



HFS Hot Vendor: Graphcore

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Introduction

The HFS Hot Vendors are an exclusive group of emerging players, each with a differentiated value proposition for the HFS OneOffice or HFS OneEcosystem. HFS analysts speak with numerous exciting startups and emerging players.

We designate a select group as HFS Hot Vendors based on their offerings' distinctiveness, ecosystem robustness, client impact, financial position, and the impact in our OneOffice and/or OneEcosystem Frameworks. The HFS Hot Vendors may not (at the time of writing) have the scale and size to be featured in our Top 10 reports, but they have the vision and strategy to impact and disrupt the market.

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Graphcore, founded by Simon Knowles and Nigel Toon, is an AI start-up with offices in Bristol, UK and Palo Alto, US. Its target market includes cloud and data centre providers (e.g., AWS), autonomous vehicle makers (e.g., Tesla), and other embedded application providers.

This start-up is targeting cloud and data centre providers with an offering to lower the cost of their AI by improving performance and efficiency by 10x to 100x. Graphcore has created a processor that's claimed to be the first specifically designed for machine intelligence workloads—an intelligence processing unit (IPU). The IPU has been optimized to work efficiently on the complex high-dimensional models needed for machine intelligence workloads.

IPU emphasizes parallel, low-precision floating-point computing and claims to provide much higher compute density than solutions from competition. Graphcore was launched with a series A funding of \$30 million in October 2016; this first funding round lead was Robert Bosch Venture Capital. Other funders include Samsung, Amadeus Capital Partners, C4 Ventures, Draper Esprit, Foundation Capital, and Pitango Capital.

In May 2017, Graphcore secured series B funding of another \$30 million led by Atomico, followed by \$50 million funding from Sequoia Capital in November 2017. Graphcore is currently sitting on an unspent capital of \$80 million, which gives a lot of leverage on how it can shape its future growth. Graphcore's main contribution is that it is rethinking the way AI computation works at an underlying level.

This area of research is fascinating enough that the likes of Google and Apple are redesigning their own graphics processing unit (GPU) technology to tap this kind of streamlined processing for operations like computer vision, language recognition, and others centred around machine learning. Graphcore's core product is the IPU. An IPU is a new breed of processor designed to do rapid-fire calculations that machine learning requires, running through millions of data points in a minimal amount of time with as little power consumption as possible. A GPU is fairly good at that, but for Graphcore, it's an area that is ready for re-thinking and specialization.

Vendor factsheet

- Founded in 2016, Headquartered in Bristol, United Kingdom
- Founders: Simon Knowles and Nigel Toon
- 1+ years experience in processing unit development
- Targeting cloud and data center providers
- Number of Employees: 50 – 100

Solution portfolio

IPU: Intelligence processing unit designed for machines intelligence workloads

Industry coverage

Automotive, Retail, and BFSI

Investors

- Sequoia
- Atomico
- Bosch
- Samsung
- Dell Technologies Capitals
- Amadeus Capital Partners
- C4Ventures
- Draperspirit
- Foundation Capital
- Pirango Venture Capital



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Its analysts are respected for their no-nonsense insights based on demand side data and engagements with industry practitioners.

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