



**CONCOURS BTP / CONSTRUCTION NAVALE
SESSION 2023**

Epreuve d'Anglais

Durée : 2 heures

L'épreuve est constituée de deux parties : un résumé et une traduction. Vous rédigerez ces deux parties sur **deux copies séparées**, sur lesquelles vous indiquerez respectivement « Anglais / résumé » et « Anglais / traduction ».

Part 1: Summarize this text in English in 200 words (+ / – 10%)

Indicate the number of words on your exam paper

A new Technology Boom is at Hand

By Rana Foroohar in Financial Times. Monday 27 March 2023

Conventional wisdom tells us the technology boom is over. The collapse of Silicon Valley Bank has sent a chill through the investment community, and the tech sector has seen a correction as interest rates have risen. But I'd argue we may be about to enter a new golden age of technological innovation and investment. The difference is that this time around, it won't be about consumers, but industry.

Three-quarters of the world's \$100tn in gross domestic product is made up of traditional legacy industries — such as manufacturing, transportation, logistics and healthcare — that have yet to be deeply transformed by technology. That's now changing, as part of what venture capitalist Greg Reichow, a partner at Eclipse Ventures,

a Palo Alto firm that has \$3.8bn invested in the digital transformation of physical industries, calls “industrial evolution”.

Two weeks ago, I visited one of Eclipse’s 70 portfolio companies outside Boston. VulcanForms, an additive manufacturing firm, takes Henry Ford’s River Rouge factory model, in which steel went into one end of a production line and finished cars came out the other, and replicates it across multiple industries by 3D printing with metals to create parts.

VulcanForms can produce thousands of parts for a jet engine one day, then switch to medical implants or consumer electronic components within a matter of hours. “The knowledge of how to make the part lives in the software,” says Reichow. This allows a digital manufacturer like VulcanForms to become a River Rouge for multiple industries. Large industrial customers can focus on their core R&D, sales and marketing, rather than production, which could theoretically now be outsourced not to hundreds of suppliers in dozens of countries, but to individual factories located anywhere customers are.

It’s a big shift, and manufacturing is just one part of it. The desire of most companies to increase resilience in their supply chains, coupled with the digitisation of industry, has increased local production capacity in strategic sectors. A legislative push to deal with climate change may well create a new tech boom in the industrial sector. Numerous investment funds are being raised to support the growth of high-tech startups in advanced manufacturing, mobility, energy and other areas associated with re-industrialisation.

“Everything we see around us, with the exception of ourselves and the food we grow, is manufactured,” notes MIT Professor John Hart, a co-founder of VulcanForms. “Now, post-pandemic, several forces are aligning to reshape how we make things. We understand the need for agile supply chains. We realise how important production is for our economic and national security. And third, we need to decarbonise, which will require the growth of new manufacturing systems at scale.”

Since areas like industry, power and transport are responsible for 70 per cent of Carbon emissions, changing the way we make things will be crucial to achieving climate change goals. Printing layers of metal, for example, requires a fraction of the energy and carbon load of cutting parts out of a block of solid material.

Technology investors see huge opportunities in the shift. Former White House supply chain policy adviser Elizabeth Reynolds — who spent much of the past two

years sorting out port backups and baby food formula shortages — has left the Biden administration to join Unless, an investment fund that plans to plough up to \$100mn a year into startups focused on industrial transformation. This includes things like additive manufacturing and materials science, but also sensors, robotics, AI, and software that will help digitize America's vast number of small and medium sized industrial companies.

Right now, those firms tend to be highly siloed. But in the world that people like Hart, Reynolds and Reichow envision, they would be connected just as consumers are on the internet, able to share resources and information seamlessly in a new industrial smart grid. The productivity and growth opportunities are obvious. “This isn't about filters that let you turn cats into dogs,” says Reynolds. “Technology innovation around re-industrialisation is very different, and we are on the cusp of a real revolution in that area.”

Indeed, I think we may be at a pivot point rather like 2007. Back then, the introduction of the iPhone led to huge growth in consumer technology. The “app-economy” evolved and changed the entire way we communicate, work, play and shop. Business is about to go through something similar, a long-anticipated shift sped up by decoupling, the pandemic and war in Ukraine. It's a transformation that will change the nature of our economy. It's also a big reason I'm still long the Nasdaq, even though there may yet be a bigger short-term correction.

One unresolved question is whether the new industrial revolution will be a jobless one? Tech talent is starting to migrate away from consumer software and into industry. But AI, along with the dramatically reduced human labour needs of high-tech factories, has reduced the number of people needed to do this work. Still, it's worth noting that the app economy created job categories that hadn't existed before. If we are lucky, a new industrial revolution will do the same in ways that have yet to be imagined.

Part 2: Translate the following text into French

The jobs we'll lose to machines-and the ones we won't.

In 2013, researchers at Oxford University did a study on the future of work. They concluded that almost one in every two jobs has a high risk of being automated by machines. Machine learning is the technology that's responsible for most of this disruption. It's the most powerful branch of artificial intelligence. It allows machines to learn from data and mimic some of the things that humans can do. Machine learning started making its way into industry in the early '90s. It started with relatively simple tasks. It started with things like assessing credit risk from loan applications, sorting the mail by reading handwritten characters from zip codes. Over the past few years, we have made dramatic breakthroughs. Machine learning is now capable of far, far more complex tasks. So complex that in 2019, Elon Musk believes it will make job pointless.

Adapted from TED talks