**Doctor who?**

In recent years, experts have debated if the future of medical practice would be more robot than doctor. Robots like the da Vinci Surgical System* have advanced to facilitating complex surgery, with arms that act as scalpels or scissors and controlled by a surgeon from a console in the same room. In Singapore, automated guided vehicles (AGVs) are increasingly sought after by hospitals to reduce the workload of caregivers: in delivering drugs or documents or even talking to patients. BT looks at five robots designed by homegrown engineering firm Hope Technik. By Jacquelyn Cheok

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**Finger force**

Co-developed by Hope Technik and NUS Professor Yu Hao Yong, the Sesto Bed Mover requires minimal effort to steer and move hospital beds around increasingly cluttered hospitals. Its motorised platform senses the direction the caregiver intends to move the bed towards, and assists by mowing the bed in that direction.

- **Payload:** 300kg
- **Max speed:** 2.0m/s
- **Features:** 8-hour endurance, omni-directional wheels
- **Use:** Post-trial

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**Iron man**

A wear-on robotic lower limb assistive structure, the Rehabilitation Exo-Skeleton co-developed by Hope Technik and NUS Prof Yu is meant to assist patients during physiotherapy and gait rehabilitation sessions.

- **Use:** Pre-trial

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**Body check**

The Sesto Logistic Mover is able to detect and avoid obstacles when in autonomous control mode; auto-brake, and hold its position on slopes. Like the bed mover, it assists logistics personnel by sensing their intention and assisting in moving hospital equipment in the desired direction.

- **Payload:** 200kg
- **Max speed:** 2.0m/s
- **Features:** 8-hour endurance, omni-directional wheels
- **Use:** Changi General Hospital, manufacturing and logistics companies

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**Compound annual growth rate**

**28.4%**

**Global healthcare mobility solutions market worth**

**US$4.8m**

**US$24.3m**

**2015**

**2020**

Source: MarketsandMarkets

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*According to American manufacturer Intuitive Surgical, its robot is named 'da Vinci' in part because Leonardo da Vinci's study of human anatomy eventually led to the design of the first known robot in history.