

Training Sessions, Briefings & Site Visits

IoT Training @ Nanyang Polytechnic (17th and 21st Jun, 2017)

Training Workshops on OGC SensorThings API and Briefing on Challenge Statements

1. Some 176 participants from the School and Open Categories attended the OGC SensorThings API training workshop conducted by CXA2017 training partner Nanyang Polytechnic on 17 and 21 June to acquaint themselves with the essentials of this IOT open standard. Among the participants were students from secondary schools, JCs, ITE, polys and universities, and working professionals from various industry sectors.
2. The 2-hour start-up workshop is designed to get them quickly up-to-speed in using the API through an introductory use case and hands-on practices on developer dashboards and tools, coding, code walkthrough and demonstration. During the workshop, the participants experienced the use of the live SensorThings API cloud platform provided by SensorUp Inc., the competition's technology provider. This is the same IoT standard platform that the teams would be using during the 24-hour hackathon this year.
3. Leading up to the day of the hackathon, the SensorThings API platform used in the training workshop will continue to be available online to facilitate the teams to continue exploring the API, and begin ideation and experimentation of their solutions. In addition, the workshop training materials, sample code, API documentation, and other developer resources are accessible through the workshop website until the competition.
4. Recognising that information and services interoperability is key to unlocking the full potential of IoT as we drive towards our vision of a Smart Nation, the CXA2017 participating teams are encouraged to demonstrate the application of IoT standards to enable sharing of sensor data and seamless connectivity of IOT applications to address real-world industry challenges.

5. SensorThings API, an Open Geospatial Consortium (OGC) standard, is one of the international standards recommended by Singapore's Technical Reference TR50 : 2016 – "IOT Information and Services Interoperability for Smart Nation".

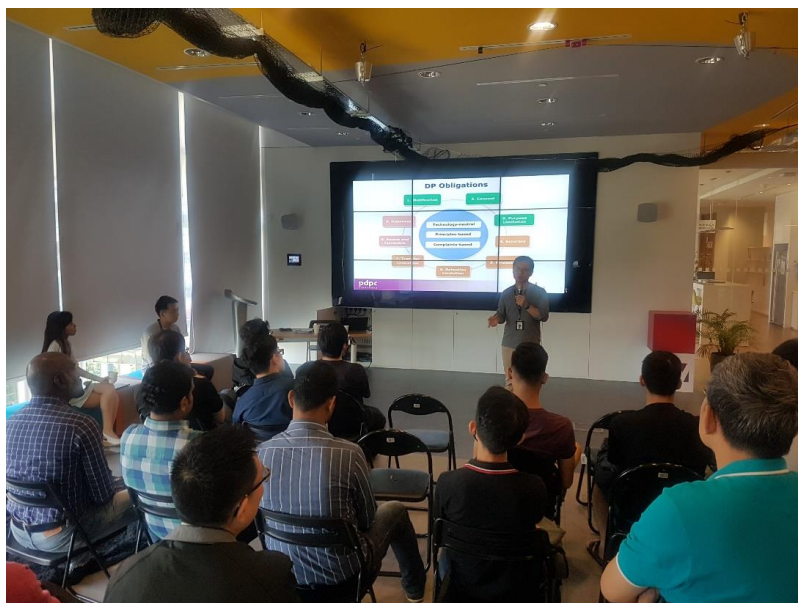
6. Differently from the practice in previous years, the challenge statements this year had been released six weeks prior to the competition. This is to allow the teams more time to conceive and design better and more complete solutions. In conjunction with the training workshop, briefing and Q&A sessions on challenge statements were also organised to help teams better understand the competition tasks at hand. Representatives from PSA, Cyber Security Agency, Suntec, CAG and the Organising Committee were present to provide the briefing and answer questions. On the day of the hackathon, additional requirements to the challenges (aka the "twists") will be announced to keep the teams really busy during the 24 hours.





PDPC Training @ IMDA (30th Jun, 2017)

7. A total of 14 participants turned up for the training. The purpose of the PDPA Sharing Session is to familiarise participants with organisations' obligations under the Personal Data Protection Act and what it means by Personal Data Protection by Design in a technical solution. During the sharing session, participants learned the basics about Personal Data Protection such as why Personal Data Protection is important for businesses, what PDPA governs, the 9 Data Protection obligations, Do-Not-Call provisions and Data Intermediaries. Participants also learned about incorporating the Data Protection obligations into the design and development of their technical solutions.



Oracle Code CXA 2017 Workshop – Live for the Code (3rd July, 2017)

8. A total of 20 participants had turned up for the workshop. The workshop was catered for developers & innovators to share how to develop modern cloud native applications with Docker and how to deliver business insights from sensor data with modern analytics toolset. Led by Oracle Asia Pacific R&D and Big Data Analytics team, together in partnership with CXA 2017, and the topics covered were:

- Technical support to the teams working with Oracle Cloud technologies
- Cloud resources and tools for your development of the challenge
- Mentorship at the CXA challenge
- Mentorship for startups (for those startups recruited under the Oracle Startup Cloud Accelerator program. For more info, refer to the Oracle Startup Cloud Accelerator program)



Oracle Startup Cloud Accelerator

9. In the global marketplace, one size doesn't fit all. That is especially true for today's diverse and competitive startup ecosystem. Oracle Startup Cloud Accelerator is not your traditional accelerator program—it's a next-generation acceleration initiative. The program focuses on reimagining enterprise innovation through partnerships with start-ups that foster co-development and co-innovation, where we all win. Our Singapore program will work across the vibrant and established startup community and provide unique benefits such as the following:

- Free credits on Oracle Cloud
- World-class mentoring and advising
- State-of-the-art technology
- Co-working space
- Access to Oracle customers and partners
- Access to investors

PSA Port Tour (5th Jul, 2017)

10. Participants were given a tour and briefing on the PSA port for a better understanding of the problem statement and what port business is all about. PSA is looking to implement solutions that will improve their workflow and making efficient use of their resources while maintaining high service and safety standards. The itinerary included:

- Seeing Automated Rail Mounted Gantry (aRMG) cranes in action - these unmanned, fully automated cranes run on electricity and stand seven stories tall
- Knowing more about Automated Crane Operations Control (ACOC), which allows control centre staff to monitor and handle exceptions for these cranes
- Automated Guided Vehicles (AGV) - driverless trucks that transport containers around the clock within port terminals and are being tested in a live operational environment at the 'PSA Living Lab'.

- Visit to the Maintenance Base which contains various components and spare parts for all equipment.
- Visit to the PSA Living Lab and unBoXed venues - where innovative ideas that bring value to PSA take shape, from conceptualization to prototype testing.



Microbit Workshop for Junior Category (19-22 Jun, 2017)

11. In preparation for the CXA competition, a total of 36 participating teams in the Junior category were given the opportunity to attend a training workshop held from 19-22 June 2017 at the School of Computing, National University of Singapore. The 3-hour session was specially curated to familiarize the young participants with the competition proper. For the first time, the participants will be using the micro:bit, a pocket-size micro-controller with a series of sensors and actuator modules. They are given sample challenge statements to work on to produce a solution in the form of an interactive and responsive system. During this workshop, they also learnt to program the various sensors and actuator modules to make simple prototypes. This training session was led by Home-Fix DIY Pte Ltd.