ASIA'S AI BOOM:
THERE'S MORE TO AI THAN CHIPS

Wade K Wright / Startup News Asia

It's a headline that is self-evident, of course, but it's easy for this basic fact to be lost in the ever-shortening news cycle: artificial intelligence is about more – much more – than the chips that make AI possible.

We tend to see AI as something that exists in the air, in the digital world, when in fact it is grounded, and limited, by some very clear real-world considerations. With these considerations inevitably come opportunities, and I'll look briefly at a handful of those opportunities below, in part to illustrate the 'depth' of the overall opportunity that artificial intelligence technologies present as a package.

Briefly, I'll look at 3 elements to Asia's artificial intelligence boom that, whilst obvious, present a depth of opportunity that can sometimes go under the radar.

1) Data centers plus

We of course already have data centers, globally, delivering processing and storage for online and data-driven services.

Under the current, burgeoning AI boom, these facilities are being upgraded, expanded, refined - and sometimes physically reshaped – whilst new facilities are obviously being planned and constructed.

Each of these elements represents significant investment, in financial terms and in infrastructure. This pushes both government and private industry to invest, and to create vehicles and mechanisms for investment. Significantly, these elements can, and usually do, also represent opportunities for partnerships, innovations, collaborations and exchange.

In our own everyday lives, a good working partnership leads us to want to work with that individual, or company again. So too with reliable development partners, whether in finance or technology.

As Asia develops into its own, unique digital future, these elements may inevitably prove to be as important as the core physical facilities that drive artificial intelligence and related technologies.

2) Real estate

Yes, real estate.

What we've seen with the growth of data centers, often but not exclusively driven by the growth of AI, is the development of larger, and growing, opportunities in the real estate sector. Why? You need somewhere to site your facilities, of course, but you also need that location to be viable – within acceptable reach of your primary market, if serving a particular geographical area – and affordable.

Simply to illustrate, Singapore real estate is relatively expensive, both due its small available footprint upon which to build, and due to regulations and pricing around carbon emission and power, respectively. In contrast, Johor state, over the border in neighbouring Malaysia, presents a favourable, well-located, low-cost option for facilities.

> *"According to Malaysian property agency Zerin Properties, the state of Johor in Malaysia is expected to attract RM17 billion ($4.9 billion) in new data center investments in 2024, building on the RM51.1 billion in data center investments in 2022. Linking the surge in investments in Johor to Singapore's stricter criteria for data centers, favoring sustainability, Johor's ample land and stable power supply, in contrast to Singapore's rising energy costs and land constraints, make it an ideal location..."* **(Link)**

> *"The latest to announce its opening of a data centre in Johor is Singapore-based ST Telemedia Global Data Centres (STT GDC). The new STT Johor data centre campus is its second in Malaysia."* **(Link)**

Consider also the facility construction costs inherent in different countries and locations, and you see why real estate can also gain from the growth of AI, with the building of data centers needed to drive AI services.

> *"The top 5 most expensive markets for land cost are Singapore, South Korea, Greater China and Hong Kong, Japan and Mainland China... With year-on-year increases of between 8% in Singapore and 3.5% in Australia, the top 5 most expensive markets for construction cost are Japan, Singapore, South Korea, Greater China & Hong Kong, and Australia."* **(Link)**

3) Energy innovation

China has recently unveiled both the world's largest offshore solar energy platform (**link**), and the world's largest wind energy turbine (**link**). Whilst these are, of course, not purely focused on serving the artificial intelligence industry, sustainable energy projects like these will undoubtedly – and increasingly – be part of the mix required to meet AI-related energy needs. After all, China is investing billions into large-scale technology projects such as the 'Eastern Data and Western Computing' network (**link**), and so faces ever-increasing energy demands to support projects at this scale.

Taiwan, obviously a leading light in the world's semiconductor manufacturing industry, can also illustrate where energy innovation may be set to gain from the artificial intelligence boom. In simple terms, if the requirements state that a percentage of energy must come from sustainable sources, any increase in the baseline for that requirement automatically means more of each part of the energy mix that fulfils it. That means more sustainably-produced energy and – quite likely – increased state, and private, investment in this as a growing industry.

> *"A Taipei-based renewable energy firm has commissioned [what may become] the world's largest offshore floating solar power plant... The enhanced capacity will now supply energy to approximately 74,000 households in Taiwan."* **(Link)**

ASIA'S AI BOOM:
THERE'S MORE TO AI THAN CHIPS

Wade K Wright / Startup News Asia

> *"Since 2022, Taiwan has increased electricity prices four times, primarily affecting large industrial users. In April, prices surged by 11% on average, with TSMC and other major industrial users experiencing a 25% hike. Last month, the government froze prices for households and declining industries but raised them by 14% for thriving industrial sectors."* **(Link)**

Whilst the quote directly above may not at first glance seem to fit with the point I'm making, consider it instead in terms of how an increase in volume can often mean a drop in per-unit cost.

So, again, in one way of looking at it, AI may be helping to drive sustainable energy mixtures at the national level, and at the technological layer by simply being a requirement. More AI equals more efficient and sustainably produced energy, perhaps.

Final thoughts

The three points outlined above really remain only the tip of the iceberg that is AI. Many other techologies – and therefore opportunities – emerge from a few moments' thought: energy management solutions, cooling technologies, cybersecurity innovations, and the development of skill sets and new industries for both educational and workplace specialisation. And that doesn't even touch on the research and development opportunities.

So, to bring this brief overview to a close, strangely enough I'll go to the less technologically-obvious element of real estate's importance to AI facilities. In the Asia context, locations that in the past had limited opportunities to participate in a meaningful way in the world's technology industries may now find themselves with an open door for partnerships, for cross-border exchange, for infrastructure development, and for a range of associated benefits.

To borrow from the real estate world, AI in Asia may in some ways be all about 'location, location, location'.