

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.

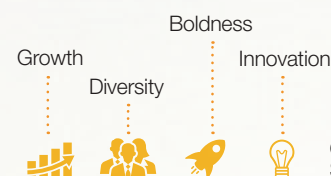
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DECISION-MAKING
INDEX AND REPORT

2019



The Crowe 100 Decision-Making Index



Overall 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

Global 1000 2023: A Comprehensive Analysis of the World's Largest Companies								
Key Performance Indicators (KPIs) and Strategic Focus Areas								
Overall Rank	Company	Headquartered	Sector	Strategic Focus Areas				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