AI Transformation

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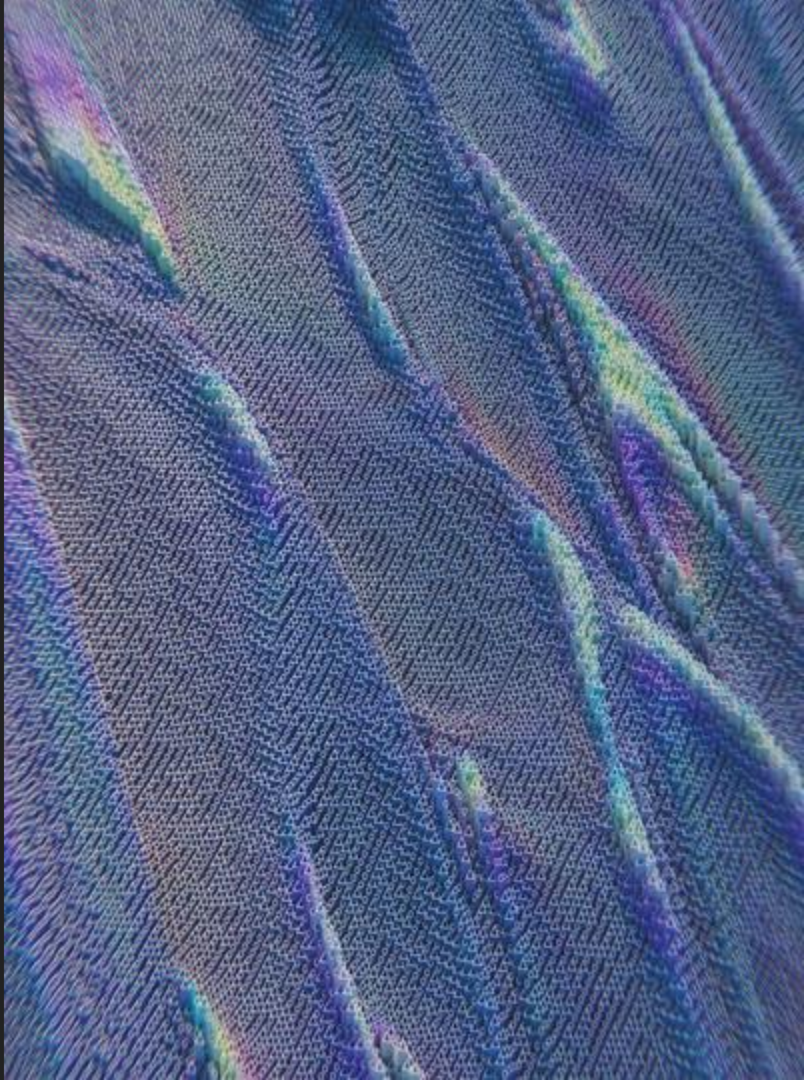

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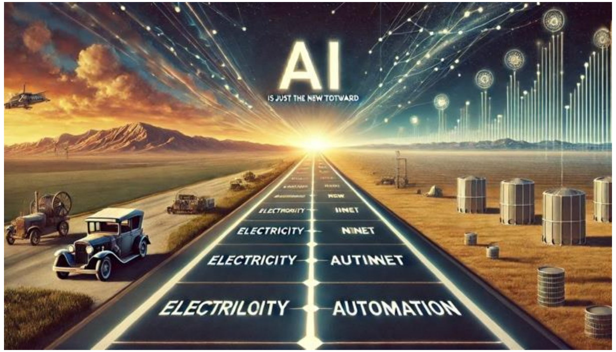
01/Contents



AI as the Horizon of Technology
- When is a technology considered to be "AI"?
- The broad field of AI technologies

Symbolic, Sub-symbolic and Composite AI
- Convergence of modeling approaches

Angles of AI impact
- How is the value added?

What can we expect from AI in the next decade?
- What are the key trends? How to be prepared for it?

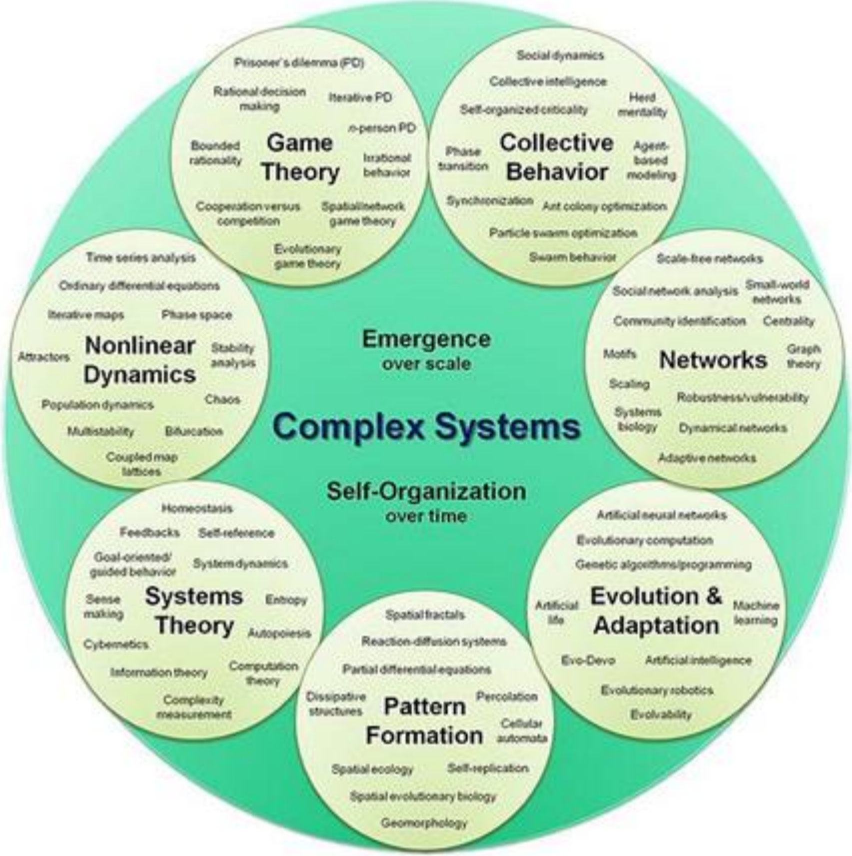
How to build a b2b AI company?
- Value, IP, PR, recruitment, fundraising, sales conversion

02/AI Horizon and Complex Systems

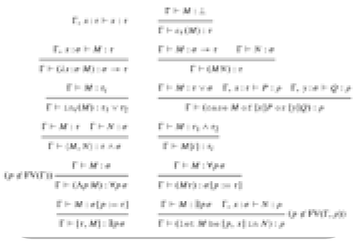
Artificial intelligence is a computerized system that exhibits behavior that is commonly thought of as requiring intelligence. ***NSTC***

The science of making machines do things that would require intelligence if done by men. ***Marvin Minsky***

The study of how to make computers do things at which, at the moment, people are better. ***Kevin Knight***



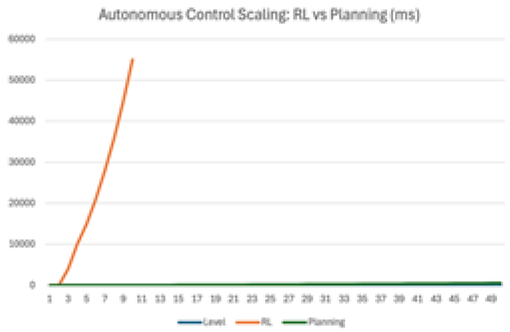
03/ AI: Symbolic, Sub-symbolic, and Composite

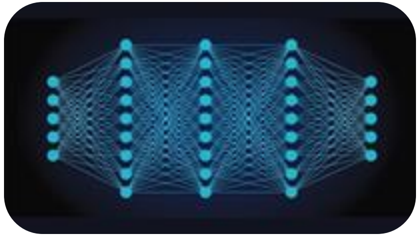


Symbolic AI

- Explainable, auditable, human-readable
- Scalable in the size of the problem
- Small data for learning
- Cheap learning, cheap ops
- Scales to thousands of actions

Neuro-symbolic
Composite
Horizontal
Multi-modal





Sub-symbolic AI

- Neural networks, statistical, black-box, merging causality with correlation
- Great for small decision spaces with big data sets
- Expensive learning, cheap ops
- Scalable to dozens of actions

04/Angles of AI Impact

But where does the value come from? What are the fundamental principles?

- Optimization
- Automation
- Innovation
- Functional Approximation
- Democratization of Knowledge Aggregation

Number of Parts

Quality \ Decisions	2	3	4	5	6	8	10	13	16	20	25	32	40	51	64
0.5	3.549	5	6.398	7.761	9.097	11.71	14.27	18.04	21.75	26.62	32.62	40.91	50.25	62.95	77.79
0.6	3.783	5.5	7.178	8.828	10.46	13.67	16.82	21.49	26.1	32.17	39.65	50	61.69	77.56	96.09
0.7	4.137	6.333	8.569	10.83	13.12	17.77	22.47	29.63	36.87	46.66	59.04	76.62	96.98	125.4	159.4
0.75	4.398	7	9.751	12.62	15.59	21.79	28.28	38.45	49.07	63.82	83.08	111.3	145.1	193.8	254.2
0.8	4.761	8	11.62	15.57	19.8	29.04	39.17	55.84	74.08	100.5	136.7	192.3	262.3	368.4	506.6
0.84	5.178	9.25	14.1	19.65	25.86	40.09	56.57	85.14	118	168	239.7	356.1	510.3	756.3	1094
0.88	5.81	11.33	18.52	27.33	37.75	63.32	95.1	154.2	226.8	344.3	523.8	835.3	1276	2026	3125
0.91	6.569	14.11	24.87	39.04	56.76	103.4	165.5	289.4	451.7	730.6	1184	2023	3286	5580	9159
0.93	7.354	17.29	32.66	54.19	82.48	161.5	273.4	510	837.6	1430	2445	4431	7589	13643	23613
0.94	7.901	19.67	38.82	66.66	104.3	213.4	373.8	725.3	1228	2167	3826	7185	12707	23649	42273
0.95	8.62	23	47.82	85.53	138.4	298.1	543.1	1103	1937	3549	6511	12746	23404	45368	84233
0.96	9.621	28	62.08	116.7	196.5	450.6	861	1849	3389	6506	12496	25737	49465	1E+05	2E+05
0.97	11.14	36.33	87.49	175.2	310.6	770.9	1565	3606	6987	14231	28995	63733	1E+05	3E+05	6E+05
0.98	13.8	53	143.3	313.3	596.1	1652	3648	9273	19412	42955	95062	2E+05	5E+05	1E+06	3E+06
0.99	20.28	103	338	856	1834	6111	15563	46726	1E+05	3E+05	7E+05	2E+06	5E+06	1E+07	4E+07
0.995	30.3	203	804.9	2354	5666	22673	66497	2E+05	6E+05	2E+06	6E+06	2E+07	5E+07	2E+08	5E+08
0.999	80.12	1003	6107	24832	78131	5E+05	2E+06	1E+07	4E+07	2E+08	6E+08	3E+09	1E+10	5E+10	2E+11

Quality \ Decisions	81	102	129	163	206	260	329	416	526	665	840
0.5	97	120.5049	150.4602	187.8734	234.8329	293.3948	367.7413	460.9225	578.0896	725.3952	909.9866
0.6	120.0625	149.3435	186.587	232.9941	291.0877	363.3222	454.7337	568.9109	711.9607	891.1293	1114.775
0.7	204.4568	260.9394	334.5901	428.6707	549.3797	703.177	902.5922	1157.776	1485.262	1905.336	2442.239
0.75	337	444.4295	589.5404	781.6855	1037.334	1375.211	1829.886	2434.031	3239.324	4312.576	5738.122
0.8	706	978.0846	1364.828	1903.99	2659.32	3710.42	5200.081	7285.14	10212.62	14322.11	20070.55
0.84	1606.879	2343.408	3445.259	5062.171	7445.908	10935.47	16137.95	23797.75	35107.39	51799.45	76341.19
0.88	4903.531	7626.748	11968.31	18758.37	29423.38	46050	72448.84	113841.7	178911	281141.4	441094.9
0.91	15322.58	25363.73	42396.28	70743.91	118115.6	196665.8	329337	550648.1	920709.4	1539099	2568009
0.93	41730.31	72870.4	128602.9	226491.4	[illegible]	[illegible]	1239213	2186566	3858123	6805492	11979318
0.94	77241.49	139346.3	254203	462693	[illegible]	[illegible]	2794343	5095781	9292527	16940082	30812774
0.95	160081	300099.3	569277.7	1077288	[illegible]	[illegible]	7311264	13862553	26283457	49816027	94194428
0.96	390706	767626.3	1527400	3031209	[illegible]	[illegible]	23727758	47185502	93831048	1.87E+08	3.7E+08
0.97	1234649	2576798	5452609	11504852	[illegible]	[illegible]	1.08E+08	2.29E+08	4.84E+08	1.02E+09	2.16E+09
0.98	6250081	14203025	32775674	75392557	[illegible]	[illegible]	9.19E+08	2.12E+09	4.89E+09	1.13E+10	2.59E+10
0.99	1E+08	2.63E+08	7.03E+08	1.88E+09	[illegible]	[illegible]	3.56E+10	9.52E+10	2.55E+11	6.8E+11	1.81E+12
0.995	1.6E+09	4.86E+09	1.51E+10	4.66E+10	1.44E+11	4.43E+11	1.38E+12	4.28E+12	1.33E+13	4.11E+13	1.27E+14
0.999	1E+12	4.26E+12	1.87E+13	8.12E+13	3.54E+14	1.53E+15	6.72E+15	2.94E+16	1.28E+17	5.61E+17	2.44E+18

05/AI in the Next Decade

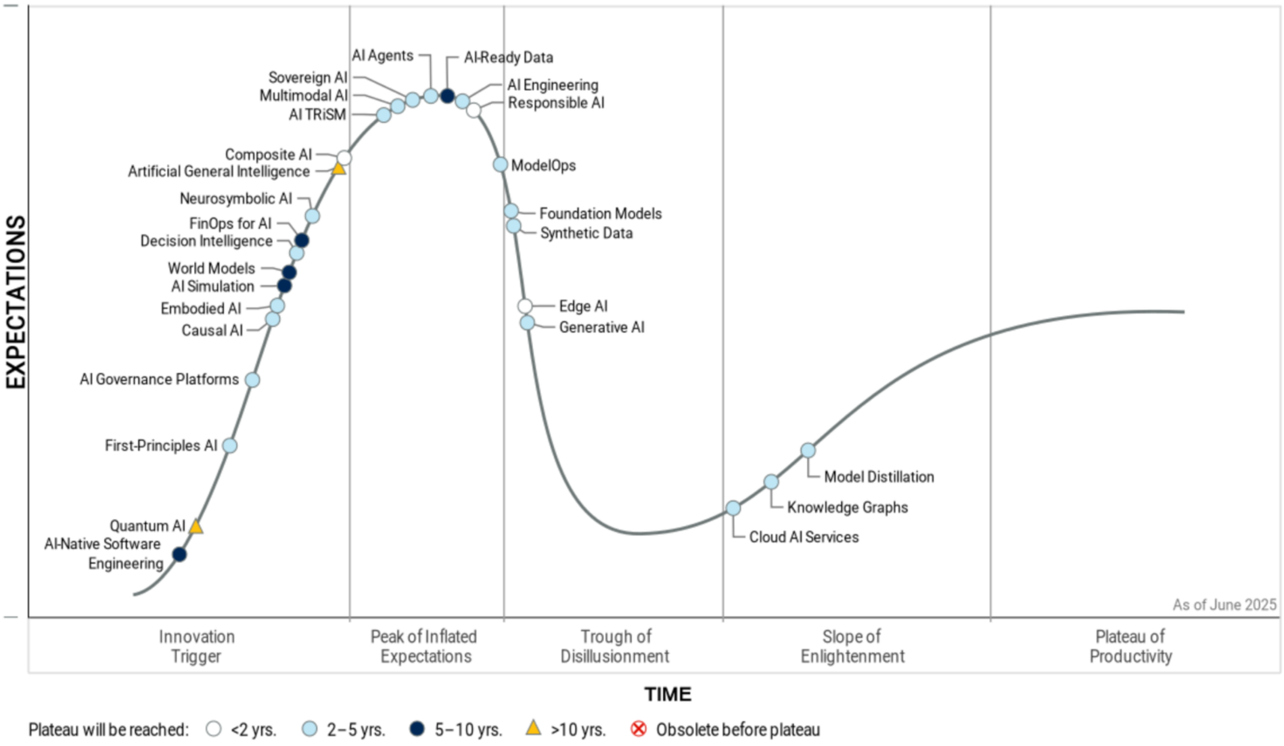
Global AI Augmentation
- In 10 years, the "lack of experts gap" will be bridged

Composite AI
- The science of reasoning how heterogeneous models can achieve more together
- Symbolic and sub-symbolic convergence

Operationalized AI
- Give autonomous AI resources, goal and "see what happens"

Innovative AI
- will become the largest contributor to society

Hype Cycle for Artificial Intelligence, 2025



Thanks!

Any questions?

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A great idea is 5% of the work, 95% is execution

- There are many AI opportunities → idea evaluation engine

AI as a value creation engine

- Unique technology with IP protection
- Long-term vision and steering agility

PR + recruitment + fundraising

- Visibility, credibility, preparation

B2B Sales conversion

- Strategy >> Operations >> Innovation
- Multi-channel validation