

Modelling the Digital Health Ecosystem Round Table

May 18th 2021

Host & Chair:

Joann O'Brien, *Vice President, Digital Ecosystems, TM Forum & Chair*

Speakers / Presenters:

David Smith, *Head of Ecosystems, Huawei*

David Mohally, *Business Innovation, Huawei*

Martin Creaner, *Centre Node, Huawei*

Panelists:

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

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

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

Russel Duncan, *CTO, Telstra Health*

David Thomas, *Managing Principal, Global Health Strategy, TELUS Health*

James Hospedales, *Founder, EarthMedic and EarthNurse Foundation for Planetary Health*

Context:

TM Forum in partnership with GIO hosted the Digital Health Webinar on April 27th, titled 5G in Healthcare where communications service providers from around the globe had 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/>

Webinar presentations were provided by:

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

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



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Saud A. Alsherahi, GM, New Business Development, Enterprise Business Unit, STC



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Russel Duncan, CTO, Telstra Health

David Smith, Head of Ecosystems, Huawei

David Mohally, Business Innovation, Huawei

At the end of the webinar, it was agreed to focus the follow up round table scheduled for May 18th on this topic of modeling the digital health ecosystem, to help gain a deeper understanding of the concept and learn new approaches that can be used to help model out different ecosystem scenarios.

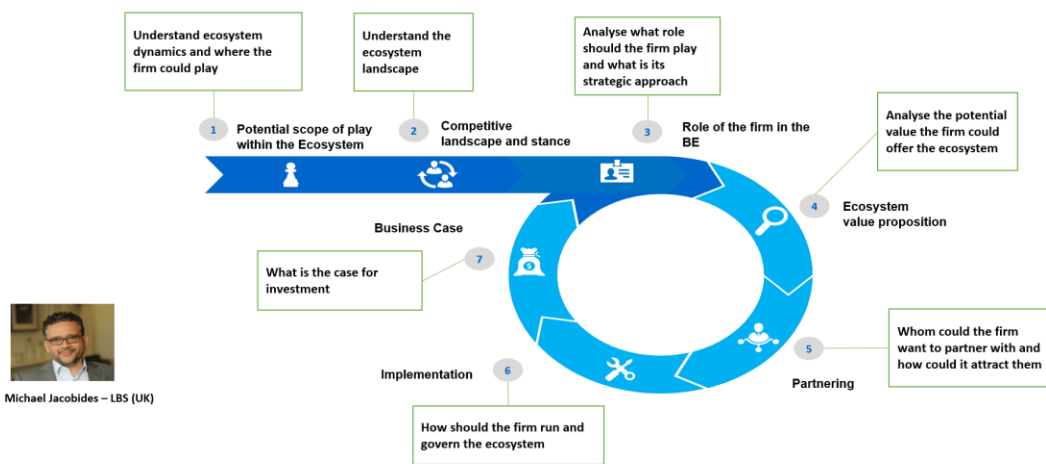
Round Table:

The round table was led by the Huawei SPO lab team, presenting their research and findings on business modelling for digital health, recognizing that the models and patterns can be reused for different vertical contexts. The session was structured into two presentations followed by two panel discussions with the panelists listed above.

Between the panelists and the presenters there was a truly global presence on the round table, bringing perspectives from many different corners of the world.

The session started with a presentation on the outline ecosystem framework which was developed with Professor Michael Jacobides, London Business School, UK.

Ecosystem framework - seven step iterative process and toolkit for business ecosystem development



Michael Jacobides – LBS (UK)



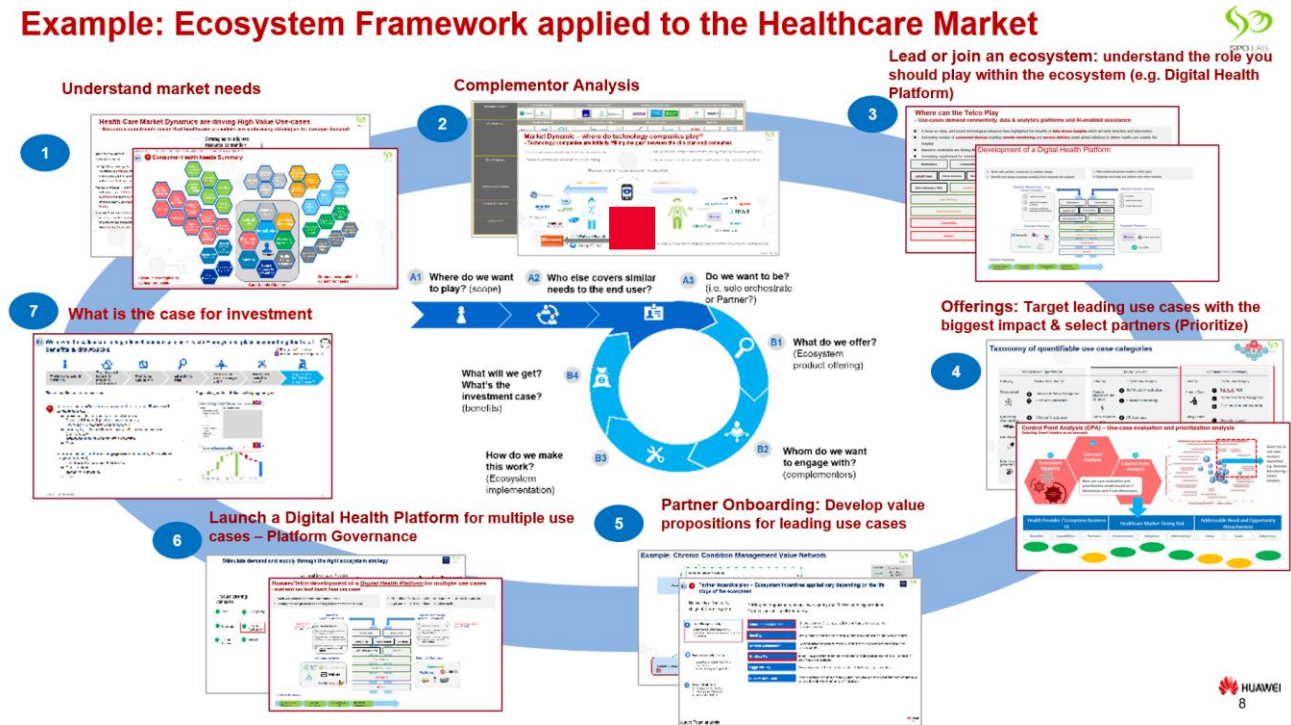
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It was explained that each stage of the framework has a wealth of templates and information behind each stage and that the framework above represents a summary of the true modelling effort.

Ordinarily, a thorough evaluation of every stage of the framework would require significant time, therefore for the purpose of the round table, we will select elements of the framework and delve into these.

Example: Ecosystem Framework applied to the Healthcare Market



As the focus for the roundtable series is the opportunity for Telco's to go beyond connectivity and develop new business opportunities in the digital health space, the session started with a reflection on the specific opportunity of the Telecommunications providers and their relevant key capabilities in the digital health space, leveraging connectivity.

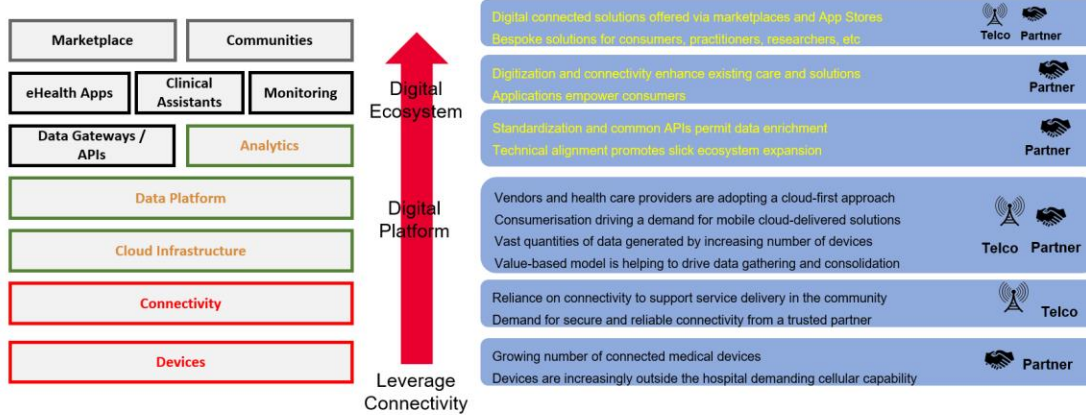
Understand role in ecosystem



Where can the Telco Play

- Use-cases demand connectivity, data & analytics platforms and AI-enabled assistance

- Increasing requirement / strategy / initiatives for **remotely-delivered services**
- Accelerated as a result of the **impact of the pandemic** (ultimate impact to be determined)
- Increasing number of connected devices** enabling remote monitoring and service delivery assist global initiatives to **deliver health care outside the hospital**
- Digitization** means we can avail of **data-driven insights**, plan, etc.



The session is also framed in the context of CSPs using at least 1 of 3 key strategies for growth, connectivity++, platform play, end to end play.

In the following example the assumption is that the Telco is seeking to go beyond connectivity in a digital health platform play for remote doctor or monitoring services.

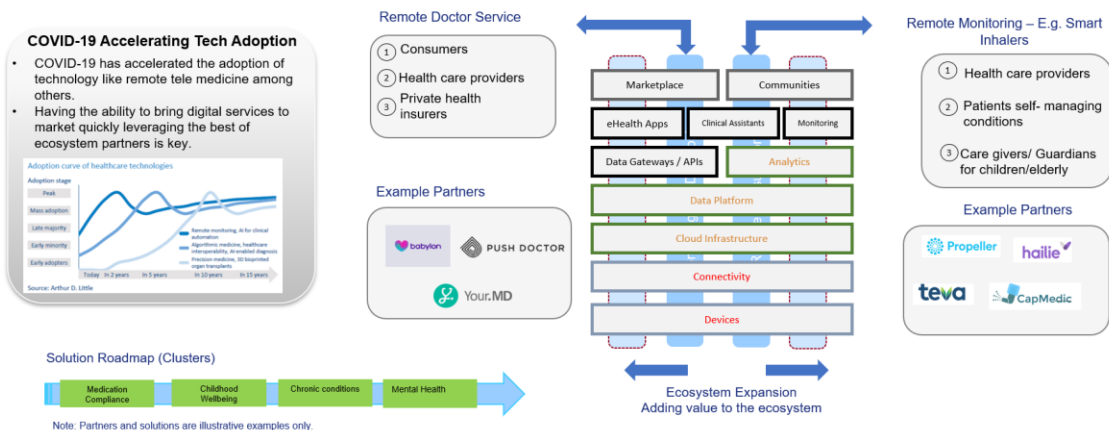
Development of a Digital Health Platform Ecosystem

Understand role in ecosystem



- A Telco looking to target the Healthcare market can leverage their technology capabilities (e.g. connectivity, edge, cloud, ...) to bring a Digital Health Platform combining their capabilities with a rich partner ecosystem

- Work with partner companies on solution design
- Identify and design business model(s) then integrate the solution
- Pilot solution/business model in select market segments
- Replicate and scale out solution into other markets

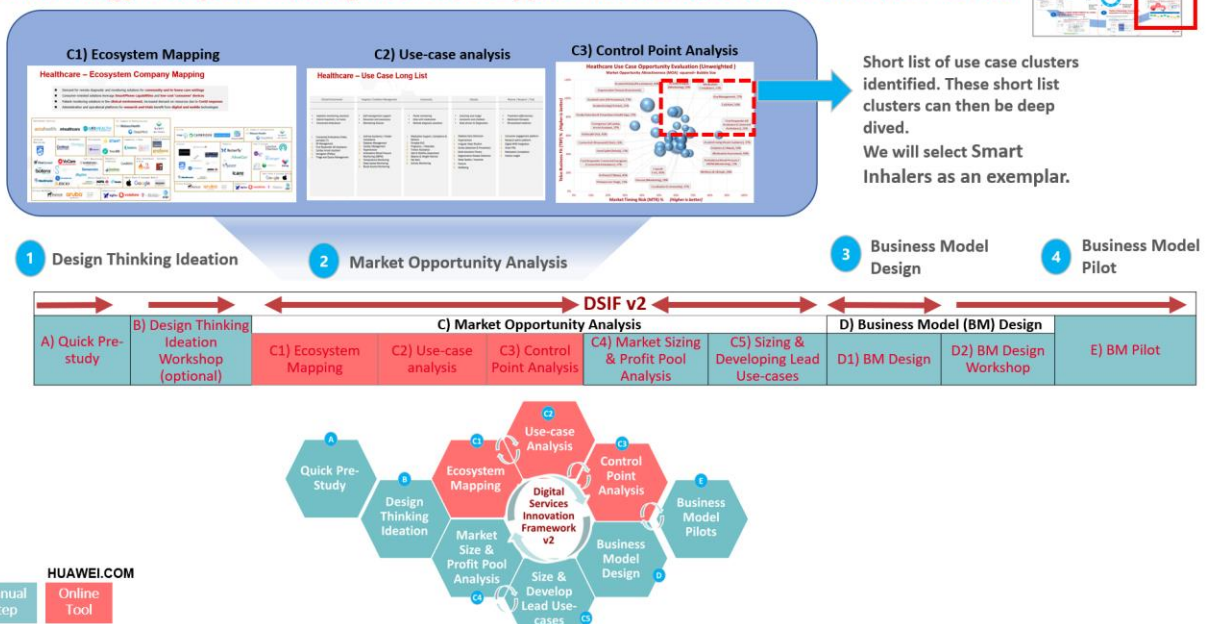


Note: Partners and solutions are illustrative examples only.

Then the team outlined the methodology for exploring new digital service opportunities and their related business models. The process also captures critical stages such as design thinking and ideation, validation through market opportunity analysis and consideration towards the business models design to ensure growth as well as piloting the business model, not just the product or service.

Digital Service Innovation Framework - Methodology to explore new Digital Service Opportunities & Associated Business Models

Understand role in ecosystem



In the next stage the team shared a high-level view of Control Point Analysis (CPA) which is a useful tool for evaluation of different use cases to help select which are likely to be the most fruitful business opportunity.

Each stage of the model embeds a series of criteria which are used to establish a rating for each stage and conclude the most appropriate business / use case investment or prioritization.

For the purpose of the round table, the smart inhaler use case has been pre-selected. It is selected because it is a scenario that will be familiar to almost everyone and is not too medically technical, therefore, the intricacies of the use case itself should not cloud or hamper the evaluation of the models / frameworks towards the use cases. The use case is one such example to bring the models to life, and can be reused for many different models.

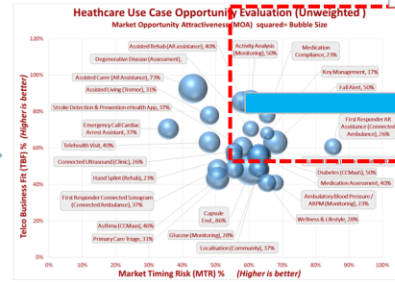
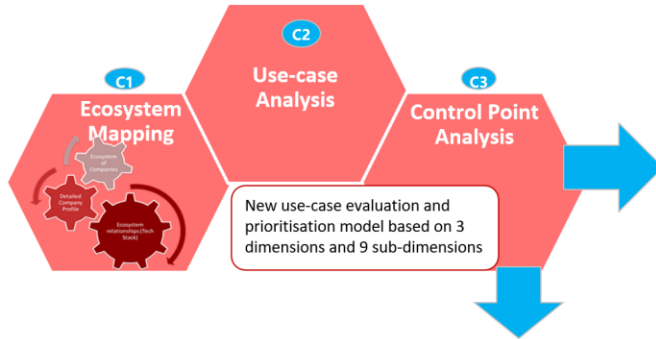


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Control Point Analysis (CPA) – Use-case evaluation and prioritization analysis
Selecting Smart Inhalers as an exemplar

Prioritize use cases



Short list of use case clusters identified e.g. Remote Monitoring – Smart Inhalers



Health Provider / Ecosystem Business Fit			Healthcare Market Timing Risk			Addressable Need and Opportunity Attractiveness		
Benefits	Capabilities	Partners	Environment	Adoption	Alternatives	Value	Scale	Adjacency
Does the use-case deliver significant benefits for the consumer and/or society?	Does the health provider have the resources (funding, time, skills, etc.) to leverage the full benefits of the use-case if it is delivered?	Are the technology partners ready and able to deliver the solution?	Encompasses regulators, care commissions, ministerial / governmental healthcare strategy and societal factors.	Adoption – Is the market receptive to the use case?	What are the primary alternative solutions? Could the 'status quo' be maintained?	What is the quantifiable value as a result of the use-case delivery? 1. The consumer / society 2. The provider 3. The vendors	What is the potential scale and growth rate for the use-case?	How could the use-case dovetail with other healthcare solutions and potentially 'lifestyle' applications?

Following a description of the CPA tool, the presentation was paused to and a poll was entered asking participants their views on the following questions.

Poll - Quick Questions on Use Case selection



Start a poll, and open questions to panelists while audience answer poll for 5 mins.

Use Case Selection

- How do you select lead use cases in your organization and market?
 - > Are all use cases evaluated against a common set of criteria?

A: We use ad-hoc analysis among team

B: Engage with internal stakeholders, and use their input to drive priorities

C: We use a repeatable methodology with a common set of criteria

Test Value Propositions

- How do you test value propositions and go to market options with ecosystem stakeholders?
 - > When do you engage potential solution partners, channel partners ...?

A: We always engage early in the process with prospective partners to test and validate use cases

B: We engage with partners once we have selected a short list of priority use cases

C: Engage with prospective partners when we are at a pilot/prototype stage



The conclusion of the poll was as follows:



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- Adhoc analysis among the team: 1 vote
- Use repeatable methodology with common criteria: 3 votes
- Poll internal stakeholders: 7 votes
- We always engage early in the process with prospective partners to test and validate use cases: 8 votes
- We engage once we have selected a short list of priority use cases: 4 votes
- Engage with a shortlist of prospective partners when we are at pilot phase: 3 votes

Panel discussion regarding the use of the methodology for use case selection:

The panelists were positive towards the frameworks presented and generally wished that such tools were available to them during the early stages of their business development into the healthcare space.

Then the session moved forward looking at the smart inhaler use case and its application to the remainder of the stages of the framework.

Smart Inhaler's – Digitization driving benefits to Asthma patients

- Asthma is one of the most common chronic non-communicable disease
- Asthma affected an **estimated 262 million people in 2019 and caused 461,000 deaths**
- Asthma is the **most prevalent respiratory condition in children worldwide.**
- The total 20-year direct and indirect costs of uncontrolled asthma are about **\$963 billion globally**

Prioritize use cases

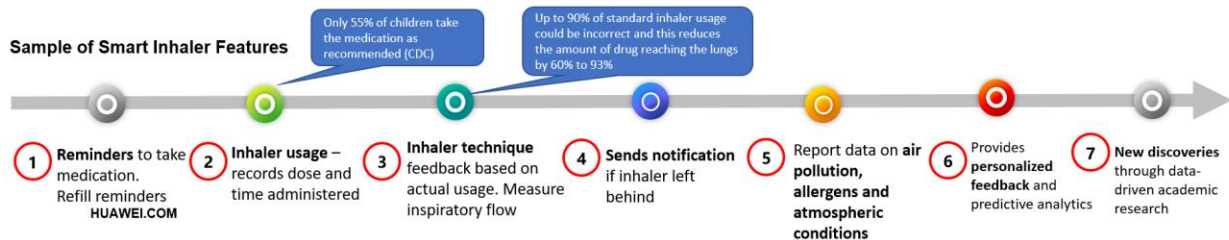


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Smart Inhaler Benefits

- **Improved patient outcomes**
- Provide accurate and detailed insight of **inhaler usage for practitioners**
- **Adherence** to prescribed medicine
- **Reductions in doctor visits / emergency admissions**
- Capture additional data items to **predicts asthma attacks**
- **Management of long-term conditions at scale**
- Data at scale in line with regulations can **drive further breakthroughs**



(*) https://www.asthma.org.uk/591e6f4b/globalassets/get-involved/external-affairs-campaigns/publications/smart-asthma/auk_smartasthma_feb2017.pdf

Then the team went into more detail regarding the CPA tool and its application to the smart inhaler use case.

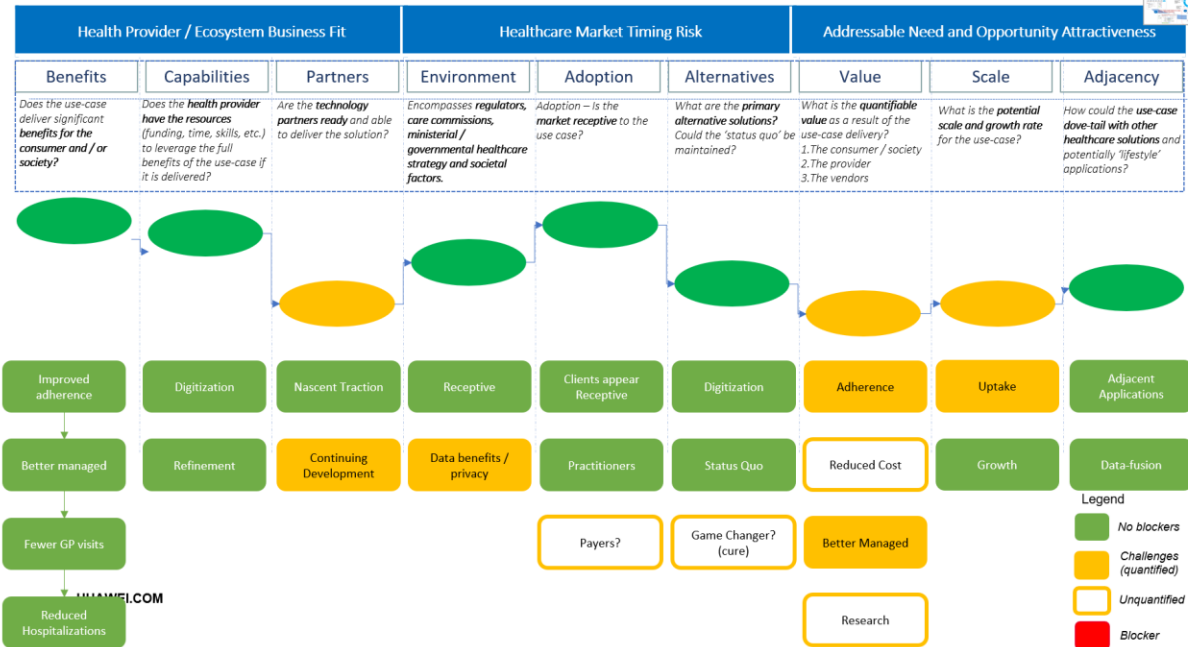


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High Level Evaluation of Smart Inhalers against Prioritization Criteria

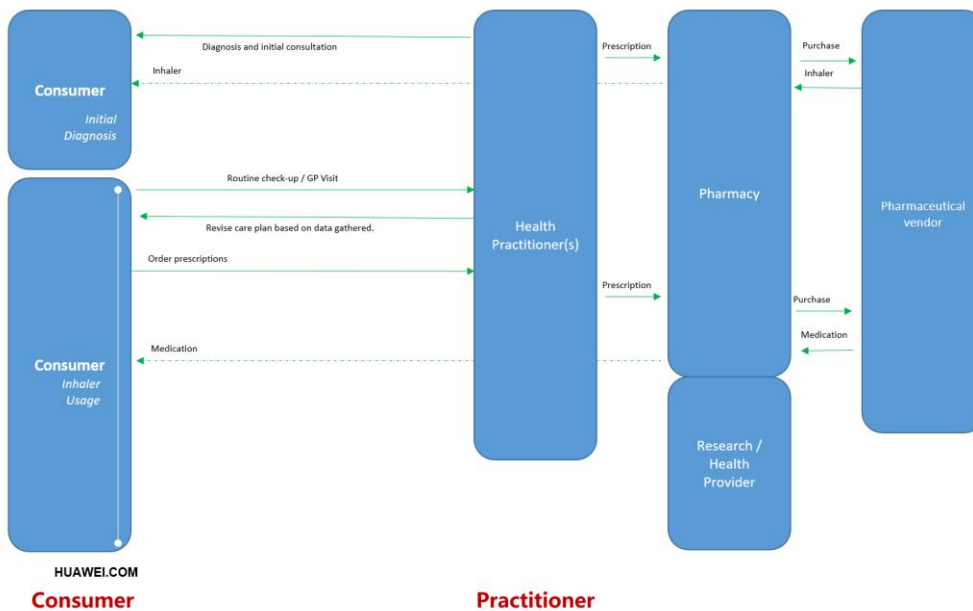
Prioritize use cases



Then the team looked and compared the value network for traditional inhalers v's smart / connected inhalers, recognizing the significant increase in complexity of the value network in order to fully realise the value from the use case.

Traditional Inhaler – Value Network

Develop value propositions

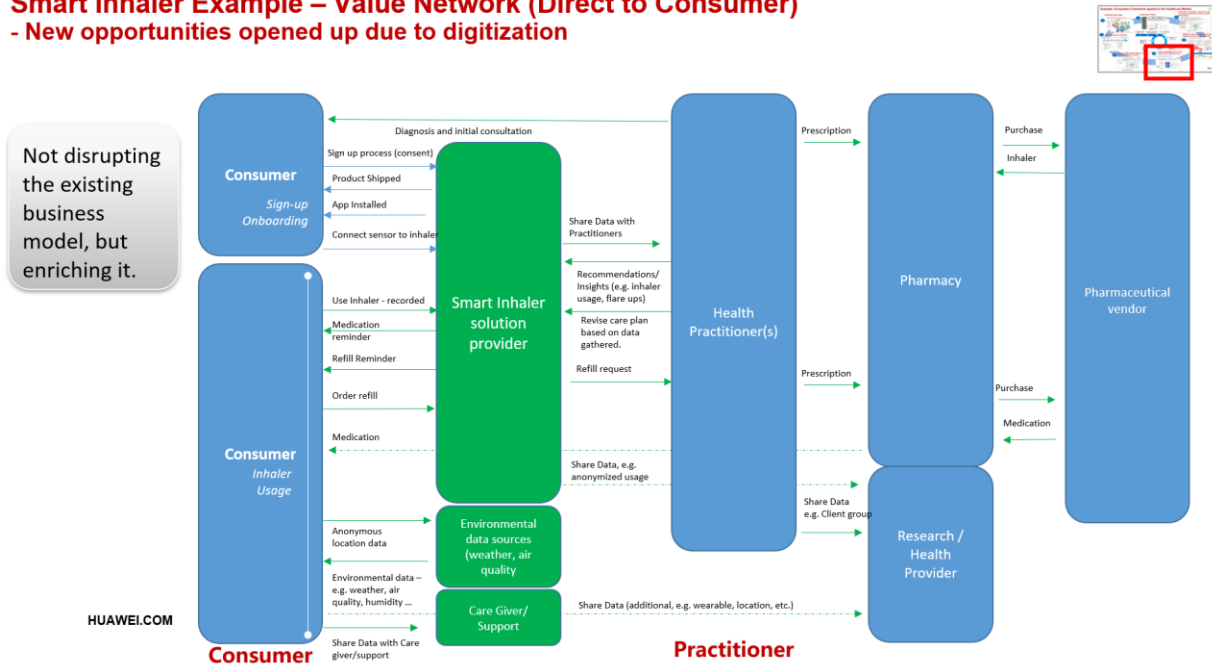




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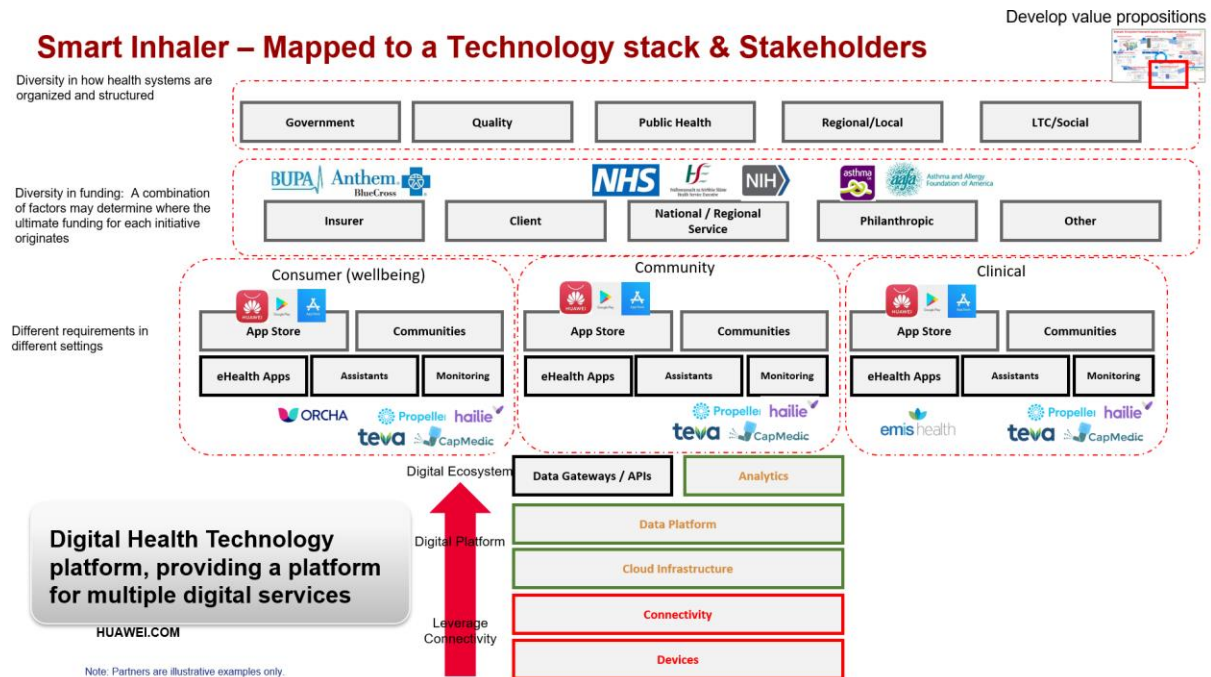
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Smart Inhaler Example – Value Network (Direct to Consumer) - New opportunities opened up due to digitization



Then the use case was mapped to the different technology layers and the respective stakeholders who play in this space.

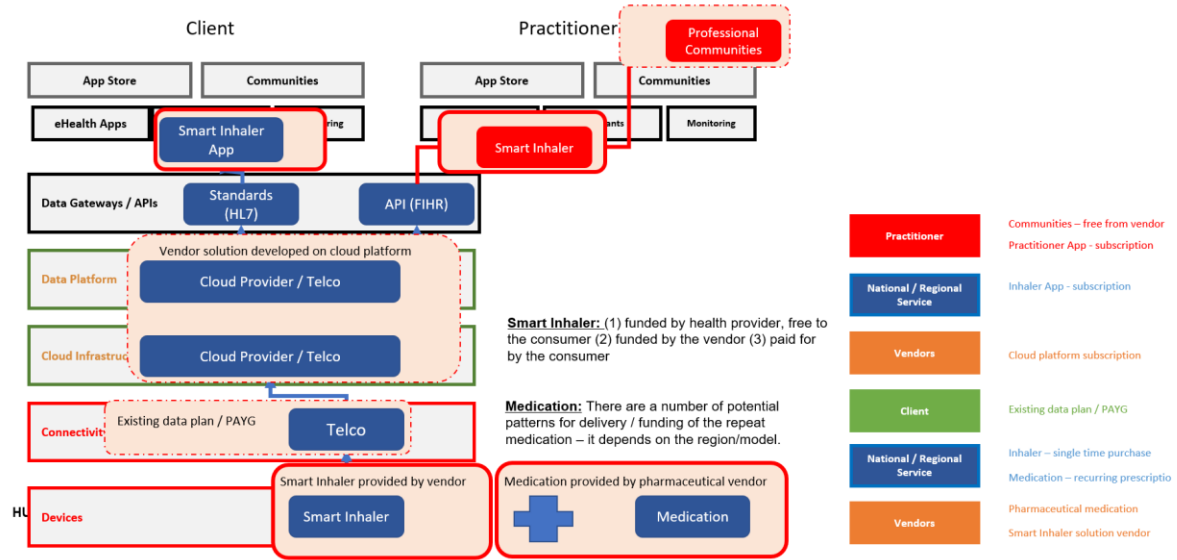
Smart Inhaler – Mapped to a Technology stack & Stakeholders



Note: Partners are illustrative examples only.

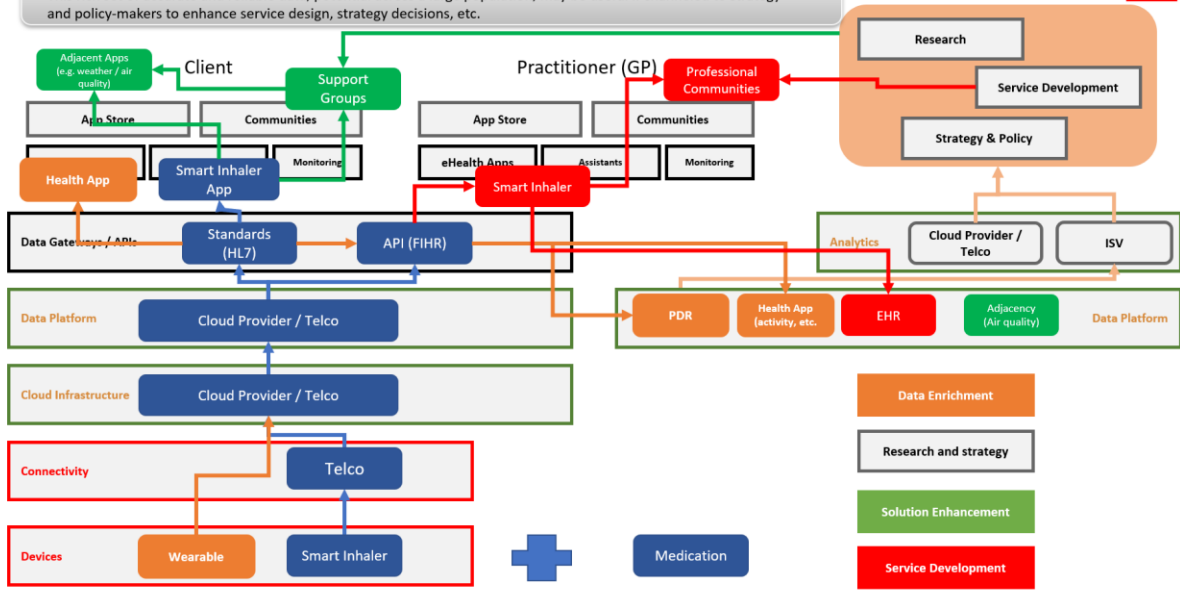
Smart Inhaler – Ecosystem Tech Stack Mapping

In this view, the inhaler and medication are at the core of the solution – similar to the traditional non-digital solution. Key difference vs traditional is the inclusion of the connectivity aspect and the cloud compute platform – essential tiers to achieve the higher-value functions at the top of the stack.



Smart Inhaler – Opportunity for data enrichment as ecosystem evolves

- Wearable may introduce more data items, such as sleep time/quality, activity, and biometrics.
- This rich set of accurate and reliable data, potential across a large population, may be useful if channeled to strategy and policy-makers to enhance service design, strategy decisions, etc.



Leveraging these diagrams the CSP can evaluate where they wish to play in the ecosystem and how this relates to other use cases, allowing for development of a common platform and reuse model to enable exponential growth for multiple offerings.

Checklist to challenge yourself for Business Ecosystem Development

- ✓ Understand ecosystem dynamics and **where your company could play?**
- ✓ Understand the **ecosystem landscape**
- ✓ **What role your company should play** and what is its strategic approach?
- ✓ **What potential value can your company offer** the ecosystem?
- ✓ **Who would you want to partner with** and how could it attract them?
- ✓ What **other ecosystems** will you need to interface to?
- ✓ How should the you **run and govern the ecosystem?**
- ✓ What **tools and skills do you need** for business ecosystem development?
- ✓ What is the **case for investment?**



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Open Questions & Discussion – Business Ecosystem Development

Use Case Selection	<ul style="list-style-type: none"> • What use cases should be prioritized for Business Ecosystem Development?
Beyond connectivity	<ul style="list-style-type: none"> • Beyond connectivity what opportunities should the Telco target? • What value can the Telco bring beyond Connectivity?
Platform Business	<ul style="list-style-type: none"> • What is your preferred Go To Market for new opportunities? • Who is best positioned to orchestrate a vertical industry platform?
Biggest Challenges	<ul style="list-style-type: none"> • What are the biggest challenges in creating a business ecosystem? <ul style="list-style-type: none"> > E.g. Skills, Organization & Culture, Regulation, Investment strategies ... • Are Telco's investing in the skills and structures needed to drive business ecosystems and platforms?

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Following this an open discussion was held with the panelists gathering their thoughts on potential applications of the frameworks and models shared during the session.

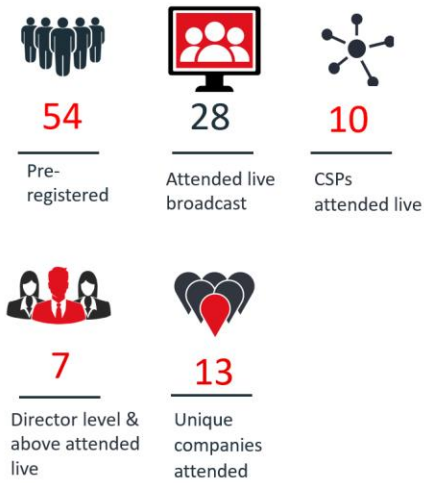
Conclusions:

There was a phenomenally positive response from the telco's regarding the methodologies shared and the value that these provide in driving the right strategy for growth beyond connectivity.

Joann indicated that she would be keen to see a new collaborative effort focused on ecosystem modelling and business model modelling inside the beyond connectivity program of TM Forum to help build out this essential practice in our industry.

Appendix Marketing Report:

Who attended



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

*reported numbers do not include sponsor affiliated staff

*Data from the last 30 days
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Service provider companies in attendance



Outreach and visibility



200+
emails sent



150+
individuals reached
via LinkedIn



200+
personal
invitations