

## Fact Sheet

23 May 2017

### ENHANCED CLINICAL TRAINING WITH IMMERSIVE TECH

#### Background

1. As recommended in the Committee of the Future Economy, there is a need for Singapore to build stronger digital capabilities. Digitalisation is creating new industries and transforming many existing ones. By building stronger capabilities in digitalisation, Singapore can tap on the economic and social opportunities that benefit businesses, government and the community.
2. Immersive Technology, which includes Virtual Reality (VR), Mixed Reality (MR) and Augmented Reality (AR), is an emerging digital tech that can benefit and potentially transform industries including Healthcare. Recent tech advancements in computation and immersive tech hardware as well as better gesture / interactivity tech are enabling opportunities to realise the potential of immersive tech.

#### Enhanced Clinical Training with Immersive Technology

3. VR/MR lends itself particularly well to medical training as it provides an opportunity for healthcare practitioners to safely train using realistic and complex simulated environments and scenarios.
4. The Infocomm Media Development Authority (IMDA), Tan Tock Seng Hospital (TTSH) and local tech and visual effects company SideFX Studios (SideFX) have collaborated to jointly leverage immersive tech to enhance such clinical training.
5. This project that kicks off in May 2017 will involve the use of VR / MR to create innovative immersive tech clinical training simulations for:
  - Emergency airway management: Team based simulation to enable realistic training scenarios for one of the most important and critical component in the resuscitation of a deteriorating patient in an emergency, life threatening situation.

- Basic surgical skills: Simulation to enable realistic practice scenarios for suturing and hygiene which are essential skills of a doctor that are required in the delivery of care.
6. TTSH consultant specialists from emergency medicine and surgery; and their teams will provide healthcare domain knowledge to guide and test the development of the immersive tech simulations.
  7. IMDA's collaboration with TTSH is a result of the Memorandum of Intent (MOI) signed by both organisations to explore healthcare tech innovations that solve real world challenges. The opportunity to leverage immersive tech to provide solutions for a real healthcare challenge in partnership with a major healthcare stakeholder is a potential driver to catalyse new possibilities in Singapore's immersive tech ecosystem.
  8. Currently, VR will be used to complement traditional methods of clinical training because it cannot yet fully replicate a number of different qualities, such as tactile responses, patient and dynamic environmental changes.

## **Benefits**

- The use of VR/MR can help to increase productivity by requiring less clinician time, which is expensive and limited, to conduct training
- As set up of VR/MR can be set up in a relatively short time, VR/MR, resources such as training rooms, manikins, task trainers can be optimised and allow for more training sessions to be conducted
- VR/MR can also reduce costs by replacing the need to perform incisions directly on physical manikins that have expensive skin replacement parts
- VR/MR can simulate real and complex scenarios such as bleeding and swelling, offering more sophisticated training.
- The enhanced realism in the training simulation promotes greater retention and recall.

**About Infocomm Media Development Authority (IMDA)**

*The Infocomm Media Development Authority (IMDA) will develop a vibrant, world-class infocomm media sector that drives the economy, connects people, bonds communities and powers Singapore's Smart Nation vision. IMDA does this by developing talent, strengthening business capabilities, and enhancing Singapore's ICT and media infrastructure. IMDA also regulates the telecommunications and media sectors to safeguard consumer interests while fostering a pro-business environment. IMDA also enhances Singapore's data protection regime through the Personal Data Protection Commission. For more news and information, visit [www.imda.gov.sg](http://www.imda.gov.sg) or follow IMDA on Facebook [IMDAsg](#) and Twitter [@IMDAsg](#).*

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