

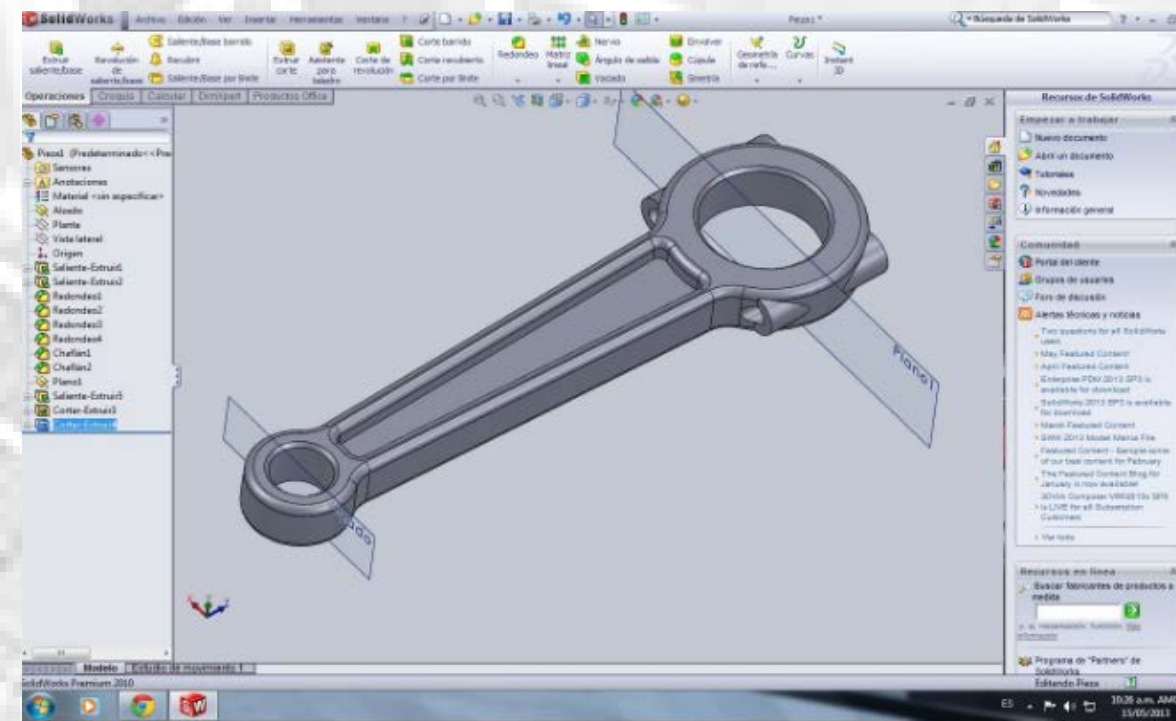


Enable the disabled – Use of 3D Printing technology in Occupational Therapy

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Use of 3D printing in KHOT

- Since Dec 2015
- 3D printer, scanner and software



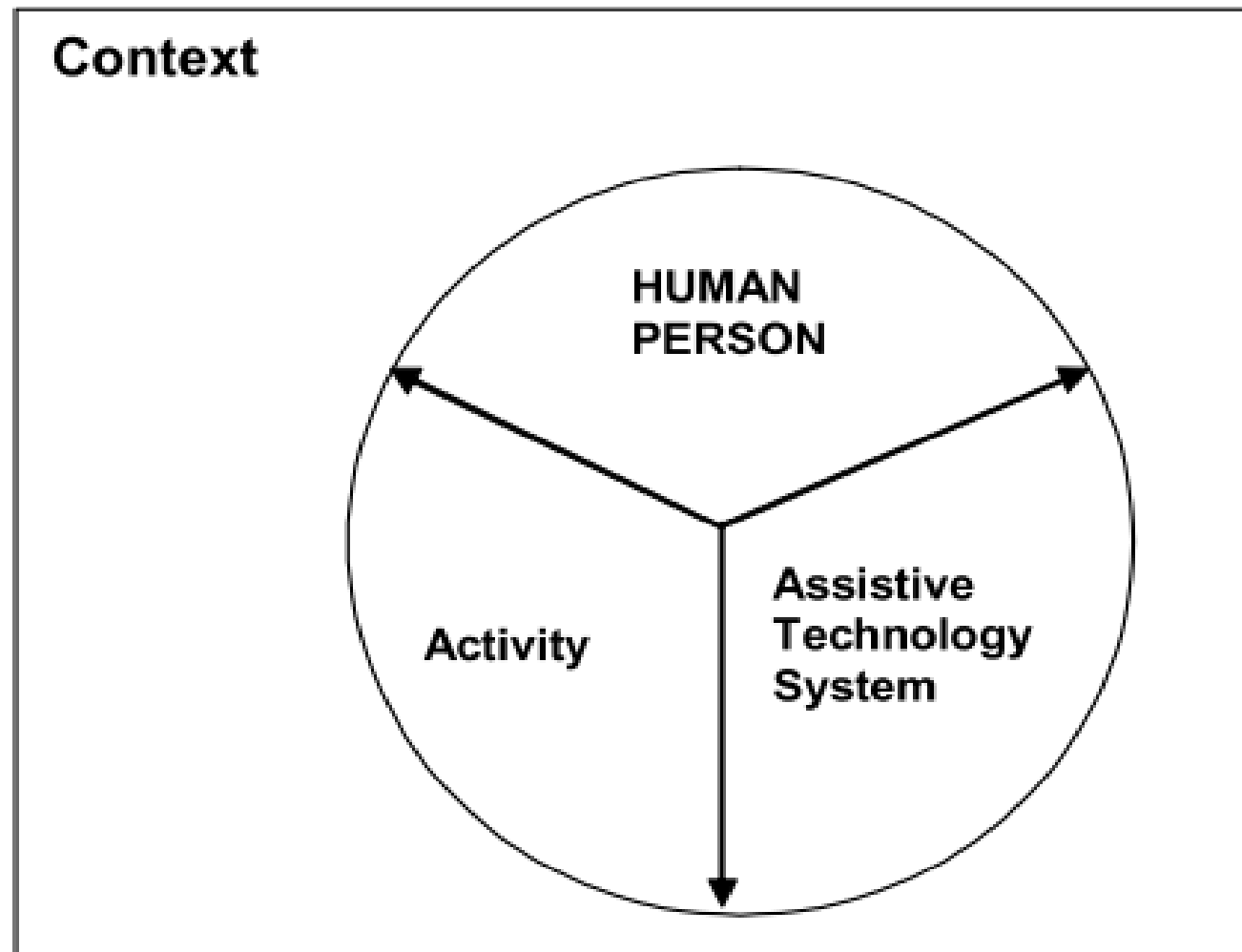
What 3D printing changes our assistive devices production?

- Sustainable/Environmental friendly
- Save the time for “bring ideas into reality”
- Complexity
- Customization
- Massive production

Generic VS Specific

3D PRINTING

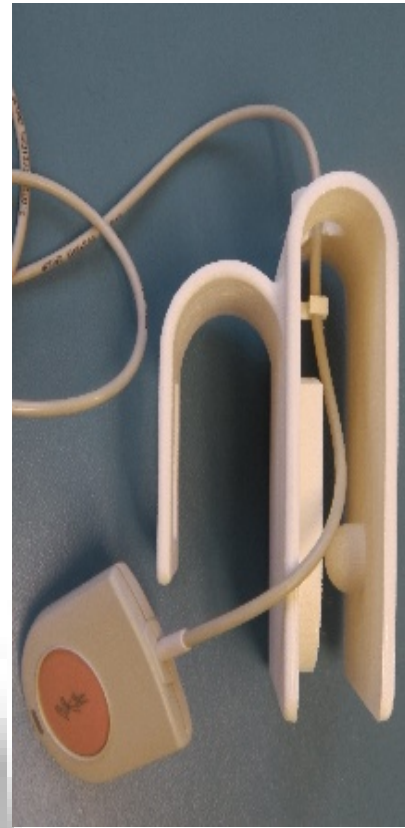
Development of 3D printed assistive device



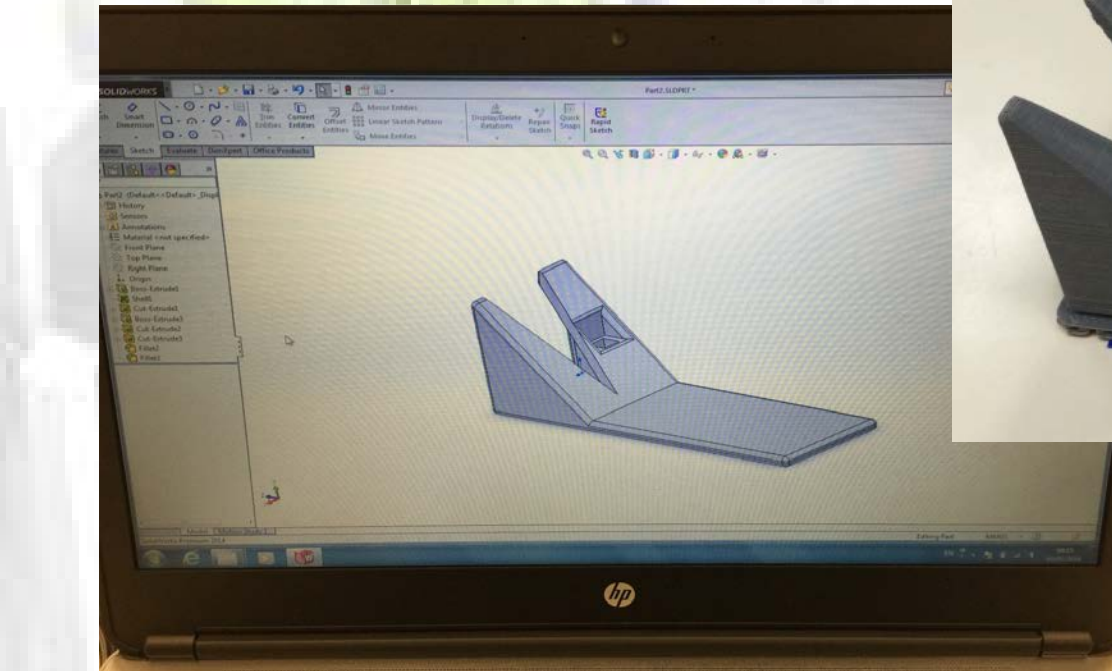
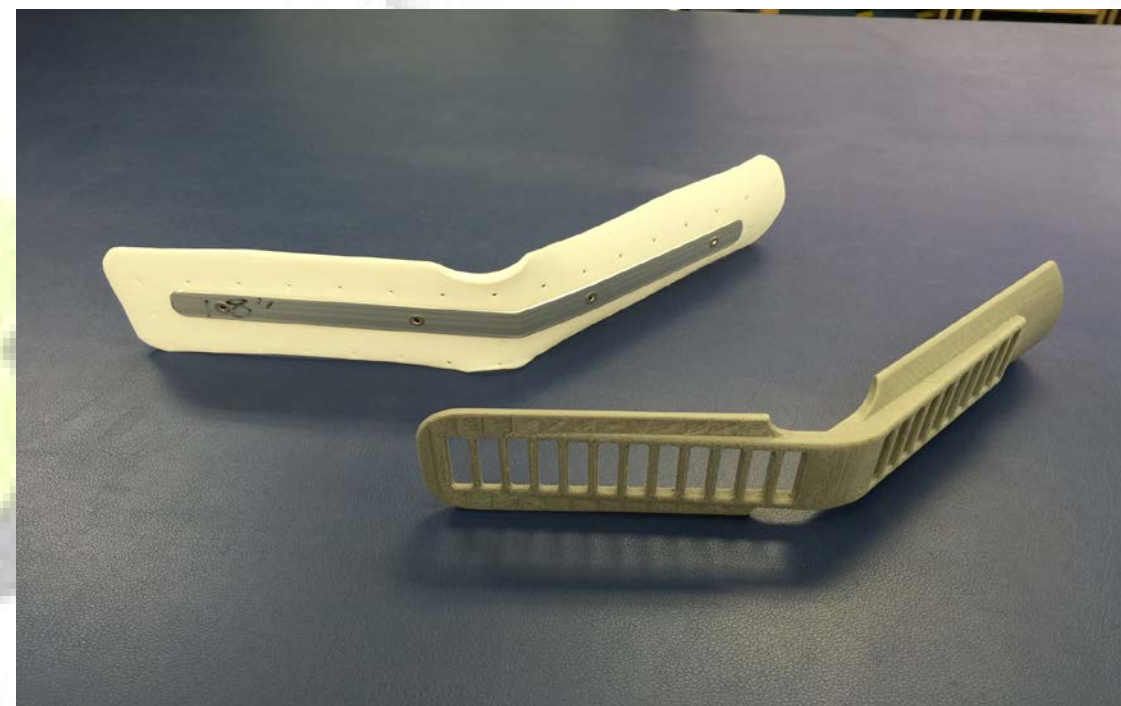
Human Activities Assistive Technology (HAAT) model

- Study the operational behaviour and performance of humans doing technological tasks
- Human-centred design procedure
 - Context
 - the social and physical environment in which the person and the assistive technology have to operate
 - Human person
 - person **(the OT)** who have the attributes of sensory inputs, central processing and motor outputs
 - Activity
 - the procedure, operation or task that the person would like to achieve **(Most flexible part of this model)**
 - Assistive technology
 - the external enabler **(3D printing technology)** used to overcome any contextual barrier or obstacle

Bedside call bell adaptor



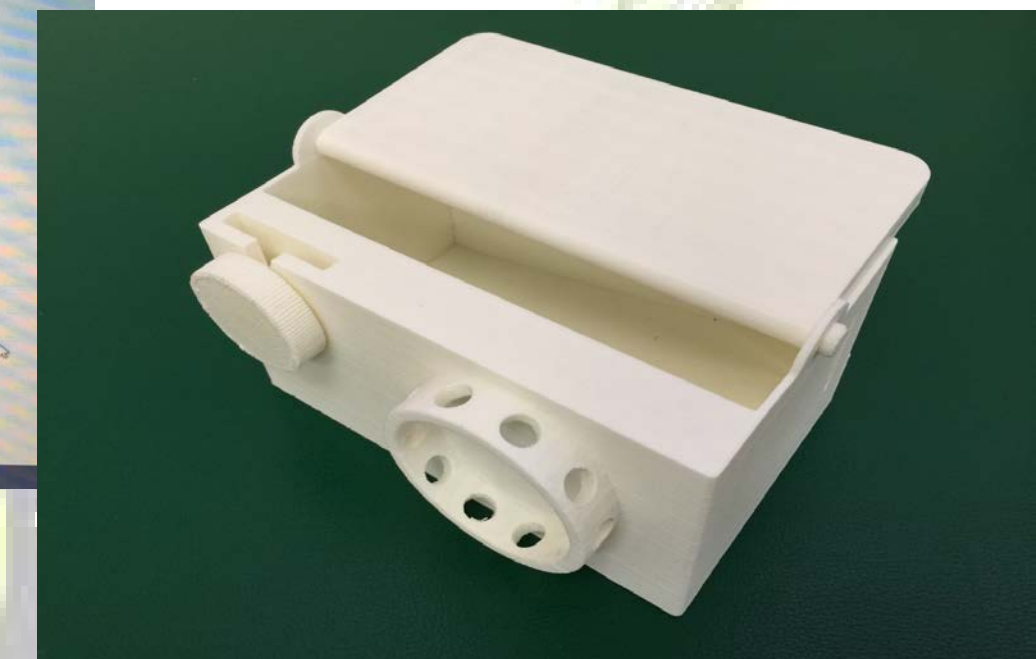
Light weighted splint in trendy design



One-handed self-injection device



Hand function training kit set



Action and future development

- Forming 3D printing supporting group within KHOT
- Developing data bank of 3D printed product on our department intranet
- The design of “Bedside call bell device”
 - Professional support from Queen Elizabeth Hospital **3D Model Service Development & Strategic Planning Committee**
 - Technical support from the **Hong Kong Polytechnic University Industrial Centre**
 - Joint collaboration to fabricate 50 devices to benefit the patients with hand function problems (e.g. stroke patient, spinal patient, etc.) to use the bedside call bell in QEH, KH and BH.



Thank you

Acknowledgments

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3D PRINTING