**Annex 1: Summary of BCG companies according to social/financial and technical innovation, period 2004-2022 (assessment at the time of 2022 based on Annual Report)**

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| MNC  \* maintaining the position/number in the BCG ranking | Employees  2022 | Net income  (billions USD  2022) | Trademarks, sigles, logos.( 2004-2022 ) | Annual granted patents, average approx. | The position of the company in financial implications for innovation | The cluster company is part of |
| SUA | | | | | | |
| 1. Apple | 164,000 | $99.8 | Apple Inc. has 1401 trademark applications. Exemple: iPhone, iPod, iPad | 2000-2500 | In 2018 has a deposit of 1 trillion USD market capitalization | 3 |
| 2. Microsoft | 221,000 | $72.7 | Microsoft Corporation has 2783 trademark applications. The latest application filed is for "VIVA GLINT" Microsoft | 3000-4000 | The most important manufacturer of softwere | 3 |
| 3. Amazon | Over 1 mln full time employee and a number of part-time employees | $-2.7 | Amazon.com, Inc. has 109 trademark applications. The latest application filed is for "ZOOX" | 3000-4500 | The most important e-commerce company | 1 |
| 4. Alphabet | 190,234 | $59.9 | Alphabet Inc. has 3 trademark applications. The latest application filed is for "ALPHABET"  Google: The company's and the search engine platform's name. | 3000-3500 | Alphabet Inc. is Google's parent business, | 1 |
| 5. Tesla | 127,855 | $12.5 | Tesla, Inc. has 93 trademark applications. The latest application filed is for "CYBERQUAD" | 2000 | The biggest manufacturer of EV | 1 |
| 7. Moderna | 3,900 | $8.4 | Modernatx, Inc. has 203 trademark applications. The latest application filed is for "MCOVFLU" | 10-25 | The company has financial innovation in the industry | 2 |
| 10. IBM | 345,000 | $1.6 | International Business Machines has 5 trademark applications. The latest application filed is for "CHRP". | 9000-9300 | One of the most innovative in technical and social firms | 1 |
| 11.Meta | 86,482 | $23.2 | Meta Platforms, Inc. has 125 trademark applications. The latest application filed is for "META GAMING" | 900-1200 | Meta Platforms -previously Facebook | 1 |
| 12. Nike | 79,100 | $6 | Trademark applications and grants for Nike, Inc. Nike, Inc. has 833 trademark applications. The latest application is for ``INFINITYRN`` | 2000-3000 | Top manufacturer in the sports articles | 3 |
| 13. Walmart\* | 2,300,000 | $13.9 | Wal-mart Stores, Inc. has 1746 trademark applications. The latest application filed is for "SAM'S CLUB HOME SERVICES INSTALLATION". | 60-80 | The biggest company of retail; 50% operates outside the country, provides social/financial innovations | 2 |
| 14. Dell | 133,000 | $5.55 | Dell Inc. has 560 trademark applications. The latest application filed is for "YOURID" Dell. | 2000-2500 | One main Manufacturer of PC | 3 |
| 15. Nvidia | 22,473 | $9.7 | Trademark applications and grants for Nvidia Corporation. Nvidia Corporation has 310 trademark applications. The latest application filed is for `` SIONNA`` | 2500-3000 | One of the important manufacturers of semiconductors, technical innovations | 3 |
| 17. Target\* | 450,000 | $2.8 | Target Corp has 4 trademark applications. The latest application filed is for "TOTAL AUTOMOTIVE PROTECTION" Target. | 70-100 | The company is making also technical and financial innovations | 1 |
| 18. Pfizer | 83,000 | $31,3 | Pfizer Inc. has 3712 trademark applications. The latest application filed is for "EASABLE" Pfizer. | 1000-1200 | Important manufacturer in the pharmaceutical industry | 2 |
| 19. Oracle | 143,000 | $6,7 | Oracle Corporation has 156 trademark applications. The latest applications filed is for `` WIRELESS PORTAL FOR YOUR MOBILE LIFE`` | 3000-3300 | Important manufacturer in softwere industry, especially in tehnical innovation. | 1 |
| 23. HP | 58,000 | $3.2 | Hewlett Packard Co has 519 trademark applications. The latest application filed is for "THINCLONE" HP | 2000-2300 | Important manufacturer in informatical equipment industry | 1 |
| 27. Johnson&Johnson | 155,800 | $17.9 | Johnson & Johnson has 6899 trademark applications. The latest application filed is for "LEADING WHERE MEDICINE IS GOING" | 4000-4500 | Important manufacturer in the pharmaceutical industry | 3 |
| 28. Cisco | 83,300 | $11.8 | Cisco Systems, Inc. has 49 trademark applications. The latest application filed is for "IR ON DEMAND" | 1300-1500 | Innovative company in technical and social industry | 1 |
| 29. GE | 172,000 | $-0.1 | Trademark applications and grants for General Electric Company. General Electric Company has 2384 trademark applications. The latest application filed is for "VERNOVA" | 2000-2400 | Major manufacturer in the industry of household appliances, electronics, etc. | 3 |
| 32. Ebay\* | 11,600 | $-1.2 | Ebay Inc. has 204 trademark applications. The latest application filed is for "EBAY". | 250-300 | Major provider in online sales; socially/financially innovative | 3 |
| 34. Procter&Gamble | 106,000 | $14.4 | The Proctor & Gamble Company has 5425 trademark applications. The latest is filed for ``BODEWELL`` | 700-800 | Important manufacturer in the chemical industry, cosmetics, etc. | 2 |
| 36. Coca Cola\* | 82,500 | $9.8 | The Coca-cola Company has 2112 trademark applications. The latest application filed is for "TOPO CHICO SABORES". | 50-55 | Largest manufacturer in the soft drinks industry; social innovations. | 2 |
| 37. 3M | 92,000 | $5.7 | 3M Company has 1106 trademark applications. The latest application filed is for "EXPRESS ONE". | 3300-3600 | Major manufacturer in several high-tech industries. | 3 |
| 38. Pepsi&Co | 315,000 | $8.9 | Pepsico, Inc. has 2686 trademark applications. The latest application is filed for `` MTN DEW ZERO SUGAR SPARK`` | 300-400 | Competitor for CocaCola; social innovations. | 2 |
| 42. GM | 167,000 | $8.9 | General Motors Llc has 1493 trademark applications. The latest application filed is for "GM ENVOLVE" General Motors: | 700-900 | Important manufacturer in the automotive industry | 3 |
| 43. Ford | 173,000 | $-1.9 | Ford Motor Company has 3797 trademark applications. The latest application filed is for `` BUILT FORD PROUD`` | 3200-3300 | An important manufacturer in the automotive industry; it also operates in Romania, with a factory in Craiova. | 3 |
| 44. Intel | 131,900 | $8 | Corporation has 632 trademark applications. The latest application filed is for `` G GRANULATE`` | 2500-3000 | The most important manufacturer of last generation semiconductors. | 3 |
| **EUROPA** | | | | | | |
| 20. Siemens | 311,000 | $4 | Siemens Aktiengesellschaft has 1537 trademark applications. The latest application filed is for `` SIVISION`` | 2500-3000 | Major manufacturer in several high-tech sectors; invested in the chip industry. | 3 |
| 25. Zalando\* | 17,000 | $0.1 | Zalando Se has 40 trademark applications. The latest application filed is for "ZALANDO" | 10-15 | Provider in the online sales industry; social innovations. | 2 |
| 26. Bosch | 421,000 | $0.1 | Robert Bosch G M B H has 323 trademark applications. The latest application filed is for "BGUSS" | 2800-3000 | Major manufacturer in several medium-tech sectors. | 1 |
| 35. Adidas | 59,200 | $0.2 | Adidas Ag has 299 trademark applications. The latest application filed is for "WONDERWAVE" Adidas | 1000-1300 | Technical and social innovator; competitor for Nike | 3 |
| 40. SAP | 112,000 | $2.4 | SAP has 72 trademark applications. The latest application filed is for "SAP" | 1000-1300 | Provides technology and software solutions | 1 |
| 47. Philips | 77,200 | $-1.6 | Philips N.v. has 756 trademark applications. The latest application filed is for "S2" | 2200-2500 | Major European manufacturer of PCs, laptops, etc. | 3 |
| 49. Nestle | 275,000 | $9.7 | Société Des Products Nestlé S.a. has 3265 trademark applications. The latest application filed is for "OUTSHINE SMOOTHIES & SNACKS" | 1900-2200 | Leading manufacturer in the food industry | 3 |
| 50. Unilever | 138,000 | $8.7 | Unilever Global Ip Limited has 22 trademark applications. The latest application filed is for "SUGAR DUST" | 200-250 | Major manufacturer in the cosmetics, food, etc. industry. | 3 |
| ASIA | | | | | | |
| 6. Samsung | 267,937 | $86.8 | Samsung Electronics Co., Ltd. has 3154 trademark applications. The latest application filed is for "OPEN ALWAYS WINS | 6000-7000 | South Korea's largest company; has become a rival to Apple, Intel etc. | 3 |
| 8. Huawei | 207,000 | $5.2  Net income | Huawei Technologies Co L T D has 918 trademark applications. The latest application filed is for "HISILICON HISPARK" | 3000-4500 | Innovative Chinese company in 5G industry, mobile phones etc. | 3 |
| 9. Sony | 110,000 (2019) | $36.3  (2022)  *gross profit* | Sony Group Corporation has 37 trademark applications. The latest application filed is for "SENSOS" | 3000-3500 | Remains a leading Japanese manufacturer in the IT industry | 1 |
| 16.LG | 11,888 (33% in South Korea)[[1]](#footnote-1) | $1.4 | Lg Corp. has 359 trademark applications. The latest application filed is for "LG GRAM SUPERSLIM" | 2800-3500 | Major manufacturer in South Korea in the electronics, IT industry, competitor to Samsung. | 3 |
| 21. Toyota | 372,817 | $25.4 | Toyota Motor Corp has 16 trademark applications. The latest application filed is for "PLUS PERFORMANCE EVOLUTION" | 3200-3300 | Japan's largest automaker; remains extremely innovative; develops EVs; changes EV patent strategy from 2015 | 1 |
| 22. Alibaba | 239,740 (2022) | $49.5 | Alibaba Group Holding L T D has 248 trademark applications. The latest application filed is for "a symbol or image mark" | 1000-2500 | China's largest online retailer; has become a direct competitor to Amazon. | 3 |
| 24. Lenovo | 75,000 | $12.1  *Gross profit* | Lenovo Group Limited has 2 trademark applications. The latest application filed is for "MAXBRIGHT" | 2000-2500 | Leading global PC manufacturer; Chinese company with internationalization strategy | 1 |
| 30. Jingdong\* | 362,171 | $21.3  *Gross profit* | Beijing Jingdong Century Trading Co L T D has 7 trademark applications. The latest application filed is for "JAJOY" | 30-50 | Operates in the insudtria of online, AI etc.; innovative social | 2 |
| 31. Xiaomi | 32,543 | $9.6 | Xiaomi Inc has 70 trademark applications. The latest application filed is for "JEWEL PARTY" | 2600-3500 | Chinese manufacturer recently entered the international telecommunications market; socially innovative | 1 |
| 33. Hyundai | 150,000 | $18.6  *Gross profit* | Hyundai Motor Company has 510 trademark applications. The latest application filed is for "GT90 GENESIS" | 200-300 | Major South Korean manufacturer in the automotive industry | 2 |
| 39. Hitachi | 397,732 | $22.7 | Hitachi America, Ltd. has 42 trademark applications. The latest application filed is for "FALCON" | 5700-6300 | Remains one of the most innovative Japanese companies | 1 |
| 41. Tencent | 112,771 | $1 | Tencent Holdings Limited has 325 trademark applications. The latest application filed is for "PUPU ALIENS" | 4800-5500 | Operates in the online and entertainment industry; socially innovative | 3 |
| 45. Bytedance | 150,000 | $25 | Bytedance Ltd. has 135 trademark applications. The latest application filed is for "BYTEDANCE" | 1500-2500 | Owner for social network TikTok; social innovator | 1 |
| 46. Panasonic | 240,198  40% are based in Japan | $18.5  *Gross profit* | Panasonic Corporation Of North America has 835 trademark applications. The latest application filed is for "BRILLANCECX" | 2800-3000 | Japanese Important Company | 3 |
| 48. Mitsubishi | 80,728 (2021) | $19.1  *Gross profit* | Mitsubishi Corporation has 24 trademark applications. The latest application filed is for "MITSUBISHI" | 2100-2300 | Japanese automotive manufacturer in an alliance with Nissan and Renault | 1 |

\*Some companies do not disclose in their Annual Report the amount of funds allocated to R&D; by the nature of their business, they make fewer technical innovations per year but can be considered innovative by the degree of use of disruptive technologies.

Legend:

The inclusion of the company in a particular cluster was done by the authors;

The delineation per cluster is as follows:

1. - Company considered to have a large number of technical innovations (patents), so it is "predominantly technically innovative".

2. - - Company considered to have a large number of social innovations (mostly financial), so it is "predominantly socially innovative".

3. - Company considered to have a balanced number of technical innovations (patents) and social innovations, so it is "medium technically and socially innovative".

Source: Elaborated by the authors based on BCG, WIPO, Fortune, Forbes, European Commission reports, Annual Reports 2019, 2020, 2021

1. <https://www.lg.com/global/employees.page> [↑](#footnote-ref-1)