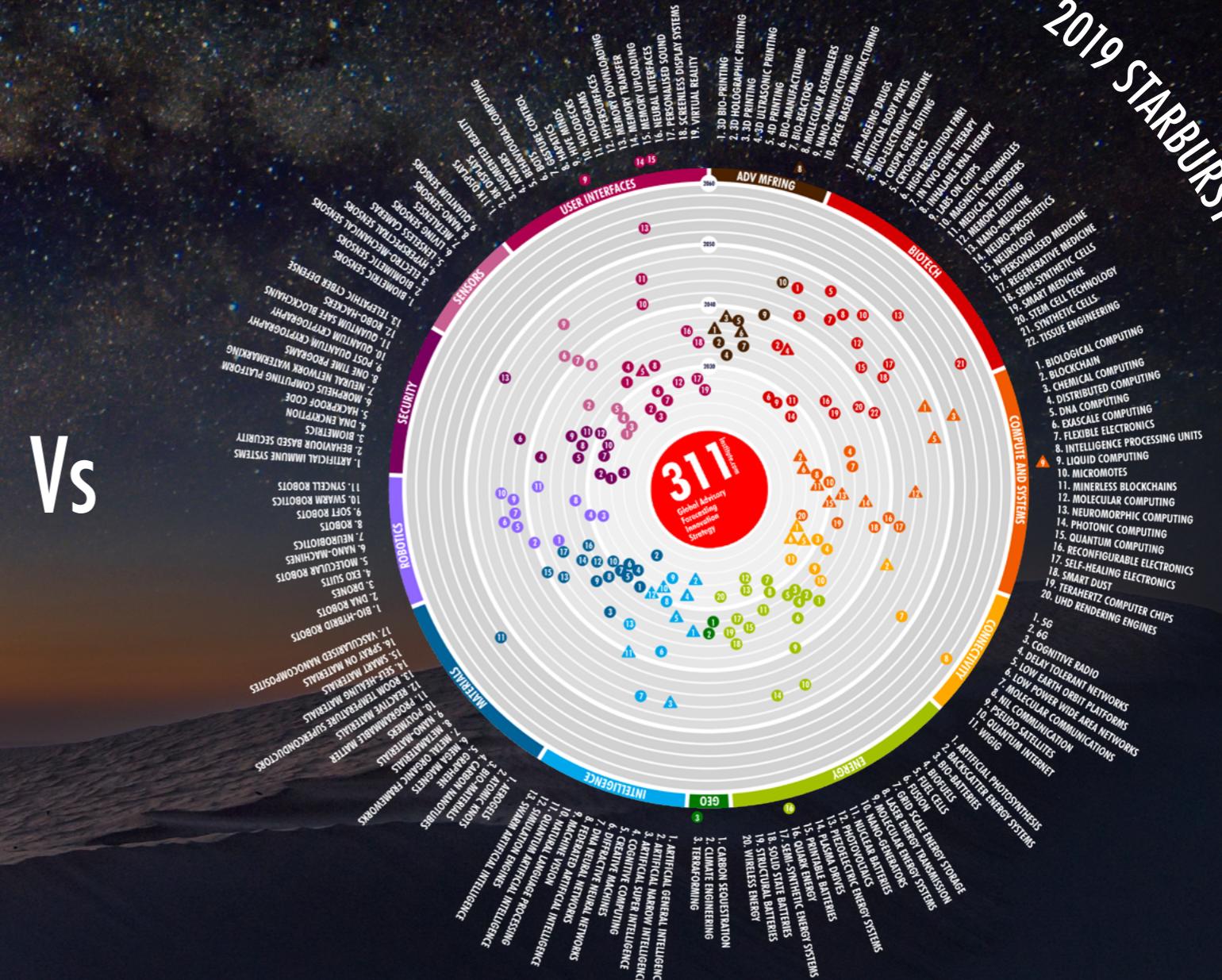
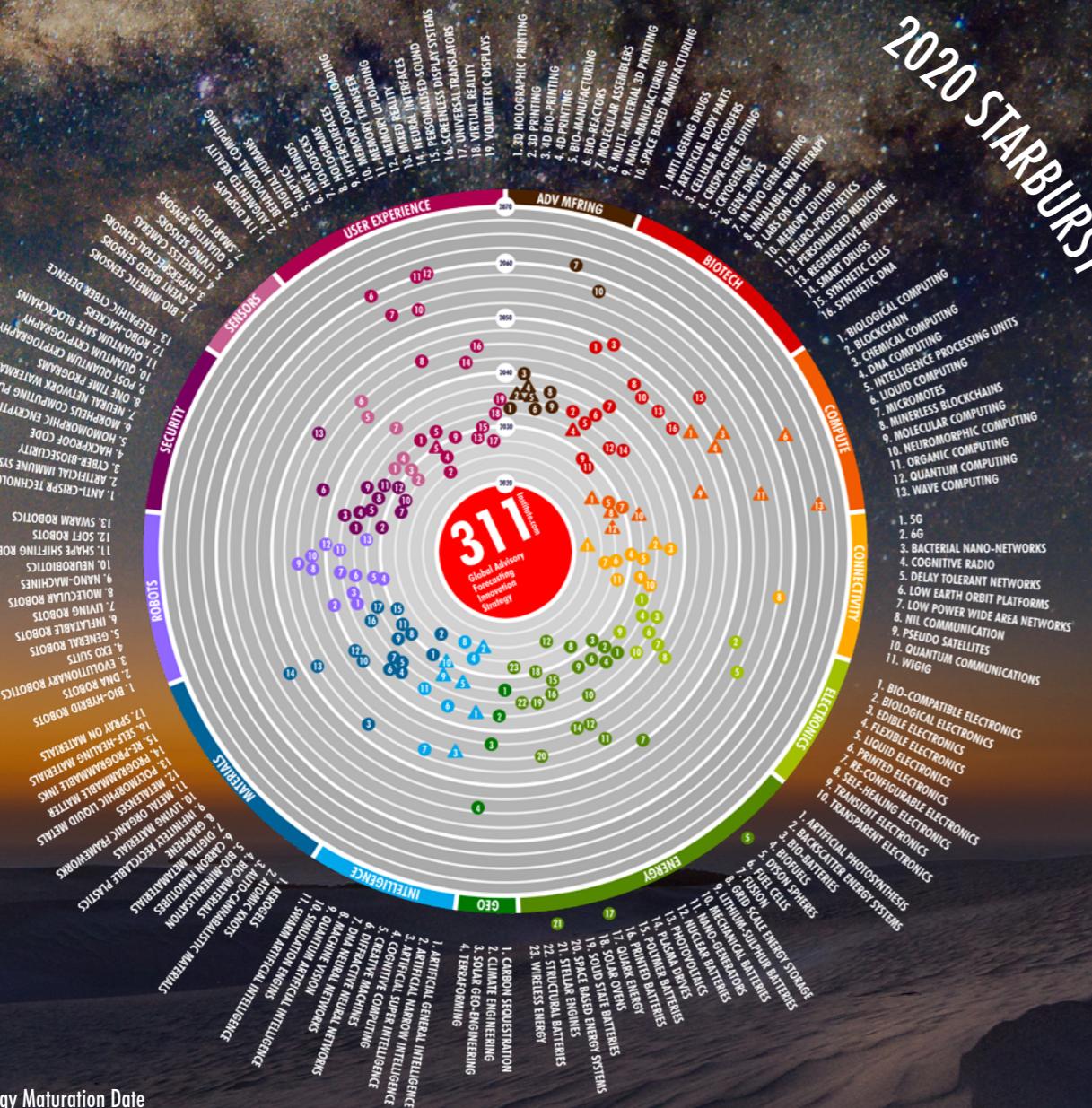




THE GRIFFIN EMERGING TECHNOLOGY STARBURST: 2020 EDITION. WHAT WILL YOU #DISRUPT?



STARBURST KEY

1 Est. Technology Maturation Date

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 forth 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 2019

In 2019 there were more notable world firsts than in 2018, especially in the field of Artificial Intelligence (AI). However, there were also noticeable breakthroughs in Advanced Manufacturing, Computing, Robotics, and Synthetic Biology which included: Achieving Quantum supremacy • An AI that learned to evolve and develop tools • The first human vaccine designed by an AI • Beef 3D printed in space • Remote robotic heart surgery • First AI made of glass • First AI signed by a major record label • First light sabres • First synthetic genome • First Living material • First in vivo autonomous robot journey • First programmable DNA computer • First book written by an AI • First fully autonomous EV energy grid • First fully autonomous vertical farm • AI beats superstar human gamers • First 8 base pair DNA organism • First AI strategy development platform • First aerosol based genetic engineering solution • First AI counsellor • First 5G robot remote surgery • First lab grown fillet steak • First intricate tractor beam • First 8 base pair DNA double helix ... and MANY more.

INTRODUCING THE 2020 STARBURST

In this year's Starburst, which displays 168 of the world's most promising emerging technologies, each with an addressable market value of at least \$500 Billion spread across 12 categories, including for the first time Electronics, I expanded the timeline from 2060 to 2070, promoted 44 new emerging technologies, and demoted 45.

In 2020 I expect a slight slow down in the number of AI breakthroughs as the resources needed to create new models rises exponentially. As a result breakthroughs will likely be more evenly distributed across the different technology categories.

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



2019 STARBURST

2020 STARBURST

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