



The Crowe 100

Decision-making may be an art, but how close to a science can we make it?

We are in the results-based business. Which is why – at Crowe – we focus on smart decisions that have *lasting value*. We acknowledge that decision-making processes are art, not science. That is why we have tested the theory, psychology and smart decision-making themes we see in our research and thought leadership against the actual performance of public companies. By analyzing theory alongside reality, we have been able to establish an index-based metric with which to test correlation in this vibrant and growing field of research.

We focused on three international sectors where Crowe has deep experience: Manufacturing, Healthcare and Real Estate. Using more than 30 sources of public information and assigning values to companies for their performance in the four key decision-making areas of Growth, Diversity, Boldness and Innovation, we have produced the most authoritative index of corporate decision-making in the world.

Our research revealed some interesting data-driven findings and enlightening case studies showing the different artistic approaches to decision-making. We hope it provides some thought-provoking ideas and examples that resonate with, or even inspire, you and your organization in your pursuit of lasting value.

Explaining the thinking behind our methodology

One of the top challenges for corporate leadership is how to ensure decision-making is efficient, effective and growth-driving. No organization is immune to the impact of luck, but – chance aside – how a company fares in good times and bad will be dictated more by its decision-making approach than by any other factor.

Decision-making remains the key component to distinguishing successful companies from the pack, and a sound decision-making approach is the best immunizer against the impact of luck and other external factors.

Through our history of working with top business leaders and corporate boards, we've come to better understand the importance of decision-making and of studying its impact and results. As part of this process, we set out to create an index of the top decision-making companies across Manufacturing, Healthcare and Real Estate, using objective indicators and subjective analysis of the process and products of good decision-making.

We recognize that while a good decision may be difficult to grasp at any one point, the effects of a smart decision can be thoroughly examined.

For The Crowe 100 Decision-Making Index 2019, our methodology seeks to get to the heart of the smart thinking behind, and effective execution of, strong corporate decision-making. A concept like decision-making is inherently intangible, but the lasting value provided by smart decisions is clear to see and measure. The impact of decision-making on corporate success is simply too powerful to overlook. With that in mind, we built a framework of measurable performance indicators with which to assess the performance of specific companies.



GROWTH

An analysis of companies using financial performance measurements, since companies that make better decisions are apt to perform above their peers in the long term. While profit may not capture growth in its widest context, and stock price may overemphasize speculation and potential growth, revenue analysis provides us with the clearest insight into corporate performance.



DIVERSITY

An analysis of governing boards and C-suite executives that recognizes the powerful advantages of a diverse corporate team. We scrutinized annual reports, company websites and public records to measure gender diversity.

Our framework is constructed around the four key pillars of Growth, Diversity, Boldness and Innovation. It is these lenses through which we analyze companies' actions. Using more than 30 initial sources of key information as our base data set (and excluding privately-held companies due to the inaccessibility of their information) we created The Crowe 100 Decision-Making Index by breaking decision-making into these four components, using data mapped from one-, five- and 10-year periods between 2008 and 2018 to produce weighted scores for each category.

This allowed us to produce a score, per category, for each company, opening the door for further

analysis of how and why companies excelled in, for example, diversity-driven growth or risk-confronting innovation. By combining these disparate scores across the four components, we arrived at our ranking of top decision-making companies within Manufacturing, Healthcare and Real Estate. While inevitably imperfect, The Crowe 100 Decision-Making Index 2019 explores the quantifiable aspects of decision-making using a combination of related objective data and subjective analysis. Our goal is to better understand the measurable aspects of decision-making to better inform conversations on this crucial art. A full methodology description can be found at www.crowe.com/theartofsmart



BOLDNESS

An analysis of the critical yet eventful steps that set companies apart through their willingness to confront risk. We conducted analysis of the percentage change in revenue per employee, to see how much a company had grown in proportion to its size.



INNOVATION

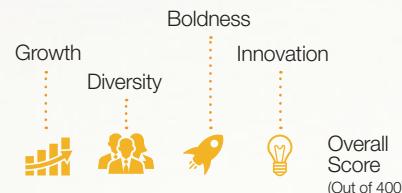
A study of the companies' unique advances in management and technology. Our research team audited major business news to collect and score relevant stories and capture all innovations that companies had been recognized for. Innovations were measured according to the four values of purpose, product, people and performance, factoring in breadth and depth of innovation and adding weight for awards received.

The Crowe 100 Decision-Making Index

Overall Rank Company

Headquartered

Sector



| Rank | Company | Headquartered | Sector | Growth | Diversity | Boldness | Innovation | Overall Score (Out of 400) |
|------|---------------------------|-------------------|--|--------|-----------|----------|------------|----------------------------|
| 1 | Incyte | USA | Healthcare (BioTech, Pharma & Life Science) | 100 | 100 | 100 | 75 | 375 |
| 2 | Country Garden Holdings | Hong Kong | Real Estate (Diversified Holdings) | 91 | 100 | 82 | 100 | 373 |
| 3 | Regeneron Pharmaceuticals | USA | Healthcare (BioTech, Pharma & Life Science) | 78 | 100 | 75 | 100 | 353 |
| 4 | Swedish Orphan Biovitrum | Sweden | Healthcare (BioTech, Pharma & Life Science) | 87 | 100 | 80 | 75 | 342 |
| 5 | Becton Dickinson | USA | Healthcare (Medical Equipment & Supplies) | 53 | 100 | 84 | 100 | 337 |
| 6 | Midea Group | China | Manufacturing (Electronics) | 58 | 100 | 98 | 75 | 331 |
| 7 | China Molybdenum | China | Manufacturing (Metals & Mining) | 79 | 100 | 91 | 50 | 320 |
| 8 | Nidec | Japan | Manufacturing (Electronics) | 96 | 50 | 94 | 75 | 315 |
| 9 | Alexion Pharmaceuticals | USA | Healthcare (BioTech, Pharma & Life Science) | 71 | 100 | 68 | 75 | 314 |
| 10 | Supernus Pharmaceuticals | USA | Healthcare (BioTech, Pharma & Life Science) | 98 | 50 | 90 | 75 | 313 |
| 11 | Tianqi Lithium Industries | China / Hong Kong | Manufacturing (Metals & Mining) | 97 | 100 | 87 | 25 | 309 |
| 12 | Biogen | USA | Manufacturing (BioTech, Pharma & Life Science) | 49 | 100 | 58 | 100 | 307 |
| 13 | Anthem | USA | Healthcare (Managed Health Care) | 11 | 100 | 96 | 100 | 307 |
| 14 | Allergan | Ireland | Healthcare (BioTech, Pharma & Life Science) | 92 | 50 | 88 | 75 | 305 |
| 15 | Vertex Pharmaceuticals | USA | Healthcare (BioTech, Pharma & Life Science) | 68 | 50 | 86 | 100 | 304 |
| 16 | AmerisourceBergen | USA | Healthcare (Healthcare Services & IT) | 45 | 100 | 83 | 75 | 303 |
| 17 | Natura | Brazil | Manufacturing (Materials & Packaging) | 72 | 100 | 78 | 50 | 300 |
| 18 | Seattle Genetics | USA | Healthcare (BioTech, Pharma & Life Science) | 67 | 100 | 77 | 50 | 294 |
| 19 | Greenland Holdings Group | China | Real Estate (Builders & Developers) | 99 | 0 | 93 | 100 | 292 |
| 20 | Assa Abloy | Sweden | Manufacturing (Heavy Equipment) | 38 | 100 | 51 | 100 | 289 |
| 21 | Great Wall Motor | China | Manufacturing (Automotive) | 39 | 100 | 99 | 50 | 288 |
| 22 | MKS Instruments | USA | Manufacturing (Semiconductors) | 77 | 100 | 59 | 50 | 286 |
| 23 | BAE Systems | United Kingdom | Manufacturing (Aerospace & Defense) | -11 | 100 | 97 | 100 | 286 |
| 24 | Longfor Properties | China | Real Estate (Diversified Holdings) | 74 | 100 | 35 | 75 | 284 |
| 25 | Tesla | USA | Manufacturing (Automotive) | 95 | 50 | 38 | 100 | 283 |
| 26 | Ionis Pharmaceuticals | USA | Healthcare (BioTech, Pharma & Life Science) | 85 | 50 | 66 | 75 | 276 |
| 27 | Illumina | USA | Healthcare (BioTech, Pharma & Life Science) | 65 | 100 | 33 | 75 | 273 |
| 28 | Prologis | USA | Real Estate (Financing, Investors, Lenders) | 30 | 50 | 92 | 100 | 272 |
| 29 | Safran | France | Manufacturing (Aerospace & Defense) | 22 | 100 | 73 | 75 | 270 |
| 30 | Insulet Corp | USA | Healthcare (Medical Equipment & Supplies) | 63 | 100 | 79 | 25 | 267 |
| 31 | Essilor International | France | Healthcare (Medical Equipment & Supplies) | 60 | 100 | 56 | 50 | 266 |
| 32 | Cisco Systems | USA | Manufacturing (Networking, Comms & Security) | -6 | 100 | 72 | 100 | 266 |
| 33 | Rightmove | United Kingdom | Real Estate (Services Platform) | 46 | 100 | 67 | 50 | 263 |
| 34 | UnitedHealth Group | USA | Healthcare (Managed Health Care) | 42 | 50 | 95 | 75 | 262 |
| 35 | Fortinet | USA | Manufacturing (Networking, Comms & Security) | 75 | 50 | 55 | 75 | 255 |
| 36 | DAMAC Properties | UAE | Real Estate (Diversified Holdings) | 52 | 50 | 53 | 100 | 255 |
| 37 | DexCom | USA | Healthcare (Medical Equipment & Supplies) | 93 | 50 | 85 | 25 | 253 |
| 38 | Saudi Arabian Mining | Saudi Arabia | Manufacturing (Metals & Mining) | 66 | 50 | 62 | 75 | 253 |
| 39 | Northrop Grumman | USA | Manufacturing (Aerospace & Defense) | 8 | 100 | 43 | 100 | 251 |
| 40 | Sun Hung Kai Properties | Hong Kong | Real Estate (Builders & Developers) | 29 | 50 | 70 | 100 | 249 |
| 41 | Amgen | USA | Healthcare (BioTech, Pharma & Life Science) | 10 | 100 | 37 | 100 | 247 |
| 42 | ASML Holdings | Netherlands | Manufacturing (Semiconductors) | 61 | 100 | 9 | 75 | 245 |
| 43 | athenahealth | USA | Healthcare (Healthcare Services & IT) | 56 | 50 | 61 | 75 | 242 |
| 44 | Cerner | USA | Healthcare (Healthcare Services & IT) | 41 | 100 | 0 | 100 | 241 |
| 45 | Intuitive Surgical | USA | Healthcare (Medical Equipment & Supplies) | 34 | 50 | 81 | 75 | 240 |
| 46 | Foundation Medicine | USA | Healthcare (BioTech, Pharma & Life Science) | 84 | 100 | 5 | 50 | 239 |
| 47 | Larsen & Toubro | India | Manufacturing (Construction Services) | 24 | 50 | 65 | 100 | 239 |
| 48 | Lockheed Martin | USA | Manufacturing (Aerospace & Defense) | 6 | 100 | 57 | 75 | 238 |
| 49 | Aldar Properties | UAE | Real Estate (Diversified Holdings) | 86 | 0 | 76 | 75 | 237 |
| 50 | Medidata Solutions | USA | Healthcare (Healthcare Services & IT) | 64 | 50 | 48 | 75 | 237 |

| Overall Rank | Company | Headquartered | Sector | 2023 Impact Score | | | | Overall Score (Out of 400) |
|--------------|------------------------------------|----------------|--|-------------------|-----------|----------|------------|----------------------------|
| | | | | Growth | Diversity | Boldness | Innovation | |
| 51 | Veeva Systems | USA | Healthcare (BioTech, Pharma & Life Science) | 90 | 50 | 45 | 50 | 235 |
| 52 | NXP Manufacturing (Semiconductors) | Netherlands | Manufacturing (Semiconductors) | 55 | 50 | 54 | 75 | 234 |
| 53 | Anhui Conch Cement | China | Manufacturing (Construction Materials) | 62 | 50 | 71 | 50 | 233 |
| 54 | Stryker | USA | Healthcare (Medical Equipment & Supplies) | 21 | 100 | 10 | 100 | 231 |
| 55 | Abcam | United Kingdom | Healthcare (BioTech, Pharma & Life Science) | 44 | 100 | 12 | 75 | 231 |
| 56 | AbbVie | USA | Healthcare (BioTech, Pharma & Life Science) | 35 | 50 | 46 | 100 | 231 |
| 57 | Haier | China | Manufacturing (Consumer Durables) | 12 | 50 | 69 | 100 | 231 |
| 58 | Edwards Lifesciences | USA | Healthcare (Medical Equipment & Supplies) | 43 | 50 | 60 | 75 | 228 |
| 59 | Apple | USA | Manufacturing (Electronics) | 26 | 50 | 52 | 100 | 228 |
| 60 | Inogen | USA | Healthcare (BioTech, Pharma & Life Science) | 88 | 50 | 64 | 25 | 227 |
| 61 | Thermo Fisher Scientific | USA | Healthcare (Medical Equipment & Supplies) | 51 | 50 | 26 | 100 | 227 |
| 62 | Henderson Land | Hong Kong | Real Estate (Diversified Holdings) | -13 | 50 | 89 | 100 | 226 |
| 63 | Daimler | Germany | Manufacturing (Automotive) | 17 | 100 | 32 | 75 | 224 |
| 64 | Vicinity Centres | Australia | Real Estate (Commercial Retail) | 47 | 100 | -4 | 75 | 218 |
| 65 | Wright Medical Group | USA | Healthcare (Medical Equipment & Supplies) | 80 | 50 | 63 | 25 | 218 |
| 66 | Unibail-Rodamco | France | Real Estate (Commercial Retail) | 18 | 100 | -1 | 100 | 217 |
| 67 | Alkermes | Ireland | Healthcare (BioTech, Pharma & Life Science) | 48 | 100 | 14 | 50 | 212 |
| 68 | Mercury Systems | USA | Manufacturing (Aerospace & Defense) | 69 | 50 | 13 | 75 | 207 |
| 69 | Coherent | USA | Manufacturing (Optics, Photonics & Lasers) | 70 | 50 | 36 | 50 | 206 |
| 70 | General Dynamics | USA | Manufacturing (Aerospace & Defense) | 7 | 100 | 19 | 75 | 201 |
| 71 | Novartis | Switzerland | Healthcare (BioTech, Pharma & Life Science) | -12 | 100 | 11 | 100 | 199 |
| 72 | Align Technology | USA | Healthcare (Medical Equipment & Supplies) | 76 | 50 | -3 | 75 | 198 |
| 73 | Opko Health | USA | Healthcare (BioTech, Pharma & Life Science) | 94 | 50 | 29 | 25 | 198 |
| 74 | CRH | Ireland | Manufacturing (Construction Materials) | 32 | 100 | -10 | 75 | 197 |
| 75 | Volvo Group | Sweden | Manufacturing (Heavy Equipment) | -7 | 100 | 2 | 100 | 195 |
| 76 | Klepierre | France | Real Estate (Financing, Investors, Lenders) | -4 | 50 | 74 | 75 | 195 |
| 77 | Brookfield Asset Management | Canada | Real Estate (Financing, Investors, Lenders) | 73 | 50 | -7 | 75 | 191 |
| 78 | China Vanke | China | Real Estate (Builders & Developers) | 33 | 50 | 8 | 100 | 191 |
| 79 | Ecolab | USA | Manufacturing (Specialised Chemicals) | 0 | 100 | 41 | 50 | 191 |
| 80 | Cigna | USA | Healthcare (Managed Health Care) | 23 | 50 | 16 | 100 | 189 |
| 81 | Electronic Arts | USA | Manufacturing (Entertainment Software) | 19 | 50 | 44 | 75 | 188 |
| 82 | Neogen | USA | Healthcare (Medical Equipment & Supplies) | 50 | 50 | 34 | 50 | 184 |
| 83 | Baxter International | USA | Manufacturing (Medical Equipment & Supplies) | 5 | 100 | 3 | 75 | 183 |
| 84 | Medtronic | USA | Healthcare (Medical Equipment & Supplies) | 40 | 50 | 17 | 75 | 182 |
| 85 | Tata Motors | India | Manufacturing (Automotive) | 36 | 50 | -8 | 100 | 178 |
| 86 | Harmonic Drive Systems | Japan | Manufacturing (Capital Goods) | 81 | 0 | 47 | 50 | 178 |
| 87 | BTG | United Kingdom | Healthcare (BioTech, Pharma & Life Science) | 57 | 100 | -6 | 25 | 176 |
| 88 | Boston Scientific | USA | Healthcare (Medical Equipment & Supplies) | 15 | 50 | 7 | 100 | 172 |
| 89 | Abiomed | USA | Healthcare (Medical Equipment & Supplies) | 82 | 50 | -13 | 50 | 169 |
| 90 | Ligand Pharmaceuticals | USA | Healthcare (BioTech, Pharma & Life Science) | 89 | 50 | 4 | 25 | 168 |
| 91 | EADS/ Airbus | Netherlands | Manufacturing (Aerospace & Defense) | -1 | 50 | 42 | 75 | 166 |
| 92 | Toyota Motor | Japan | Manufacturing (Automotive) | -2 | 50 | 15 | 100 | 163 |
| 93 | TE Connectivity | Switzerland | Manufacturing (Electronics) | 9 | 50 | 23 | 75 | 157 |
| 94 | Patrick Industries | USA | Real Estate (Construction Materials) | 83 | 50 | -2 | 25 | 156 |
| 95 | Annaly Capital Management | USA | Real Estate (Financing, Investors, Lenders) | -10 | 100 | -9 | 75 | 156 |
| 96 | Roper Technologies | USA | Manufacturing (Capital Goods) | 31 | 50 | 25 | 50 | 156 |
| 97 | Celltrion | South Korea | Healthcare (BioTech, Pharma & Life Science) | 54 | 0 | 49 | 50 | 153 |
| 98 | KIA Motors | South Korea | Manufacturing (Automotive) | 1 | 0 | 50 | 100 | 151 |
| 99 | GlaxoSmithKline Pharmaceuticals | India | Healthcare (BioTech, Pharma & Life Science) | 2 | 100 | 22 | 25 | 149 |
| 100 | SAIC Motor | China | Manufacturing (Automotive) | 28 | 50 | 18 | 50 | 146 |