Open source provides the building blocks for future technology innovation

By Sumit Sharma

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Open source is by no means a new technology, but it has matured over the past 30-plus years and with the latest wave of digital transformation, its role has become increasingly prominent. In the everyday business sense, it is still a cost-effective option for operating systems, databases, and analytical tools. However, where the nature and benefits of open source are truly being realised is in the artificial intelligence (AI) and machine learning spaces.

Sumit Sharma, enterprise architect and head of advisory services at In2IT | image supplied

The open, community-driven, and collaborative environment created by open source is the perfect ground for these new-age initiatives, fostering innovation while ensuring that there is no single entity driving the agenda around the technology that will shape our future.

Still the business benefits

Open-source solutions remain a viable option for organisations looking to reduce capital and operational expenses and work within increasingly tight budget constraints. The Covid economy has driven more businesses than before to consider these types of solutions.

The speed of innovation is also one of the appeals of open source, and the platform lends itself well to projects that require high levels of customisation. However, while the barrier to entry for proprietary software and systems is financial capital, there remains a barrier to entry around open source in the form of human capital.

While licensing costs are reduced and the source code is open so it can more easily be tailored and customised, open-source solutions are only 'free' to a certain extent, and there are certain trade-offs. The skills required to develop and maintain software and systems using open source are not something that every business has or can afford to keep in-house.

For this reason, although the energy and technology sectors in Southern Africa are adopting open source, it is not the preferred solution in this region, or up into Africa, due to the well-known skills shortage and still-maturing market. There remains a lot of room for growth.

The right partner is key

The high barrier to entry in terms of skills and knowledge is one of the main detractors for shifting to open-source solutions, especially in the South African context and through Africa in general. The decision of whether or not open source is a viable platform for any business depends on the needs and personality of the organisation.

A conservative organisation that appreciates the presence of the Original Equipment Manufacturer (OEM) is not well suited to open source, nor is an enterprise that is looking to outsource the majority of the IT function. Your IT partner can assist with ensuring the correct decision is made around the right business solutions.

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However, open source is providing the building blocks for future technology innovation. It is seeing a lot of development, major proprietary vendors are acquiring open source houses, and new technologies including AI, machine learning and blockchain innovations are being driven by open source.

The futuristic concept of 'Artificial General Intelligence' or AGI is something that can only come from the collaborative environment of open source, as is the evolution of natural language processing to natural language understanding.

Open source is driving the future of technology. It is therefore an option that is worth exploring for many businesses. To really exploit the benefits, skills and experience in the code are critical, and where businesses cannot maintain these in-house, the right IT partner is the key. A specialised IT partner can also provide maintenance and support to ensure solutions continue to deliver as required.

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