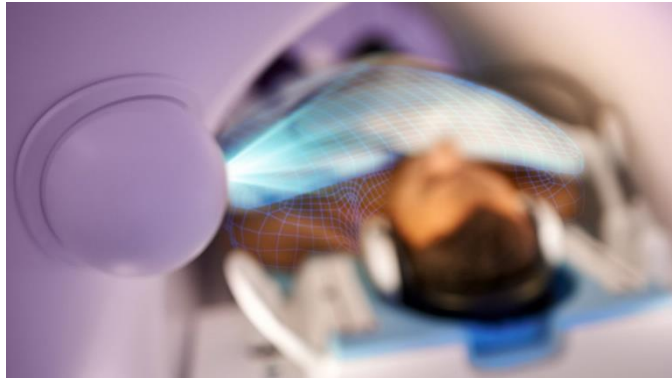


## Media Backgrounder

January, 2022

### **The power of AI**

AI represents a dramatic opportunity to improve healthcare by turning data into actionable insights that enable more precise and personalized care across the health continuum; helping people take better care of their health and well-being, and enabling healthcare providers to do what they do best - prevent, diagnose, treat, and monitor.



### **Why is it important?**

A rapidly growing body of research has demonstrated how AI can have a wide range of useful applications in healthcare, such as the interpretation of chest X-rays, spotting cancer in mammograms, identifying brain tumors in MR images, and detecting arrhythmias in ECGs<sup>1</sup>. AI has also been used to inform cancer treatment recommendations based on a patient's genetic profile<sup>2</sup> and to predict the likelihood of complications in stroke treatment<sup>3</sup>.

With those applications come the promise of earlier detection of disease, more precise diagnosis, personalized treatment, while in addition, AI-enabled technology has shown potential in facilitating self-management of chronic disease at home, thereby improving quality of life and reducing the risk of hospital (re)admission,<sup>4</sup> and more.

### **What is the benefit of the innovation?**

**Philips' AI-enabled solutions are designed to:**

1. **Augment the expertise of healthcare providers and support their decision-making:** AI can assist healthcare providers with their daily work and help inform their decisions, allowing them to practice at the top of their license and deliver optimal patient care. For example, AI can support radiologists with image segmentation and quantification, for

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<sup>1</sup> Kelly, CJ, Karthikesalingam, A, Suleyman, M et al. Key challenges for delivering clinical impact with artificial intelligence. BMC Med 2019. 17, 195. <https://doi.org/10.1186/s12916-019-1426-2>

<sup>2</sup> Davenport, T, & Kalakota, R. The potential for artificial intelligence in healthcare. Future healthcare journal, 2019. 6(2), 94–98. <https://doi.org/10.7861/futurehosp.6-2-94>

<sup>3</sup> Aung YYM, Wong DCS, Ting DSW. The promise of artificial intelligence: a review of the opportunities and challenges of artificial intelligence in healthcare. Br Med Bull. 2021 Sep 10;139(1):4-15. <https://doi:10.1093/bmb/ldab016>. PMID:34405854

<sup>4</sup> Lee D, Yoon SN. Application of Artificial Intelligence-Based Technologies in the Healthcare Industry: opportunities and Challenges. Int J Environ Res Public Health. 2021 Jan 1;18(1):271. <https://doi:10.3390/ijerph18010271>

greater confidence and consistency in diagnosis. Similarly, AI can aid cardiologists with diagnosis and help guide interventional procedures. By integrating patient data, AI can also provide additional insights for more precise and personalized care. For example, in cancer care, AI can help integrate data across specialties longitudinally, to support cancer care teams with a definitive diagnosis and inform selection of the best care pathway. Or, in acute and post-acute care, it can help clinical teams identify patients at risk and intervene earlier based on an assessment of multiple vital signs.

2. **Improve operational efficiency to help healthcare providers save time and focus on patient care:** By automating or accelerating routine and repetitive tasks, AI can ease the burden on healthcare providers, saving them time and freeing up focus for value-added work to improve productivity as well as the patient experience. For example, in radiology, AI can support imaging technologists with routine exam planning and preparation. Similarly, it can speed up image acquisition to shorten exam times and thereby improve the patient experience. AI also enables predictive maintenance of equipment to help optimize uptime and prevent avoidable disruptions to patient care. On an enterprise level, AI can help forecast and manage patient flow, based on real-time and predictive insights that inform the allocation of staff, beds, and equipment, for timely patient transitions all the way from hospital admission to discharge.
3. **Empower people to take better care of their health and well-being. Ultimately, that's how AI can contribute to better health outcomes, improved patient experience, improved staff experience, and lower cost of care:** AI can turn data from smart personal health devices into actionable insights that support people with healthy living, and that help them prevent or manage chronic disease in collaboration with healthcare professionals. For example, in oral healthcare, AI can analyze an individual's brushing behavior through sensors embedded into a smart toothbrush, and – through a mobile app – offer personalized recommendations that encourage people to improve their oral hygiene habits. Similarly, in chronic disease management, AI-enabled solutions can motivate people to take an active role in their therapy and track progress towards personal goals, while staying closely connected to a qualified healthcare professional.

### **What is innovative about it?**

At Philips, we believe the value of AI is only as strong as the human experience it supports. That's why we combine the power of AI with deep clinical knowledge to create solutions that integrate into the workflows of healthcare providers and people's daily health routines – supporting them at every stage of the health continuum.

AI fosters connected and collaborative care across settings – from hospital to home:

- **Intelligently filter information** to give caregivers just the information they need, when and where they need it.
- **Enable early intervention** by rapidly identifying sick patients in lower acuity units.

- **Support ICU discharge planning and readiness** by predicting at-risk patients and readiness for discharge.
- **Enable remote patient monitoring** to extend the line of sight and prevent potentially avoidable hospital readmissions.
- **Provide patients with personalized therapy support** for increased patient engagement and better outcomes.

But for AI-enabled solutions to take hold, they need to integrate into the workflows of healthcare professionals and people's daily health routines. And only by combining AI with deep clinical knowledge can we gather the most relevant insights from data that truly make a difference at the point of care.

### **Find out more**

- Philips [AI-enabled solutions](#) | [Philips](#) portfolio
- [Philips AI Position Paper](#)

### **Sources**

- [Philips AI Position Paper](#)
- AI at Philips (customer deck)

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#### **About Royal Philips**

Royal Philips (NYSE: PHG, AEX: PHIA) is a leading health technology company focused on improving people's health and well-being, and enabling better outcomes across the health continuum – from healthy living and prevention, to diagnosis, treatment and home care. Philips leverages advanced technology and deep clinical and consumer insights to deliver integrated solutions. Headquartered in the Netherlands, the company is a leader in diagnostic imaging, image-guided therapy, patient monitoring and health informatics, as well as in consumer health and home care. Philips generated 2020 sales of EUR 17.3 billion and employs approximately 78,000 employees with sales and services in more than 100 countries. News about Philips can be found at [here](#).