

IS INDIA & GERMANY IN A RACE?

3D PRINTING

AEROSPACE

SKY IS NOT THE LIMIT

Indian space startup fires world's first fully 3D printed rocket engine as others play catch up. It only takes four days to produce and can carry payloads of up to 100 kgs into lower earth orbit (LEO).



MEDICINE

German scientists create see-through human organs. Dr. Ali Ertuerk, Group Leader at the Institute for Stroke and Dementia Research (ISD) at the Ludwig Maximilian University holds a transparent mouse at his laboratory in Munich.

MEDICINE BREAKTHROUGHS



CONSTRUCTION

Germany-based construction company PERI Group is in the process of erecting the country's first "market-ready" additive manufactured residential building.

PERI's two-storey house located in Beckum, North Rhine-Westphalia is being built using Danish manufacturing firm COBOD's 3D printing technology. The project is part of the region's broader "Innovatives Bauen" or "Innovative Construction" program and reportedly represents the first time that the fabrication technique has been used in Germany.

JEWELRY

GUINNESS WORLD RECORD DIAMOND RING MADE WITH 3D PRINTING



maginarius, a 3D printing service based in India, broke a surprising record last year when it contributed to the creation of the ring with the most diamonds in the world: 7,801 to be exact.



Photo via the PERI Group.

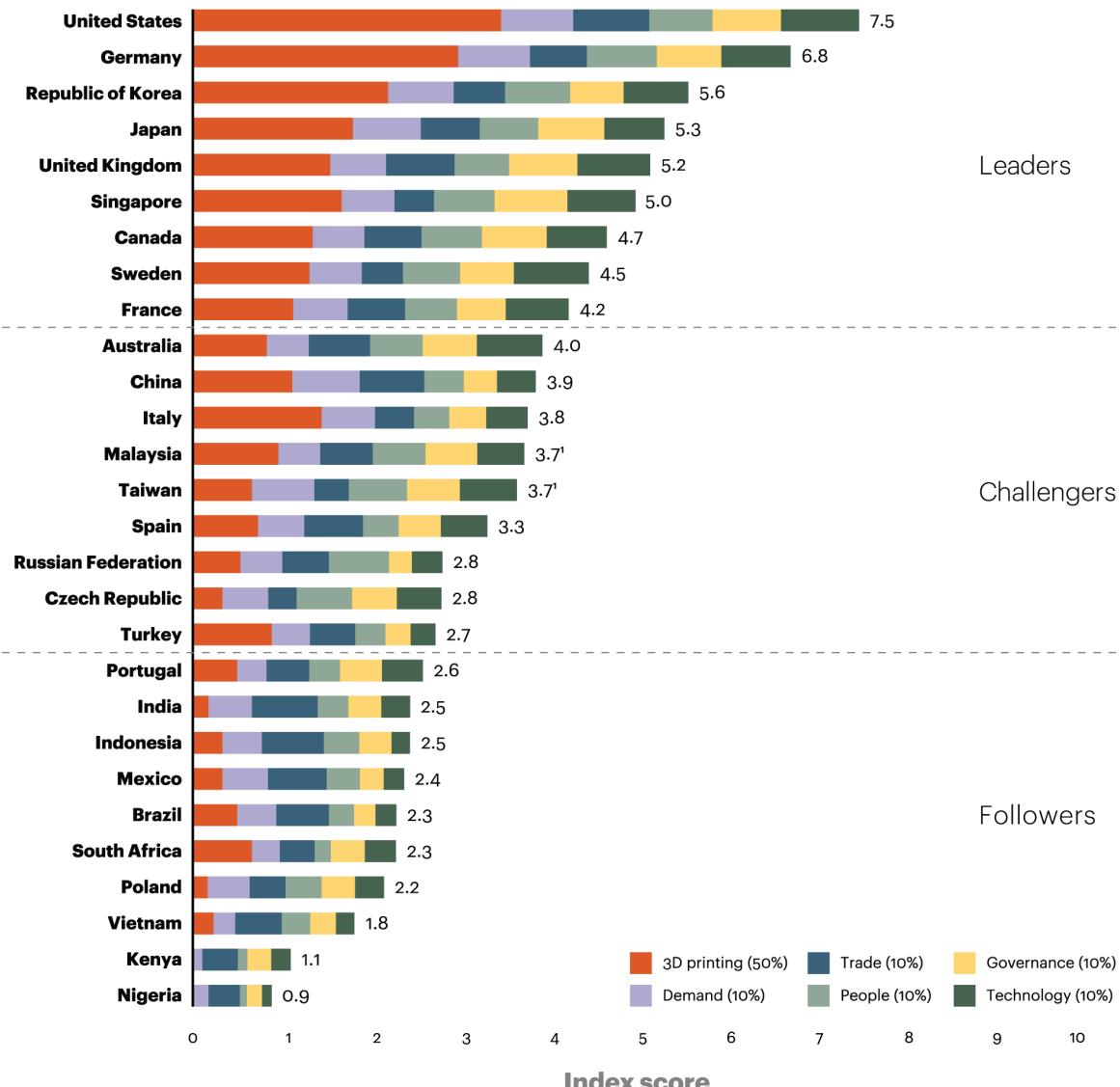
CATCHING UP WITH THE LEADERS

Indian government realizes the vast economic potential of 3D printing for their manufacturing base. Officials have revealed that a draft policy will soon be formulated and sent out to experts from India's 3D printing Industry and seek their inputs and opinions on the same. According to some estimates,

India's 3D printing industry size is around \$67 Million but has the potential to grow to become a \$1 billion industry.

Germany Global turnover in the 3D printing sector is forecast at more than EUR 22 billion for the year 2020.

The 3D Printing Index assesses each country on 6 dimensions



Leaders and challengers will both need a national road map that prioritizes workforce education, a demand stimulus and incentives to reduce barriers to R&D and 3D printing. Forward-thinking policymakers will also take advantage of public-private partnerships to work alongside the developing ecosystem.

These partnerships have the power to develop a complete 3D ecosystem. For example, private institutions can partner with universities to find ways to use 3D printing to solve industry problems. This will not only teach students — tomorrow's workforce — how to design for 3D printing but also encourage industry to adopt the technology.

The followers can overcome macroeconomic barriers by focusing on niche markets, as Italy has done with jewelry and metals. Focusing on existing strengths will generate opportunities to capture economic growth and create the potential to leapfrog into the Fourth Industrial Revolution.

Source: A.T.Kearney analysis