



WHEN SMALL IS BEAUTIFUL

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Today there is no doubt that advances in artificial intelligence (AI) are fuelled by an explosion of data. The general logic is that the more data a system is given, the more it learns and the more accurate it becomes. And data is indeed exploding: each year the amount of data we produce doubles and by 2030 there will be at least 20 times [more connected devices](#) than humans on earth.

In the search for the ‘winners’ of the AI race, Chinese and American companies are often the usual suspects. Yet upon closer inspection, smaller nations like Israel are thriving amongst these digital giants. But how – and why – has it succeeded where others have failed? My team set about to unravel this mystery by speaking with Israeli firms at the forefront of AI success.

Digital companies such as Google, Amazon and Facebook, but also traditional businesses like MetLife and GE, thrive on access to abundant data and perhaps the largest pool of AI talent available. Add to that a massive inflow of capital – including government funding – and we have the recipe for an AI marathon, rather than just a sprint. In fact, the US is no longer the biggest investor in AI. China is investing over half of the world’s total funding into AI start-ups and according to [PricewaterhouseCoopers estimates](#), is poised to take home over \$7 trillion worth of contribution to GDP by 2030 – more than double that of North America. China produces more data than any other country, and that data is more easily accessible to Chinese companies than any others.

But then there is Israel, which has one of the smallest populations in the world yet is surprisingly big in AI. The facts don’t lie. Israel boasts a similar number of AI start-ups as China and about one-third of capital raised in 2019 – around \$3 billion USD – went into AI start-ups. As the CEO of the Israel Innovation Authority shared with us, over 40 of the 400 research and development centres of the world’s leading multinationals in Israel, such as Intel, IBM and Microsoft, are focused on AI. Moreover, Israel is also home to [20 unicorns](#), some of which are focused on AI.

What are we missing? Isn’t access to massive data a prerequisite for AI success? Clearly, Israel cannot easily borrow data from China or the US. Even a highly supportive government – with a unique military defence commitment - and Israel’s strong local entrepreneurial culture cannot make up for the sheer access to data that is afforded to Chinese and American companies.

In a recent discovery expedition, we set out to find answers. We spoke with several top Israeli AI companies, including the founder of Mobileye, who sold his company for a historic \$15+ billion USD to Intel. We also gleaned insights from trailblazing Zebra Medical in AI-driven radiology imaging and Gong.io, a soon-to-be unicorn which creates revenue intelligence for sales teams.

One of our findings is that the future application of AI is much less about big data than it is about the precision and relevance of data. Companies from Europe, the Middle East and South-East Asia ought to pay close attention. Not every company can imitate Amazon or Alibaba, but many can learn how Israeli companies leverage the best of the data they have – and that’s probably more than most companies realize.

When talking to companies such as Mobileye, Zebra Medical and Gong.io, they appear to all target specific problems with specific data sets. For instance, Zebra Medical has access to interesting data sets that, despite Israel’s small size, have real value. This includes the digital health data that Israel has been collecting for the past 20 years. Mooly Eden, former Senior Vice President, Intel, even goes as far as stating that the future of digital healthcare will be in Israel, as it is the only country in the world that has collected high-quality longitudinal data, labelled and interpreted by top doctors and scientists with deep domain knowledge. That Israel has neither the biggest hospitals in the world nor the most visited digital healthcare platforms such as China has, may not matter.

Another example is [Plataine](#), a decade-old company that delivers AI-driven actionable insights for discrete manufacturing for the heavy industrial segment, in particular in large factory settings such as aerospace, automotive and industrial manufacturing. Plataine’s deep domain expertise is evident – 90% of their total employees, whether they are data scientists or in sales, have a strong background in the manufacturing industry.

Avner Ben-Bassat, the president and CEO of Plataine, told us that he believes strongly in solving specific problems with specific data – including precise manufacturing challenges such as work in progress, work flow optimization, production scheduling and quality control. Note that none of these has a fancy name; they all refer to the specific problem they solve.

Plataine collects as little data as possible, rather than being weighed down with large lakes of messy data. Unusually, it does not first install sensors throughout its factory, nor RFID-tag (Radio Frequency Identification, the technology used in contactless credit cards for example) each part of the production process. Instead, it uses as much existing data as possible, and only installs sensors or breaks through data silos if absolutely required. Clearly, Plataine still collects massive amounts of data throughout the work flow of the production process, creating what it calls “digital threads”. These digital threads can be used for learning across companies and are - above all - deeply embedded in domain knowledge.

The takeaway is that Israeli companies have developed unique AI technologies to solve their unique problems. despite, for instance, the country’s scarcity in arable land and a small population. AI advances in medical applications, education and agriculture are thriving. And it is precisely this development of applications in such verticals that will ensure a promising future for AI.

Forget the big picture. Now is the time for surgical precision in collecting relevant data and old-fashioned clarity on the business problems at hand. The global AI race has not yet been won by either the US or China. This is not only good news – it should serve as an important reminder for companies worldwide.