions
7,500+ reactions, clicks & shares