

Q&A NOTES - Panel – How is IoT driving Digital Transformation?

Speaker response key:

- Rebecca Crowe, Managing Director - Spain, Sigfox
- Peter Clarke, Sales and Marketing Director, WND
- Ken Figueredo, Senior Representative, OneM2M

1. Good morning everyone my interest is in investing & support Healthcare could you offer any views around this at all please? Many thanks in advance Carl cbdLUK.com

(PC) There are already some products available as mentioned on the call, most notably to do with measuring water health to combat cross contamination, but also for asset tracking. More recently use of enabled buttons for after care and monitoring as well as a host of innovative ideas.

(RW) Health is definitely impacted by IoT. Use cases we are seeing:

- Connected medical equipment;
 - Health monitoring solutions such as wearables
 - Temporary hospital solutions for COVID 19
 - Elderly monitoring is a huge trend as people want to stay at home rather than go to care homes

2. Which are the main use cases using Sigfox in the UK?

(PC) Direct Marketing, utility monitoring i.e. water and electric smart meters, Leak detection and prevention, waste asset tracking, cycle trackers, Oil tank level monitoring, the list goes on.

3. How might we utilise Satellite communication combined with any terrestrial networks (4G, 5G, WiFi) in IoT?

(RC) We are seeing this as complementary coverage in remote areas such as oceans, deserts etc.

4. Good Morning and a very Good Afternoon from my part of the world. @Peter Clarke....I would like to know more about the concept of connected sanitizers.

(PC) There is a company bringing these to market, the concept being that they are connected to send the analytical data on usage to support the exit strategy from COVID-19. It's proposed they will be in restaurants, shopping malls, entertainment establishments etc with branded logos as part of the business model.

5. I am very interested to understand what 'new changes are happening around security' with the rise in attacks during COVID-19? IoT is doing more and more, creating more vulnerabilities that need containing and manging.

(PC) We discussed briefly on the call, I agree with Ken's observations however worth pointing out that for Sigfox security is embedded in the transport later as encrypted messages are sent from the device and remains encrypted all the way through to the intended recipient who has the key to unlock the data. The security needs to be applied as part of the journey from there.

(KF) The general advice is to design with security in mind from the outset rather than try and add it on after a product/service is deployed. See what happened with Zoom security and the halt it placed on product management to fix security flaws. The same issue applies to data privacy. After that, it is a matter of assessing security vulnerabilities and the appropriate level of protection (to avoid over engineered and potentially costly solutions, for example).

6. Good morning!! What are the main conundrums and challenges that IoT sector needs to solve?? How have those issues/challenges changed after Covid19?? Thank you!!

(RC) IoT covers from the following basic needs:

1. Improve efficiency, especially those related to loss, theft etc, etc. This would be the example of DHL. Especially being to have a higher visibility over parts of the operations which are subcontracted. This is the example of Michelin or PSA. We also have a lot of companies wanting to optimize field maintenance through sensors.
2. New business models or revenue streams Verisure
- 3 Increase security
4. Increased competitiveness
5. Customer proximity

7. Are you seeing regulatory or governmental barriers to IoT adoption? How are those being eased?

(PC) Decision making always plays a major role in adoption speed, what needs defining is more communication about how IOT is being deployed and how it can have a positive impact.

(KF) It is more a case of regulatory clarity and conditions that need to be met around services. This can involve the use of personal data or, health and safety obligations, for example. The issue then is to map out how these obligations affect IoT solutions. In the presentation I mentioned the importance of standardisation and there is evidence of this in relation to Korea and its commitment to oneM2M (see National IoT Strategy dating back to 2014). India is currently studying oneM2M in the context of its smart city initiative. In Europe, some cities are choosing oneM2M because it provides a framework for vendors to collaborate without locking the city into a single-vendor solution (e.g. Bordeaux, Transport for West Midlands).

8. Ken talked about the trustworthiness of the data. If we are going to rely on the data how do we verify the content of the data if say for example it is wrong due to a faulty device? How do we mitigate this?

(KF) This is an emerging area of work. Users of AI/ML solutions are starting to look for solutions to the challenge of explainable AI (i.e. when a diagnostic pattern recognizer or classifier predicts a fault, what explanation does it provide to the technician?). The next step in the process is trustworthy AI. This will involve users asking questions about whether they can trust the decisions an AI/ML system provides. That line of reasoning takes you down the path of tracking data and its provenance through data tagging or certificates, for example. ETSI has some work going on around AI and standardisation (Disclosure - I am a project advisor).

9. How to plan digital strategy from start within a manufacturing organization where nothing has done so far.

(PC) Start with the expectation of value you need to get from data and which elements of the business can be digitalised. We know a number of people that can support you with this.

(RC) You should identify your main pain points/areas for growth and look at similar success stories in other companies. Maintenance/asset loss are usually a huge cost centre in manufacturing where lots of efficiency can be gained.

10. Hi Peter, do the sensors work effectively indoors e.g., for universities, offices for air quality, water as you mentioned etc. For UK, which sensors are best to procure from both quality and cost wise to be based on Sigfox?

(PC) In short yes, however in some cases for deep indoor coverage signal may need enhancing for which we provide solutions. Would be happy to discuss specific sensors.

(RC) Yes. Sigfox has been specially designed to penetrate well buildings. You need to be careful about the quality of the sensor areal to maximize coverage.

11. To what extent will the 'issue' still be no shortage of ideation and lots of 'piloting' but a lack of understanding that governance, internal alignment, data ecosystems, cloud modernisation and lots of other 'enabling' factors are required to make IOT propositions make it to success-at-scale?

(PC) These are all valid points particularly if you are building and designing your own end to end IOT solution. The use of Sigfox technology takes away some of these concerns however our advice when deploying a pilot is to also work very closely on the value expected when its rolled out a capacity and take into account whether the individual components can be scaled i.e. devices may well be easy to get for a POC but will the same device be available in large quantities. Also, deployment factors need to be considered.

(KF) Pilots are fine as long as there is a strategy to progress beyond a pilot. In addition to the technology issues, that requires the piloting agency to focus on issues such as the business case, change management and user involvement in making the investment case for the organisations that are going to use and deploy IoT solutions. Here are some lessons learned from a successful project that was intentionally structured as a pre-commercialization pilot.

https://www.iiconsortium.org/pdf/June_2017_Jol_Intelligent_Transport_Solutions_for_Smart_Cities_and_Regions.pdf

12. Is IoT market trying to get low prices, and do you think that then the devices will be low quality? Should we all try to pay for good devices and not only for low price devices made without quality?

(PC) IOT is about connected millions of sensors, prices are lowering not only due to higher quantities but also manufacturing processes are becoming better defined and more efficient. New innovations in design are also having a positive effect on pricing which isn't impacting quality, however in order for IOT to reach the high numbers expected then pricing has to be aligned rather than a barrier. We have certification for exactly this reason i.e. so products are tested and given a grade for commercial use.

13. Agreed Transformation & Strategy will be key to any change in healthcare we are supporting a start-up that has been for a year now addressing this Healthnovum.com. Would you agree that we need all key areas to work together towards upscaling IoT?

(PC) Id agree that the components of the ecosystem need to work together yes. Operational implementation of a transformation strategy is quite often challenging, and this is where key areas working together are critical

14. What are the main conundrums/challenges IoT sector has to face? How have those issues changed after COVID-19?

(PC) Thank you!! I think a lot of them are being worked out, however I come back to the fact the value of any data collected needs to be more than the cost of collecting the data, that is key and critical in the success of IOT and/or specific transformational projects. I think COVID-19 will open up a new way of thinking and what to do with data to make businesses more sustainable, efficient etc but also bring about new innovations.