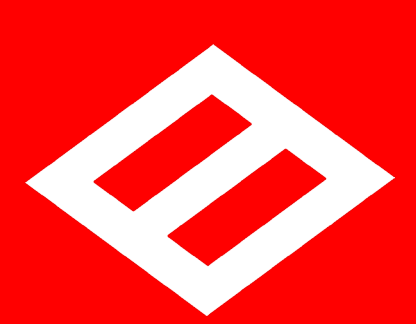
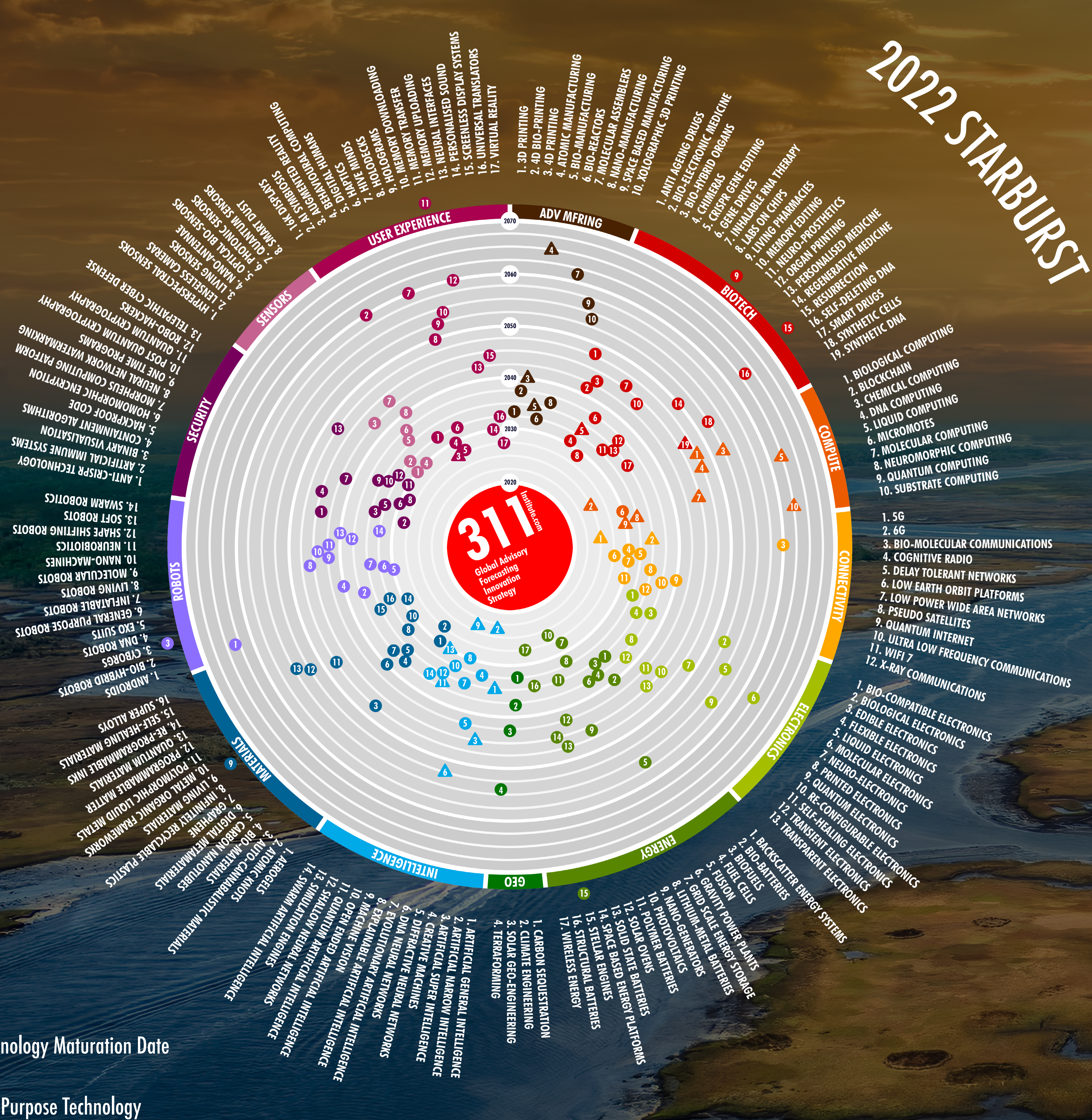
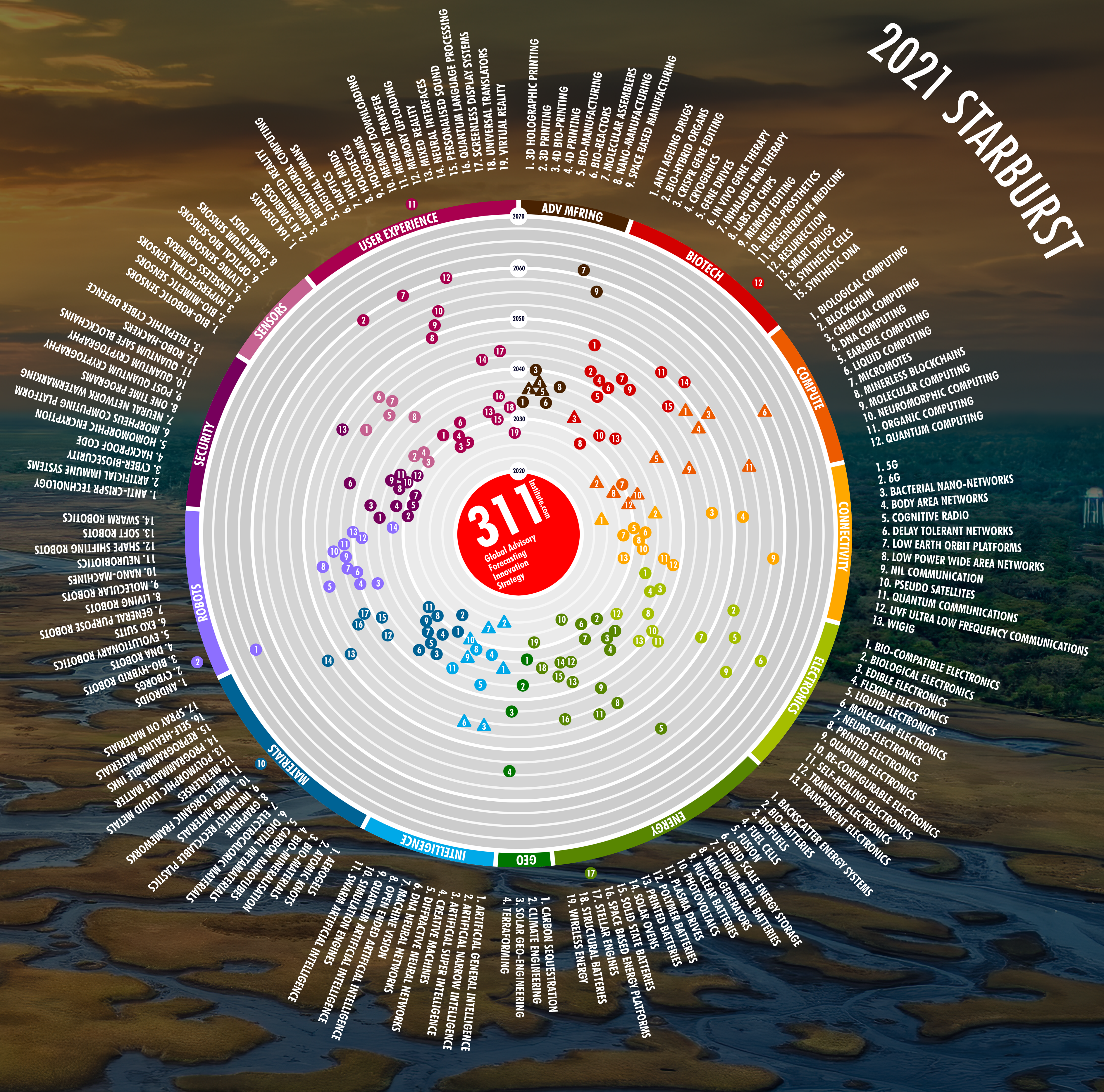




THE GRIFFIN EMERGING TECHNOLOGY STARBURST 2022 EDITION. WHAT WILL YOU #DISRUPT?



vs



WELCOME FROM @311INSTITUTE

The 311 Institute is a global Futures and Deep Futures advisory, strategy, and innovation firm, and our mission to democratise access to the future and help people realise their exponential potential.

Now in its seventh year the Griffin Emerging Technology Starburst is used by organisations all around the world to help them keep track of the latest emerging technology trends and envision the future of their companies and products.

LOOKING BACK AT 2021

In 2021 there were fewer notable world firsts than in 2020 which, as in 2021, I again attribute to the fact that much of the world's investment and R&D flows were re-aligned to fight the global pandemic, COVID-19. There was also a marked decrease, of approximately 23 percent year on year, in the number of new revolutionary exponential technologies that emerged. This marks the first consecutive year on year decline since I have been keeping record. Biotech, Compute, and Energy saw the largest gains, and notable breakthroughs included: AI learning "Diplomacy"

- First 2nm computer chip
- First 5G NR installation
- First 5 minute EV charging system
- First AI credited as an inventor
- First AI generated synthetic human genome
- First autonomous HK drone kill
- First Bio-Artificial Kidney
- First empathetic first person VR surgery preview
- First EV with 1,000km range
- First Human burgers
- First "Internet of Electricity" material
- First green steel
- First mass biometric spoofing cyber attack
- First Metaverse city
- First spontaneously replicating living robot
- First re-programmable satellite ... and MANY more.

INTRODUCING THE 2022 STARBURST

In this year's Starburst, which extends to 2070 and displays 167 of the world's most promising emerging technologies, each with an addressable market value of at least \$500 Billion spread across 13 categories, I promoted 24 new emerging technologies and demoted 24.

In 2022, with the global pandemic still hanging on, as in 2021 I expect to see an increase in the number of new healthcare technology breakthroughs, especially in the fields of Biotech and Intelligence, but I also expect us to get return to a more 2019 like baseline that sees the number of new technologies emerging increase with a focus on ESG.

MORE RESOURCES ...

Click or scan the QR code to download our Starbursts FREE companion EXPONENTIAL TECHNOLOGY CODEX to explore these technologies in more detail, and get access to thousands of articles, keynotes, podcasts, reports, and videos.

EXPLORE MORE. Click or scan me to learn more about the future.

