



**"In the next 10 years, our economy, our lives will change faster than in the last 100 years."  
Are you already prepared?**

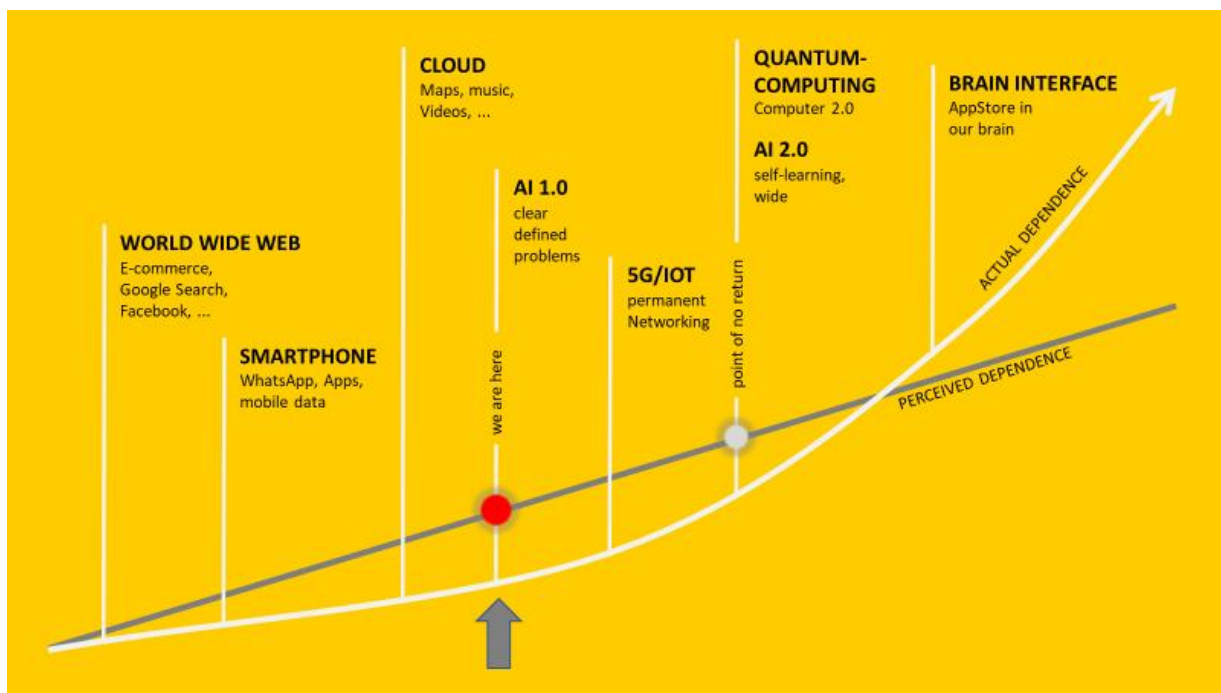
In the last BrainCandy, I focused on the high complexity of the fight against the Corona pandemic. A complexity that is currently pushing both the political leadership and the public administration to and beyond their limits, so that we still have to live with medieval lockdown.

And just in this context, a book falls into my hands that deals with far greater complexity. Frank Thelen, probably known to most as a technophile investor from the TV series 'Höhle der Löwen' (Dragons Den/ Shark Tank) , has written a fascinating book about the 'Mindset of the Future'.

His central thesis: We need a 10xDNA ('think bigger', 'think moonshot') to keep up with the development of the fastest societies / companies. So pretty much the opposite of what we are currently experiencing in the pandemic.

We humans clearly overestimate short-term developments, which always leads to hypes, but in return we massively underestimate longer-term developments. Because we simply cannot imagine how we ourselves will develop further through learning and adaptation and appreciate new solutions for this at a later point in time. SMS was something like that. Shortly ridiculed, then quickly very popular and subsequently massively overrated, now almost irrelevant due to much more powerful solutions like WhatsApp. To the chagrin of all the big telecommunications providers who didn't see this coming and had to leave the field to Facebook and WeChat.

"We always overestimate the changes that are supposed to happen over the next two years, But we underestimate the change that happens over the next ten years." Bill Gates.





We think of our future linearly instead of exponentially, as we did not foresee the digital development in this way. We simply think cars further ahead, a little less consumption, a little more in terms of assistance systems, four wheels and still road. The future will look different, radically new solutions will emerge because innovations become affordable when they can be produced in higher numbers. With your next car, you will probably decide above all between combustion engine, hybrid or electric. Everything is noticeably linear. With the car after that, the question will probably already arise whether you can do without ownership of the car and situationally fall back on a rental offer from a robot driving service. On the road alone? A mini-home office on wheels, or a 'couchette' for jet lag? On the road with colleagues? Mobile confi would be good right now. Want to do some exercise? The Gymcar will be here soon. Important appointment? Mobile beauty salon, hairdresser instead of pilots. Rush hour slowing down your forward momentum? Air taxi. Thelen has a start-up in Lilium.

Or thought in 10xDNA: It takes courage to work on a vision while the majority thinks you are crazy.

Three theorems support Thelen's 10x DNA. Heavily abbreviated:

1. Moore's Law: In 1965, Moore formulated that the number of transistors on a processor doubles every 18 months (exponential development). This 'law' has actually held true for the last 50 years! And today it is further enabled by new processor technology (TPU). We are getting more and more computing power for less money.
2. Wright's Law: The law of cost degression as production volume increases. Things that are still unaffordable today will become cheaper and cheaper to produce over time. When the Tesla was developed (2006), a kilowatt hour of battery power still cost \$300, 2017 (Tesla S) about \$145, today just under \$100 and is thus becoming mass marketable.
3. Kurzweil's Law: He predicted that humanity would enter an age of exponential progress because each new generation of scientists / inventors could draw on the results of the previous generation. The inventors of the pocket calculator were still working with paper and pencil. The following generation was able to work with pocket calculators and today supercomputers and artificial intelligence are available, plus there are more and more researchers worldwide. In 2010, there were almost three times as many as in 1990!

All 'laws' taken together suggest that we will experience an almost insane acceleration of developments in the next 10 years.





The steam engine revolution was followed by the industrialisation revolution, then the digital revolution. Now we are on the threshold of the fourth revolution, for which Thelen predicts this explosive development. Thelen describes with great expertise many building blocks that will accelerate further development and how these building blocks can reinforce each other. I will only briefly go into this here as an overview, treat yourself to the intellectual challenge of finding out more about this in his book, it is worth it. Even if you are not a technophile, or even more so if you find these developments rather disconcerting in your mind. You don't have to look forward to them, but a better understanding of what the possible developments are will help us all. For we are well advised to set the course so that we are not left behind - and that the framework conditions for society to function in the fourth revolution are set in good time.

Thelen's seven key building blocks of 10x acceleration:

**Artificial intelligence:** We are still at the beginning of development. AI 1.0. Actually, so far it is mainly machine learning, i.e. pattern recognition. And with that alone, it represents powerful analytical tools for scientists. And is already helping to reduce costs in many service areas, for example through speech recognition and voice output. Hello, Alexa! Artificial Intelligence 2.0 should then be able to replace many clerical jobs and also academic jobs that have clear rules of execution, such as notaries or doctors (radiologists). My readers know how I resent the failure of politics in combating the pandemic.

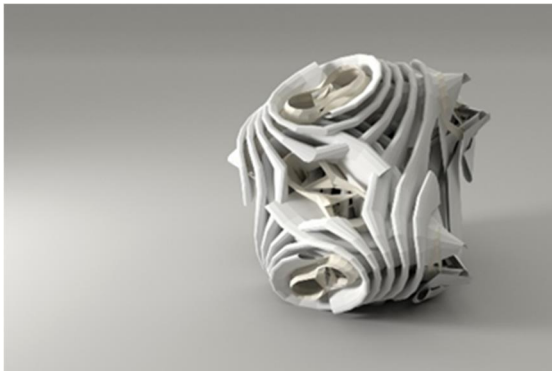
My hope here is actually that with AI we will be much better able to manage the next pandemic because the complexity of all the data of a pandemic will be more deeply understood and intelligent local adjustments can be made at short notice.

**Robots:** Complete more and more tasks faster, more error-free, more efficiently than we do. Don't get tired, don't need weekends, become stronger, more agile and will be able to optimise themselves through learning (AI). Society needs an answer, as with AI, how to deal with the disappearing employment opportunities.

**Synthetic biology:** Changes to DNA (CRISPR) make curing and preventing chronic diseases more likely. Ethical questions need to be answered.

**Blockchains:** Data can be stored and managed securely and reliably for the first time. Fundamental mathematics and IT married. Data can no longer be manipulated unobserved. Self-controlling systems that work according to fixed rules become reality. Bitcoin is currently probably the best-known application of a blockchain.

**5G:** Digital networking is driving technological progress. The Internet of Things (linking machines and people) is enabled by high data rates and low latency. For example, fully autonomous driving/flying 'cars'. It is becoming cheaper, simpler and faster. Entirely new business models are emerging.



**3-Printing:** The first time our manufacturing processes are fundamentally changed. Today, things are usually made by physically working blocks of material. Carving, bending, sawing, gluing, screwing, riveting. In the future, we will be able to bring material to any desired place in the three-dimensional space and create completely new structures. And can already print multi-family houses on site. 24/7.

<https://www.3dnatives.com/de/top-5-das-groesste-3d-gedruckte-mehrfamilienhaus-europas-221120201/> China is unfortunately already much further ahead!

**Quantum computers:** We can hardly imagine the leap that the performance of computers will make. Scientists will make breakthroughs in understanding particularly complex areas.

To make it a little more complex: Of course, these seven building blocks are not separate areas, but will continue to accelerate each other. For example, the robot with artificial intelligence, connected via 5G with supercomputer nodes with the efficiency-driving framework of a blockchain. And accompanied by inventors who develop entirely new service offerings from it.

The exponential development will create entirely new companies because the existing providers will hold on to their currently successful solutions and their current customers for too long. Just as Kodak has held on to its dominance of film among professionals and ambitious hobby photographers. The Kodak invention (!) of digital photography was left in the drawer. Future needs of potential customers were neglected. The rest is history. New technologies used to take many decades to find widespread use. Social media, digital cameras, tablets, smartphones took just a decade. This is not called disruption for nothing; the old business models have practically no time to adapt.

Frank's conclusion: In the next 10 years, our world will change more than in the past 100 years. A steep, but by all means a quasi inconceivable thesis.



I add one more theme that caught me in the book;

Acquire the '**First Principle Thinking**'.



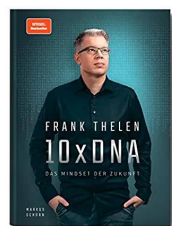
This means that one always first breaks down the task to be innovated into its fundamental components, its basic principles, and finds new, better solutions for these components instead of trying to optimise the overall performance step by step. Elon Musk is competing against NASA. He wants to make space travel suitable for the masses with reusable rockets. He reduced rockets to their central areas of aerodynamics, thermodynamics, fuel and engines. A construction plan with industrially available low-cost components was created. SpaceX succeeded in reducing the price of a rocket launch from \$18,555 to under \$3,000 per transport kilogram. And yes, I know that one of his rockets, after successfully landing, just exploded. What matters to Elon is that the landing worked.

Thelen will certainly (have to) be wrong with many of his forecasts. This is due to the nature of extremely complex, accelerating systems whose many self-reinforcing and self-regulating effects cannot be predicted. But the acceleration will certainly come. And the mentally prepared, i.e. you dear readers, will be able to profit from it.

Therefore, another impulse to read a book again: Let's assume that you are not yet satisfied with the level of your old-age provision achieved so far, and who is? Then there are currently not very many sensible alternatives to the stock markets. But if the future changes faster, are you well positioned for this disruption with your current portfolio?

Or do you have too high a stake in the proven industries of the last decades or even the internet winners of the last few years? How sure are you that you will also participate in artificial intelligence, robotics, synthetic biology, 5G, blockchain and 3D printing? Is it enough to own Alphabet? Apple and Amazon? Or will entirely new players emerge? In Europe? In America? In China? Thelen makes no secret of his investments, not only in start-ups but also in certain stocks - and Bitcoin. However, if you are not deep into the matter like Thelen, individual stocks are probably very risky. In recent weeks, some over-hyped high-flyers in hydrogen and autonomous driving have had their wings clipped a bit. It is probably better to find well-managed future funds and disruptive-oriented ETFs. But the choice is still limited at the moment. I find the ARK ETFs from <https://ark-invest.com> exciting, which unfortunately cannot be traded in Europe, but it is very worthwhile to subscribe to their newsletter. If you have already made your own experiences, perhaps you would like to share them with me? I would be happy to pass this on to interested readers.

Here's to an exciting future that we can now imagine a little better.



### Sources:

[https://www.amazon.de/s?k=thelen+10xdna&crd=19FEW70EALPLE&srefix=thelen,aps,178&ref=nb\\_sb\\_ss\\_ts-doa-p\\_3\\_6](https://www.amazon.de/s?k=thelen+10xdna&crd=19FEW70EALPLE&srefix=thelen,aps,178&ref=nb_sb_ss_ts-doa-p_3_6)



## Book recommendations

By Ralph Ohnemus:

**Brand experience.** The strategy in hypercompetition and information tsunami [> order here](#)

**Brand amazement.** Winning in the information tsunami [> order here](#)



**Feedback, suggestions or criticism about this article:**  
[braincandy@ka-brandresearch.com](mailto:braincandy@ka-brandresearch.com)

The author

**Ralph Ohnemus, CEO.** Board member and main shareholder of K&A BrandResearch since 2001.

Previously a client of K&A BrandResearch for 15 years.

National and international marketing and sales experience in senior management positions, including FMCG, fashion, media and telecommunications - most recently as SVP Consumer Sales responsible for marketing, sales and chain stores at Viag Interkom O2.

Contact: [r.ohnemus@ka-brandresearch.com](mailto:r.ohnemus@ka-brandresearch.com)

