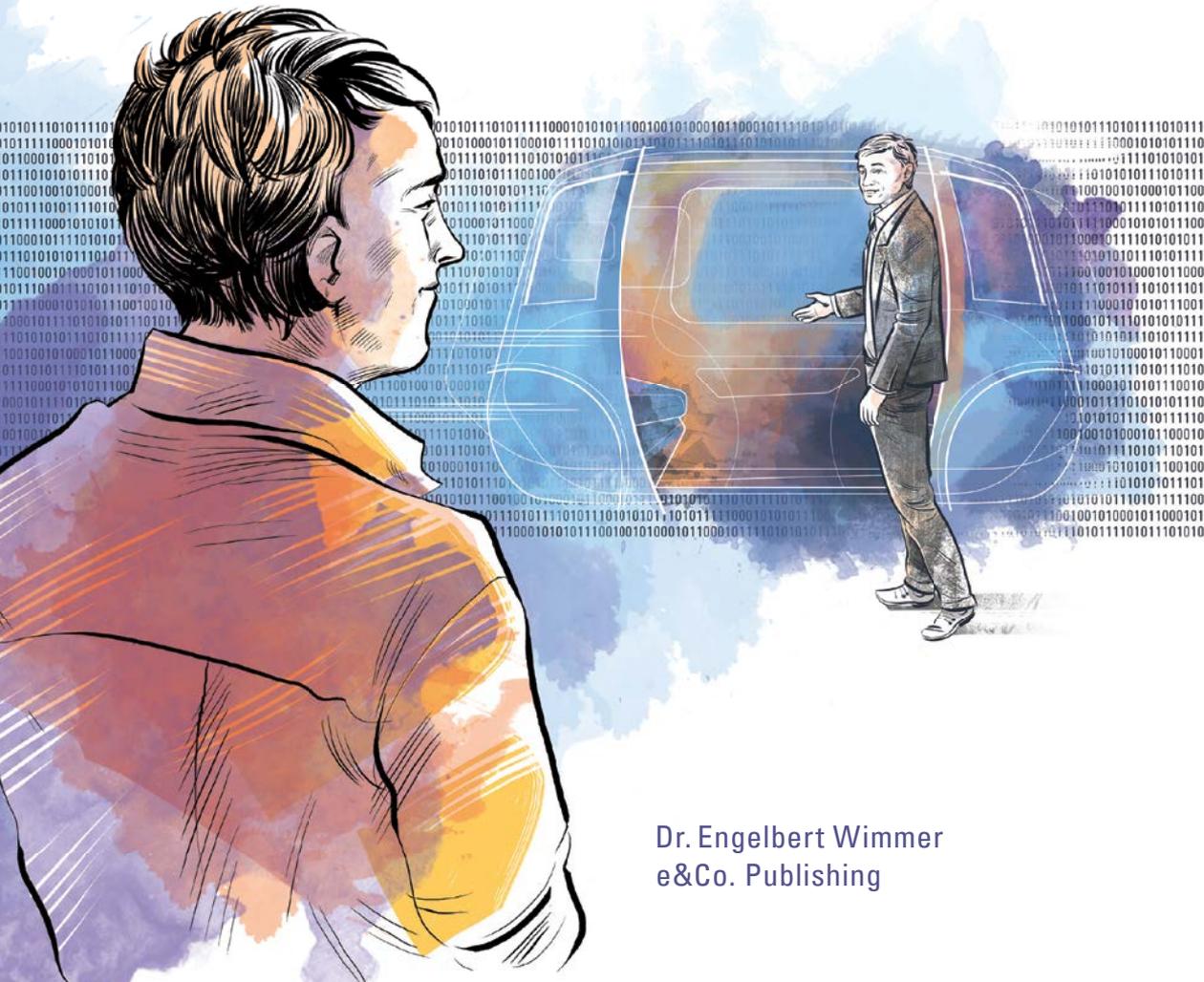


THE IN.CAR.NATION CODE

Making the digital
transformation succeed



Dr. Engelbert Wimmer
e&Co. Publishing

THE IN.CAR.NATION CODE

Making the digital transformation succeed

Dr. Engelbert Wimmer

e&Co. AG – enabling value
2019, first edition



It's still day one. I don't think the alarm clock has gone off yet. We haven't even hit the snooze alarm once. It's early. I think it's day two when the rate of change slows. And so far the rate of change on the internet if anything is accelerating.

Jeff Bezos,
CEO of Amazon

This book is dedicated to the many people who allow me, and encourage me, to keep looking for answers – and to an industry in which I feel comfortable and which I greatly respect.

THANK YOU – THANK YOU VERY MUCH INDEED!

I put my heart and soul into this book. After starting it in San Francisco in winter 2017, I finished it there, too, in early 2019, writing the last few lines while I was there on business. In the intervening period, I travelled widely and learned a lot – and spent many a weekend and many an evening writing feverishly in an attempt to get things down on paper when my commitments as a management consultant allowed. It was a journey, and one on which I was greatly helped by several people whose support I would like to acknowledge here.

First and foremost, I would like to thank my family for their patience, as well as my marketing alter ego, my friend and long-time companion **Ben Wiechmann** for his outstanding all-round collaboration on this book. My thanks also go to **Romi Klockau** for encapsulating my thoughts in the fantastic graphic design of this edition and to **Matthias Seifert** for an excellent set of illustrations in which he has truly surpassed himself. **Brian Melican** is greatly deserving of thanks for translating the original German version of this book with his finely attuned ear for language and sharp eye for style, as is **Nina Geiss** for acting as a sounding board for my thoughts – and for contributing her own. I would also like to thank the whole **e&Co. team**, especially **Hanns Peter Becker**, **Geza Brugger**, and **Max Neumann**, for being there to trade and discuss ideas, offer input, and provide consistent motivation. **Uwe Walter** is a friend and talented storyteller whose valuable contribution I would also like to acknowledge here, before I close by thanking everyone else I may have forgotten.

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Introduction

'Das Auto'

Status symbol, fetish object, bone of contention: few things are as important to Germans as their cars. We're not alone here, of course, but *das Auto* has a grip on the German mentality: not only is it, as in other countries, the most important means of transport; it is also the symbol par excellence of individual freedom and societal dynamism, a lifestyle (and not a lifestyle accessory), and an economic node around which employment, prosperity, and, yes, power coalesce. Some vehicles have become bywords for entire generations, and the automobile itself – *das Auto* – has shaped Germany, making it the prototypical car-nation.

A cursory glimpse at the numbers is enough to give an impression of the importance of the car in Europe's biggest economy: around 800,000 people in Germany are employed directly by auto manufacturers¹, a figure which rises to 1.5 million when the automotive industry is taken as a whole². It is, quite simply, Germany's most important product, and if its automotive sector were a country and its turnover of 400 billion Euros were gross domestic product, it would rank in the top ten European economies – ahead of Austria³.⁴ At the same time, this economic motor has been emitting some odd noises of late, and everyone can feel it losing traction; the symptoms aren't limited to Automotive (which this book sees as representative of German manufacturing), but are eminently audible here, as journalist Thomas Vasek writes⁵:

“The car – and, by extension, Germany’s understanding of itself as a nation – is in crisis. Like in the cylinder of a combustion engine, the German car industry is the place where, today, the core questions of our time are coming together under pressure: globalisation, climate change, the digital transformation.”

The story of post-war Germany is, in no small part, the story of the car. After driving the *Wirtschaftswunder* (‘economic miracle’) during the reconstruction years, it survived the oil crises of the 1970s and has always managed to reinvent itself as circumstances have dictated, most recently in the shape of supersized, high-PS four-by-fours whose sales were favoured by the – in retrospect – astonishing cash-for-clunkers scheme in Germany during the 2008 – 2009 economic crisis. Only recently, a new challenger to the throne of consumer fetishes has appeared: the iPhone and its legion of smartphone clones is a device which swallows attention and has, in the space of barely a decade, become the be-all-and-end-all of the highly-mobile everywhere, speeding past the car to take on a central importance which would previously have been unimaginable. Indeed, in a representative online survey commissioned by digital agency Syzygy, 28 percent of respondents said their phone was more important to them than sex⁶. Of course, car companies’ press relations departments do their best to pick apart figures like these and provide all manner of counterarguments while pointing out the ever-increasing yield per car sold, but the data leaves no room for misinterpretation: in Germany, car-buyers are getting greyer – and their vehicles are getting older, too, as the car pool ages inexorably. What Germans put in their garages is, quite simply, less important to them than it once was. And if even Germans aren’t that bothered any more, it’s a safe bet that consumers in other markets have become far less fastidious. So the country’s leading industry has a problem and will need to master the biggest transformation in its more than century-long history.

Just to be clear here: this book isn't some paean to a digital utopia without cars – quite to the contrary. I don't believe that people will want to abandon the personal space that is the car or are willing to shun the ultimate customised machine of our time; there is something deeply misleading about the – to get very German here – masochistic *Schadenfreude* with which some tech commentators are already detailing the *Götterdämmerung* of the internal combustion engine. Humans are living beings with bodies built for sensuality, and so I think that for many generations to come, men and women will celebrate their freedom and prove Wolfgang Sachs right again and again: in his book *Die Liebe zum Automobil* – which translates roughly as 'For the love of cars' – the noted academic wrote that automobiles are not primarily means of transport, but of pleasure.⁷ It will take more than a mere decade for such a deeply ingrained cultural tie to disintegrate, and until it does, the car will remain a statement about a certain way of living, and one which will not be downgraded into a simple tool by whatever the current trend item happens to be.

What follows from this, though? That it's okay for the German car industry to sit back and enjoy the ride? No. After all, even gradual changes on the demand side are enough to cause serious turbulence on a supply side based on industrial plants, labour organisations, and investment decisions intended for decades. Instructive of the kind of change ahead are factory chimneys spewing smoke, which were once seen as a symbol for work, progress, and prosperity and which, today, are a symbol of wholly inconsiderate environmental pollution. The ownership of material goods and the way humanity makes use of resources are subject to this change in mentality, too.



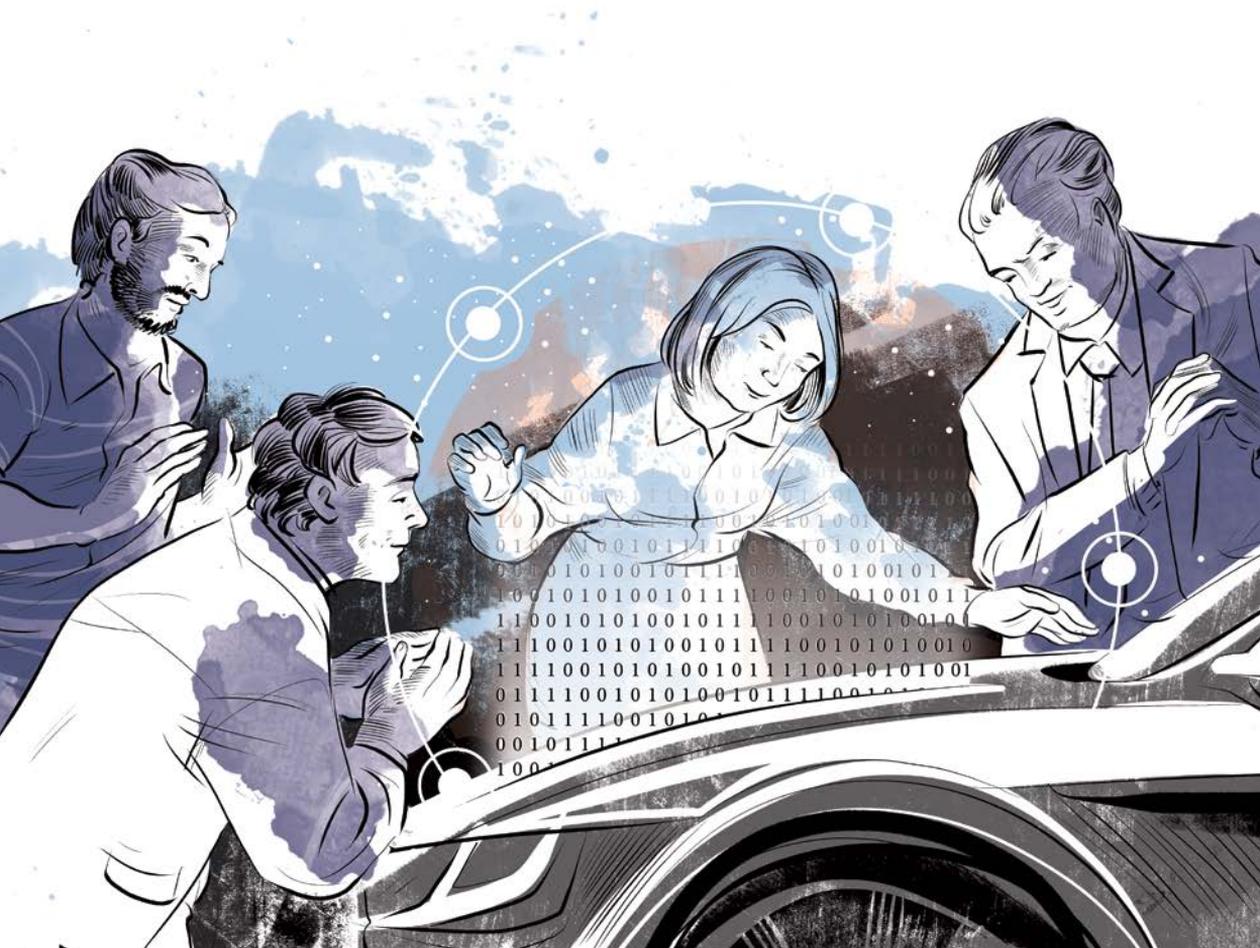
The car as a communication node

In future, being mobile will become increasingly intertwined with a stream of digital services, a development which will open up space for entirely new business models. In the same way as smartphones can still be used to make calls, but also to do a lot of other things, tomorrow's smart-car will reach into more or less every area of everyday life.

In order not to fall victim to this shift in the medium term, the car industry has no choice but to start grasping the new state of play and execute a fundamental change of course. The small screen of the smartphone is something of a black hole into which a range of familiar objects have already been sucked, lost without a trace, while others have become little more than services in the digital ether: diaries, filofaxes, notebooks, alarm clocks, torches, tape and video recorders, cameras, and even desktop PCs or the telephone itself – all of them disappeared into the maelstrom of "There's an app for that!" Already, people are more likely to discover their surroundings through the screen of an electronic device than behind a windscreen, and smartphones seem to be eating their way ever further into our everyday existences. The question is: when will cars find themselves unable to escape the pull of the matt black hole?⁸

Yet with every new generation, the distinguishing features of cars have changed, and so there is no reason why the car can't, for the next generation, take over functionality from other devices and become, if not the centre, at least a node in individual communication. As automotive systems get increasingly programmable and the new possibility of remote controlling vehicle becomes reality, it isn't just people's travel patterns, but their habits of a lifetime which are set to change quite radically: everything from eating on the go to what to read on a journey – not to mention

the social aspect of car-sharing – is up for grabs. The internet of things, electric power, and a range of other technical innovations from autonomous driving through to completely new concepts for transportation can't work without networked sensors, cloud-based intelligence, and super-fast payment systems, and there is no way of turning back the clock on the increasingly networked reality of transportation systems – a reality which offers hope when it comes to tackling a range of today's problems. From traffic congestion to a lack of parking, from how to share cars through to how to work at the wheel, there is no shortage of issues to which, in these times of radical change, solutions are now becoming possible. The developments at hand are sending the amount of digital data transmitted soaring – and, with it, the potential for new business models. It's a self-reinforcing loop which won't just affect cars, but certainly will make itself particularly visible in automotive applications. And in view of the scale of the transformations in this area, in my view, the time has come in Germany, in this "in-car-nation", for a full re-incarnation of our most important industry.



What is the aim of this book?

So another book about the digital transformation, then? Yes! In my view, it's high time that the car industry got its digital act together. Not because we're running out of time, though – as Jeff Bezos says, it's still day one – and not because some evil mastermind has discovered the golden key to lock us out of the next stage.

No, I'm an enthusiastic optimist – and this book is written in that spirit. I am utterly convinced that the opportunities represented by the digital transformation of our industries are so immense that they outweigh the dangers by quite some margin. Anyone who doesn't want to try and avoid change, anyone not willing to run from the future, has no choice but to confront the challenges of tomorrow and adapt to them as best they can: this book is primarily about how the path forward can be actively shaped to offer potential for success. Of course there will be obstacles on this track, and my line of argument will not ignore them: for one thing, there are financial risks inherent in backing what may turn out to be the wrong horse – or in investing in something which simply doesn't work. There is, however, nothing new about that in the world of business, in which taking risks, trying things out, seeing them fail, getting back up, and learning from one's mistakes have always been part of the deal. As I will demonstrate in this book, the 'digital' and the 'analogue' worlds are converging unavoidably in a way which will change the operating system on which our economy runs. We are transforming from a manufacturing and services-based model into a digital value economy⁹, and the only question is how we get there without doing ourselves serious damage. It will mean making opposites into complements, and finding the bridges, not the borders, between analogue and digital; it will also mean expanding the linear models of classic business studies to include the reality of a networked society. There are three core elements in this book that I should underscore at this point:

I'd like to get past the question of “What is digital transformation?” and ask *what we actually have to do* in response.

I will be working with a narrative approach, trying to tell a story, in such a way as *the transfer of knowledge is psychologically intriguing*.

I want to make a contribution to the question of how our companies can finally be freed from the vestiges of the industrial age and *lead into the age of services*.

In my view, there is one insight which is fundamental in this context: digital transformations within organisations are not about technology, but rather about patterns of thought. I don't think that software (or platforms, for that matter) will swallow up the world alive; indeed, to quote Marc Andreessen, “software does not eat the world, but meets the world”.¹⁰ I think the founder of Netscape is far closer to the money, here. So the challenge is to develop a plan for how companies and decision-makers can balance analogue and digital concerns.

Who is this book for?

This book offers entrepreneurs, executives, innovators, consultants, financiers, and observers interested in business and the economy a way of structuring the discussion around the digital transformation. Regardless of whether they are working at the local (SME) or multinational level, people who are pushing things forward, people who are doing something (rather than nothing) are who this book aims to reach. With it, I am trying to show a path for companies looking to remain competitive as they move forward but who are still rooted in what we might refer to as a European corporate culture: one based on responsibility towards employees and wider society – with a growing consciousness of the importance of sustainability.

How to read this book

One thing which is common to everyone in this broad target readership is that they're short on time – and the easily navigable structure of this book is intended to respond to this shortage.



The path A mind-map visualises the journey through this book, helping readers to recognise the connections between each stop on the way and to travel backwards and forwards between them at will.



The Compass Each chapter begins with a 'navigation page' on which the key messages are summarised. This page tells readers what to expect in each section – and how much time they will need to read it.



The Story In my view, the only way to really pass on knowledge is to tell a story. That is why each chapter is fronted by an instalment in our story. You'll recognise these 'storytelling units' by their campfire symbol. Essentially, our story is a classic travelogue in which our protagonists learn as they move around the globe.



The Detours If you see the 'detour' sign, then you'll know that we're digressing from the journey in order to share an anecdote, look at a case study, or offer hands-on experience. These detours are clearly labelled and marked as text boxes, but it would be a shame to miss them: sometimes, the diversion is better than the quickest route.

Get to know the characters



Notes about readability

This book has been written in such a way that each chapter can, if desired, be read in isolation from the others; the key points in each section have been highlighted for speed-readers. Blue highlighting means that the story or case-study at hand is a stand-alone piece. At the end of the book, you will find a comprehensive literature list with recommendations about the most important sections in each work.

We will be joining two fictional characters on an international – and highly instructive – journey. As our two protagonists exchange their impressions and insights, we will learn more about them and, with them, about the world they discover.

The narrator of our story is **Peter Mahlich**, 41 years of age. He lives in Frankfurt, Germany, and – at the beginning of the book – works in the marketing and sales department of a large telecommunications company. We meet him as he summarises a recent trip to Silicon Valley, where he has been offered a highly challenging new position as board member for sales at AutoInc. – a sizeable (and wholly fictional) German carmaker. Having accepted the offer to start in four months, he decides to visit some of AutoInc.'s plants and offices to learn about the new company. He won't be travelling alone, though.

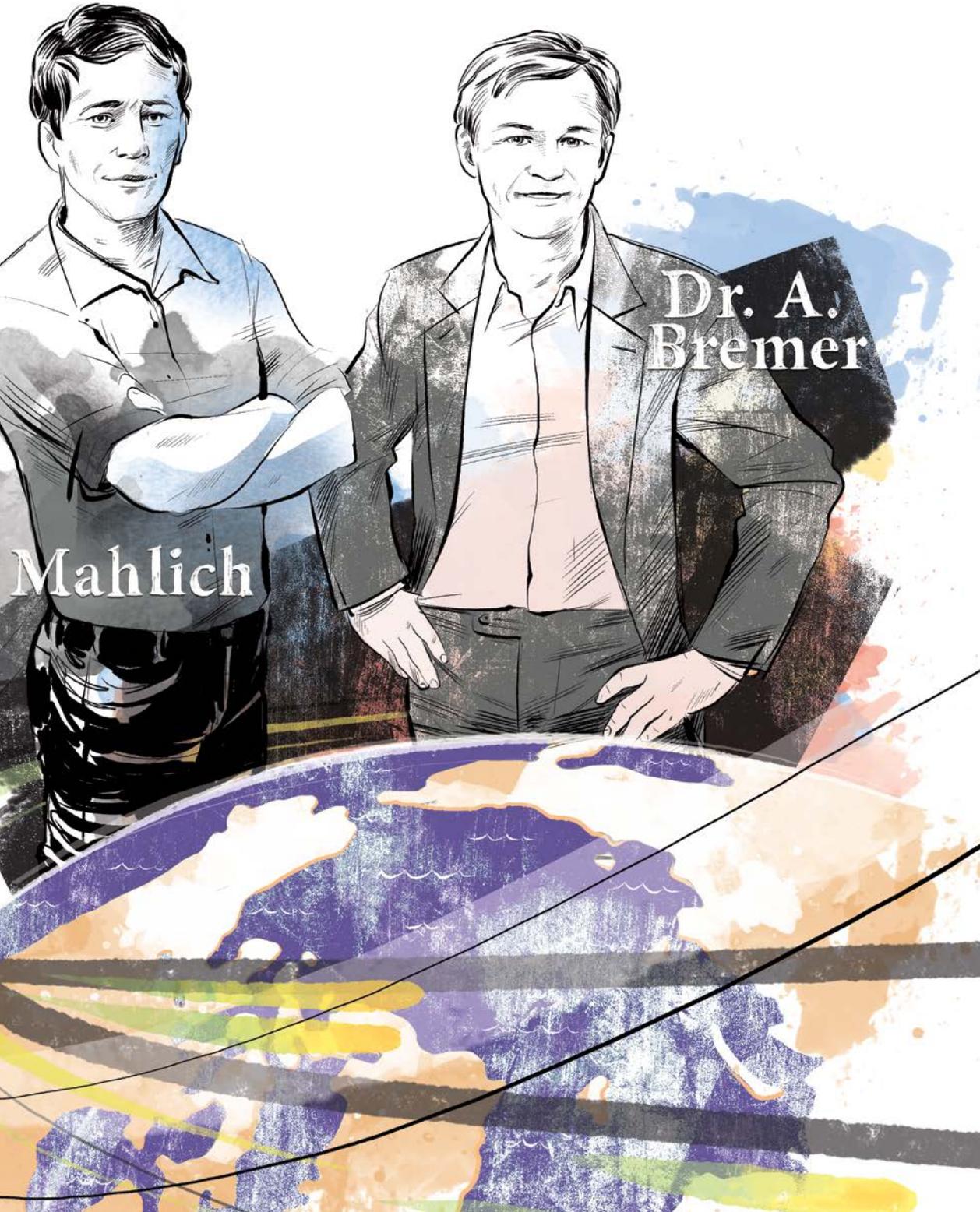
Dr. Andreas Bremer, 48, is a partner at an exclusive management consultancy who has been working with top executives at AutoInc. for many years. Among other things, one of Bremer's projects was to design the carmaker's talent management programme for tomorrow's executives, predicating it on the motto that all future managers at the company should take an intensive course in the reality of the digital value economy.

So in order to prepare Mahlich for his new position at AutoInc., Bremer travels with him to various places around the world in a quest for answers to the following questions: What does digital transformation in the car industry mean for customers? What does it mean for processes? What does it mean for organisations as a whole – and for their leaders?

I hope you enjoy this journey and wish you a pleasant read.

Dr. Engelbert Wimmer, December 2019

Peter



Mahlich

Dr. A.
Bremer



Mahlich gets onto the starting blocks

- Meet-up in the Valley
- Brain-gain
- Hi-tech research
- Experimentation
- Non**-competition
- Venture capital ecosystem
- Optimism: 'paying it forward'
- One call (to action) changes everything
- A pact to learn together

China! Or maybe Israel? Wanderlust!

- Beijing traffic blues
- China forward
- A plan for China
- Shalom, Tel Aviv
- Japan disrupts the disruptors

The four areas of the Digital Value Economy

- Creating digital user value
–turning products into experiences
- Operating in learning cycles
– making agile cycles out of linear processes
- Designing bi-modal organisations
–bringing scaling and innovation together
- Evolving leadership techniques
–ushering in the era of post-heroism

Creating digital user value

Letting your mind wander

Story: The habitat of the digital user

Mobile individuals: older, wealthier, and more numerous

Urbanisation at break-neck pace

The customer is always on

Knowledge transfer reversed

Shopping for products becomes shopping for experiences

Attention: a limited resource

Real time: a *Red Queen* life

Virtual communities and digital states

Producing the Digital Self

Analysis:

Creating digital user value

The economy of digital experiences

Convergence is the secret ingredient

Ecosystems beat brand management

Action:

Experiences become digital

Communicate (→ feedback loops)

Perfect access (→ omnichannel and de-frustration)

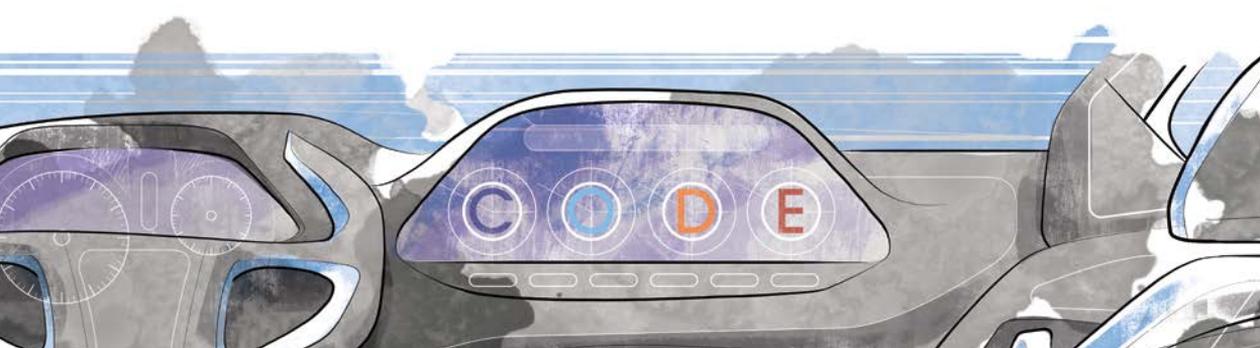
My value (→ personalisation, status, self)

User contribution (→ co-creation)

Communities (→ social)

Collaboration (→ open ecosystem)

HIPPOS and digital user value



O perating in learning cycles

Informal chats

Story: The entrails of the digital beast

The astonishing expansion of the data machine

The data jungle needs a data strategy

Learning machines to channel the data flood

The end of Hellfire Missiles

Added value in context

Analysis:

Digital innovation cycles

HMI and data channels: the victory parade

Evolution in value-centric increments

Divide and conquer using pace-layered architectures

Action:

Innovation @ Digital Speed

Hoarding data capital (→banking on USPs)

Design thinking (→creating experimentation capability)

Open innovation (→celebrating 'not invented here')

Universe of (micro-)services (→modular recombination)

Tech trendsurfing (→working the labs)

OKR vs. KPI (→bridging horizons)

The elevator pitch

D esigning bi-modal organisations

Story: Of whales and schools

Organisation is what makes us successful

The Greiner growth model

Organising innovation: exploring vs. scaling

Scaling aims for dominance

A foot in the door: corporate venture capital

Innovation requires open organisations

Analysis:

What are hybrid organisations

Agile organisations: doing or being?

Birds in the hand and birds in the bush

Innovation and culture, a challenging duo

Action:

Building hybrid organisations

Defining the purpose (→means to ends)

Organising hybrids (→experimental forms of life)

Weaving networks (→from interfaces to seams)

IT in DevOps (→multi-speed IT)

Trimming planning (→adapting pace)

Alliances for talent (→improving employee experience)

E volving Leadership

Story: The L-word—Leadership

The importance of leadership

The danger of conservationists

The rediscovery of leadership

Analysis:

Post-heroic leadership

Leading (yourself better)

New work and new teamwork

Optimising self-awareness

Action:

Leadership and mindset

Leadership compendium (→describing good leadership)

Feedback as routine (→offering opportunities to learn)

From CEO to CDO (→Chief Development Officer)

Financing risks (→trial and error)

Storytelling to build bridges (→coordinating birds in hand and bush)

Thinking in ecosystems (→increasing network performance)

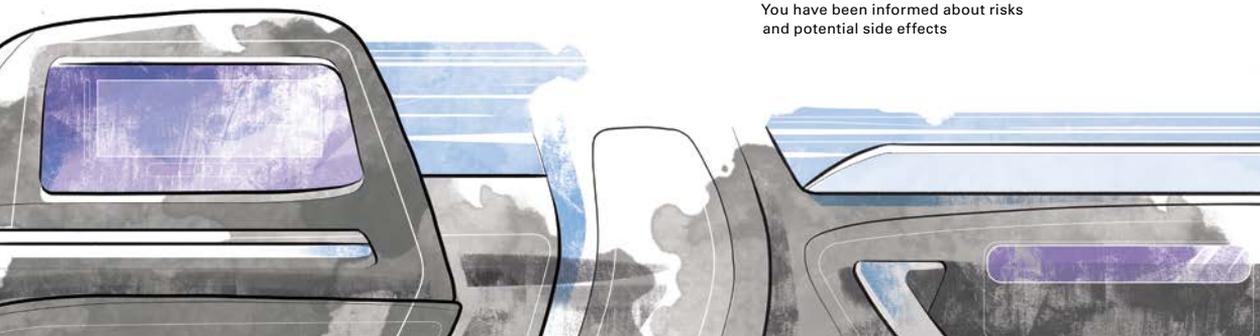
And now?

Business as usual?

Author's postscript

The digital avant-garde is not invincible

You have been informed about risks and potential side effects





MAHLICH GETS ONTO THE STARTING BLOCKS

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Mahlich gets onto the Starting Blocks



WHAT'S IT ABOUT?

Fresh into the Valley, our narrator Peter Mahlich experiences an intense tech meet-up before reflecting on it – and the most important criteria for the success of Silicon Valley – with Dr. Bremer.

THE ESSENCE OF THIS CHAPTER: FACTORS IN THE SUCCESS OF SILICON VALLEY

- » **Brain-gain** – A relaxed immigration policy is a key condition for the ‘wonder of Silicon Valley’ – indeed, perhaps 50 percent of the necessary groundwork.
- » **Hi-tech research** – The diverse and applications-focussed research landscape of the Valley provides a constant stream of ideas and entrepreneurs; competition between the various leading institutes in close proximity propels them to ever better results.
- » **Experiments** – Rather than writing business plans, people in the Valley conduct experiments which, since they deliver data and experience, are far better than written concepts.
- » **Non-competition** – If staff don't feel happy, they go – maybe to the competition, or maybe to become the competition. So it makes sense to treat them well.
- » **Venture capital ecosystem** – Money alone doesn't make you happy, so the saying goes – and it doesn't make you successful either. Alongside investors, a whole range of other service providers help start-ups to scale at speed.
- » **Keep dreaming, keep trying** – The only way to win is to keep on trying on: statistically, this is important – and it's important when you're trying to identify the next unicorn.
- » **Optimism** – ‘paying it forward’: Assuming that there is enough of everything to go around, there's no reason not to be generous and helpful.

Reading time: approx. 30 minutes (220 words per minute)





Meet-up in the Valley



It's a beautiful Saturday afternoon in November, 2017, and I'm at a meet-up in Palo Alto, California, surrounded by a random mix of people. And that's what I'm here for. I'd had the idea of taking time out from everyday life and giving myself the space to rethink things for a while, and now here I am – in Silicon Valley with four weeks' sabbatical leave. I've got a few contacts and have arranged to visit a few firms but, by and large, I've got lots of time on my hands and am curious to have a look round. Right on the first day, an acquaintance of mine said a good thing to do was to go to one of the local meet-ups and just listen in.

So that's what I've done. After all, I'm here to suck up as much of that famed Silicon Valley spirit as I can. That means finding out what's going on here, getting inspiration from how they do things, and developing my own ideas. *A propos* my own ideas: I'm currently thinking a lot about my professional future. This summer, a head-hunter I know asked me if I would be interested in becoming head of sales at AutoInc.,¹¹ which was something of a surprise because I'm by no means a typical petrol-head. I mean, yes, I've always liked nice cars, but that's been it thus far. What I understood during our discussion was that AutoInc. needs to turn itself from being a company which sells vehicles into one which offers transportation solutions, and that, in the internet of things, the car will become a key node. It started to become clear to me that I could actually contribute something important to this transformation. And here I am in Palo Alto with the moment of truth fast approaching: will I, won't I?

This evening, actually, I'm hoping to learn a bit more about AutoInc., as I'll have the opportunity to talk to Dr. Bremer. I met him at the AutoInc. headquarters back in Germany, and he's currently out here visiting one of his start-ups. So maybe I'll get a few clues from him – after all, I won't be the only person in the running for this job.

The meet-up is about to start, and today's topic is the future and potential of blockchain. There was a summary of what to expect in the app the organisers and participants use to coordinate the event, and if you were interested in coming, all you had to do was to sign-up in the online forum; anyone interested in the topic can join in – even if, like me, almost all of what you know about blockchain is what you've heard from the media hype around Bitcoin. For a long time, the whole idea was swathed in the suppositions about its uses as an untraceable means of payment for drug deals, weapons, and all other kinds of nasties in the depths of Darknet; yet blockchain is more than just a virtual currency. What I know is that it is also a safe and, importantly, decentralised way of processing transactions in networks – and I'm curious to see what else I'll learn about it today.

A hand-written poster hangs on the door at the entrance; as I discover at reception, the space has only just been hired; we're in a non-descript office building used by a small software manufacturer. The meet-up has been organised by a team of young Chinese entrepreneurs, and I'm impressed and (if I'm honest) somewhat surprised to note that said team is mainly composed of extremely highly-qualified, very self-confident, and clearly ambitious young women calling themselves NABA – the North American Blockchain Association¹². It's a name made for big things, even if, today, the room is at capacity with just 40 guests, entrance is free, and the coffee comes – as it must at this sort of thing – in Styrofoam cups. We start by introducing ourselves briefly, and as I learn more about other people in the room, I start to get interested: behind me, there's an advisor to the US government, of Indian heritage, who is also happy to take on business in the private sector and is generous with his business cards; the woman next to him is a banker at Goldman Sachs. Proceedings get started when three of the young Chinese students speak for around ten minutes each, delivering – in what can only be described as broken English – impulses for discussion about how blockchain can be used.

There are a lot of mathematical formulae flying around, so I'd be lying if I said I understood everything; nevertheless, I quickly grasp what is behind the title of today's event, "Smart contracts",

and get an inkling of just how much potential there is in this technology. Talk turns to how blockchain could one day make banks as we know them superfluous, replace land registries, and encrypt data in such a way as it can only be read with the consent of the data subject; some of those present think we are not actually that far away from this point today.

I'm absolutely fascinated. More than the topic itself, what really grips me is the almost tangible energy between the participants in the room. What is taking place here is an exchange between the very best of the best. Accordingly, there's no shortage of preening, and it's not as if every single question or answer is breathtaking; but it's all happening in the public sphere, the sounds echoing through the air like at a jazz concert, with no spheres of influence off limits, no legal eagles wagging their fingers, no reams of non-disclosure agreements to sign beforehand. I'd need a big cheque book to get this kind of crowd in one room at home, I think, and then I'd have to put in a lot of effort to coordinate everyone. Here, people just do it themselves, wandering in regardless of hierarchy to do some networking and compare notes on the current state of play – and, of course, to do deals.

Suddenly, I realise that I'm sitting next to one of the technology heavyweights in the Valley: Hamid Pirahesh, an IBM Fellow.¹³ A fellowship is IBM's way of rewarding technological lifetime achievement and a mark of excellence which only around 100 people in this gigantic conglomerate ever carry at one time. Fellows are given almost boundless freedom to find and dedicate themselves to a research topic within "Big Blue", as insiders call IBM; the resources available for their projects are considerable – and are generally dealt out liberally.

The results of this programme are five Nobel prizes for IBM fellows and around 150 important patents registered to date; what is more, the company enjoys an outstanding reputation as a technology firm and, as an added bonus, has an insurance policy against unwelcome surprises out of left-field. It is this cover against asymmetric shocks which has allowed the company to retain technological leadership over decades where so many other erstwhile pioneers have eventually perished. If staff are given the freedom to question the status quo from within the organisation, they don't feel quite such a pressing need to take their ideas elsewhere and start up their own companies, explains Pirahesh, who took a seat next to me at some point during the discussion. This approach, he continues, is what has kept the IBM tanker on course despite the stormy start-up climate around it. It's an exciting concept – and one that I'd like to hear more about later.



**The Valley's
meet-up culture**

On any given day in the Bay Area south of San Francisco, there is a multitude of meet-ups within an hour's drive. The idea is for like-minded people to gather and talk about all sorts of technological and commercial issues, regardless of the industry or company they are in.

As the meet-up continues, I remain gripped. Pirahesh is now at the centre of a group of curious youngsters, happily explaining in some detail the technical limitations of, and bandwidth required by, today's blockchain process; he also listens carefully to the ideas advanced by his listeners. It is clear that he has a lot of respect for their passion, a genuine interest in their views, and a penchant for interdisciplinary exchange. He's not here to protect the gigantic research budget he commands, nor is he here to justify it; in fact, he doesn't, in this moment, seem conscious of it. He's here for a frank discussion. Here, I'm experiencing first-hand the famed openness of the Valley and its effects. Using the app, you can find a variety of events like this where like-minded people can talk about all sorts of technological and commercial issues, regardless of the industry or company they are in – all in this stretch of the Bay Area south of San Francisco, all within an hour's drive. Of course there are meet-ups in Europe, too, but this one has drawn quite a crowd and is about enabling a deep and meaningful exchange on the topic at hand; what is more, the participants expect straight-talking, high-quality feedback. Curiosity here isn't driven by attempts to differentiate oneself from the competition, by the need to feel superior to them, or by jealousy of them, but rather by the simple desire to learn something. It's so easy and yet so effective, and before I know it, I'm scribbling down thoughts that I want to talk over with Dr. Bremer this evening.

On the way back, I drive a few miles up the Highway 101 towards San Francisco, past the Intel Museum, the NASA Ames Research Center, the Googleplex, and Stanford University parks. As impressed as I am by all these household names, I can't help but think about the dark sides of the Valley: the increasing social divide, the concentration of power to such an extent that it can even sway elections, the homelessness affecting unqualified workers who can no longer afford houses for which they are competing with a biblical plague of incoming programmers; then there are the rumours of sexist escapades in many Valley companies.¹⁴ I've arranged to meet Dr. Bremer at the SAP HanaHaus at 6pm.¹⁵

I'm on time as I park up the rental car right in front of the complex; on entering the cafeteria in the entrance area, I can already see Bremer waving me over with a friendly look on his face. We both register online as visitors and then take a seat in the workspace on one of the invitingly comfortable seating arrangements. I look around the building and my attention is caught by the architectural blend of arches, steelwork, and concrete, by the contemporary chair groups and glass-walled mini-cubicles.

Bremer notes my curiosity, leans back in a relaxed fashion and says: “Perfect place for us to start working together, isn’t it?” I reply that does indeed seem fitting: “Has a nice plug-and-play feel to it.” In fact, I feel like I’m in a plug-and-play world – not just here in the HanaHaus, either. I tell Bremer I feel like I’ve been in a new reality all day and then give him a detailed account of the meet-up this afternoon; he listens attentively.

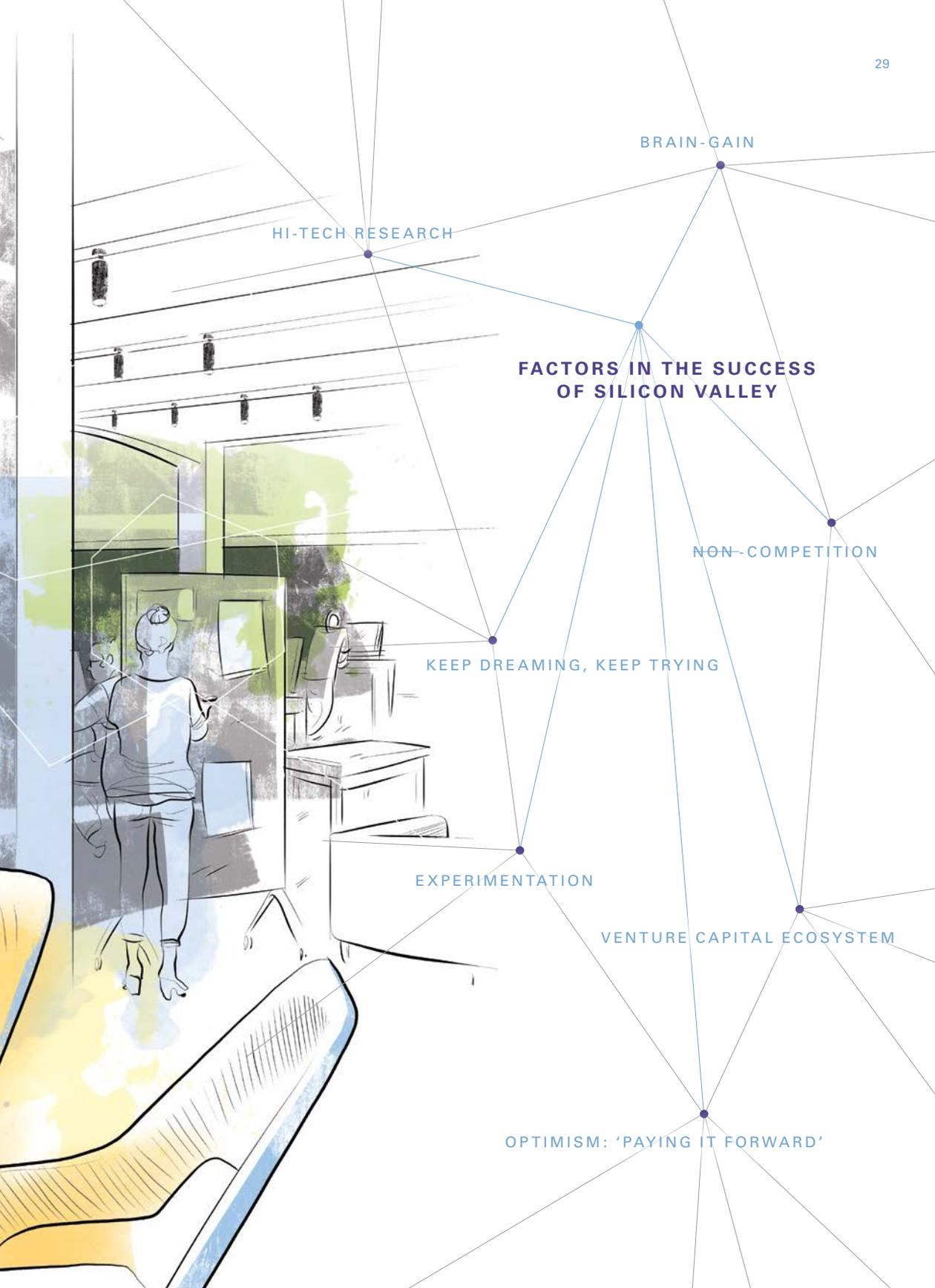
“You’re completely right about the extremely open culture and the high level of curiosity here,” says Bremer once I’ve finished: “It’s a real part of Valley DNA and you have to be willing to get involved when you’re here.” He tells me that the building we’re in was set up by Hasso Plattner, one of the founders of SAP, with precisely this philosophy of free exchange in mind: “He wanted to create a physical place which embodied the ideal of maximum openness to greatest possible extent. It’s a place where people can meet and start working on ideas and initiatives together.” The building used to be a theatre and has 1,400 metres squared of space, from the open work area we’re sitting in to numerous conference rooms and an auditorium for up to 100 people. “All you need to do is click, pay a couple of dollars, and you find yourself right inside the Silicon Valley parallel universe pulsating with projects. It’s an ‘open-mic nite’ for new initiatives, if you like,” explains Bremer. “What’s important for you, though, is that you made it here by yourself,” he adds, “rather than as part of a scheduled tour – the kind of spoonfeeding I see so many executives opt for. Otherwise, it would be – and please excuse me for being so blunt – nothing more than an ego boost. ‘Been there, done that, seen the digital petting zoo! Box ticked!’”

I have to say that I discern a certain disdain behind the words ‘ego boost’ and try to ignore it when I reply that, as interesting as they are, open workspaces aren’t something Silicon Valley has a monopoly on; in fact, I add, Europe already has a very comparable set of co-working providers and start-up centres.

That brings me to the question I’ve been wanting to ask Bremer all along, the question that has brought us here today. “What is it, in your view, that makes the creative energy here in Silicon Valley so incredible? After all,” I continue, “you’ve helped on a lot of joint projects between Germans and Americans. Tell me, Dr. Bremer, what are they putting in the kids’ cereal here to make them so creative that even us Germans – known as a land of inventors – have to bow our heads in respect?”

“That’s a very good question!” laughs Bremer, pulling a pen out of his pocket. “Why don’t we draw a mind-map and then try and boil it down to the essentials? It is very important to be familiar with the strengths of the Valley, after all, and there are far better ways of going about things than fighting its influence. It would be cleverer to learn how to use the energy of the challengers to our advantage – like in martial arts!”





BRAIN-GAIN

HI-TECH RESEARCH

FACTORS IN THE SUCCESS OF SILICON VALLEY

NON-COMPETITION

KEEP DREAMING, KEEP TRYING

EXPERIMENTATION

VENTURE CAPITAL ECOSYSTEM

OPTIMISM: 'PAYING IT FORWARD'

Brain-gain

“The first thing we have to look at,” says Bremer, “is where the talent behind the Valley’s success comes from. And what we see is that the majority of them don’t come from the region, but rather have come to the region. Then we have to ask,” he continues, “why that is, and it’s quite simple: immigrants usually have very little to lose – and much more to gain – by taking risks, so they start their own businesses twice as often as Americans.” He backs this assertion up with some statistics: of the 68 “Unicorns” in the Valley (i.e. companies worth more than one billion dollars), 44 were founded by immigrants.¹⁶ “The result is that we have a group of immigrants with the prospect of making it big and lots of positive role models for so doing. That environment attracts people. In fact,” he advances, “this openness to new talent from outside is what have made the Valley into what it is today: a brand name for creative thinkers worldwide.” Bremer has more statistics, including studies which demonstrate that 53 percent of engineers, around half of CEOs and founders in the Valley, as well as its professors, and more than half of its students, were born outside the USA.¹⁷ That means that the region is a vast melting pot of talent – “and the people in it make connections,” adds Bremer, “because when they’ve changed country, academic subject, or profession, they are far more open for new social contacts.” To illustrate the point, Bremer asks me to think back to when I started university, which he says is a comparable time of change; everyone in the first year has to find new social contacts at the same time, and that’s why it’s so easy for freshers to make friends. “Yes,” I reply, “and I can’t imagine my life today without the people I met back then; but it’s much harder to meet lots of new people once you’ve got into the swing of things, isn’t it?” Bremer agrees: “If, however, rediscovering your own role and meeting new people becomes the norm because of the continuous and frequent addition of new talent, new ideas, ventures, and projects, then you get the kind of open Silicon Valley culture you experienced today.” He finishes with a whimsical flourish: “Just recently, a good friend said to me that if you were looking for an icon to represent the Valley, it wouldn’t be the microchip or the iPhone, but a moving van instead! That is what keeps everyone curious.”

I hadn’t really looked at that way before, but it’s a coherent explanation. Thinking back to the meet-up, I share a few more of the things I observed that really enthused me –

one of which was the age of the participants. Many of them had only just graduated and you could almost hear their hooves scraping at the floor, ready to get of the box and show the world what they can do.

Hi-tech research

Bremer nods his agreement before moving on to the second branch in his mind-map, which he labels hi-tech research. With Stanford, Berkeley, and San Francisco, *Silicon Valley has three of America’s top 15 universities*.¹⁸ “That means that there is no shortage of top brains in all kinds of subjects, from software and bio-technology through to renewable energies,” he explains, “and the people who do degrees at this kind of elite institution have learned to be curious, have learned to cultivate a research mind-set – and haven’t had their faculties dimmed by the demands of continuous assessment.” Bremer gets quite worked up here; the structure of university courses is clearly something he is deeply concerned about.

“Don’t get me wrong: I’m sure the Bologna Process was well meant, but by giving themselves that kind of framework, European universities have markedly reduced academic performance for at least a generation,” he argues, “because everything that is part of the university experience – having time and space to experiment, try new things and places – has all but vanished. Nowadays, students are kept busy

rushing between pointless presentations and silly seminars in which they are forced to regurgitate what they've been force-fed. All they learn how to do is follow, not find out, not convince and persuade." Bremer underscores his point by asking whether I knew that Google founders Larry Page and Sergey Brin were at Montessori schools, and both, he adds, have stressed how important they think the Montessori philosophy of enabling children to learn for themselves was for their later success, he says, referring to an interview with Barbara Walters on ABC.¹⁹ "What's interesting is that the quicker knowledge develops and the more it needs to be renewed in later life, the more important this skill becomes," he concludes. "Just have a look around and see what this kind of curiosity and openness leads to: if you drive down here from San Francisco on the Highway 101, you go past a start-up for every different kind of future technology: artificial intelligence, biotech, space travel – you name it, there's someone trying to own it. So there's no need for people at the top of their field to move away."

When I think about it, Bremer is right: "There's even a carmaker here!" I add with a wink, thinking about Tesla, whose headquarters are no more than 20 minutes away from Palo Alto. What I don't bother to add at this point is that all of the other vehicle manufacturers also have technology laboratories in the Valley in order to get the earliest possible access to new technologies coming out of California; and I decide not to ask Bremer how successful he thinks they are in so doing – because he's already onto the next branch of the mind-map.

Experimentation

"Research generates ideas, applications, and profits – and drives more research," says Bremer, pen in hand. "In this virtuous cycle, applications are the key stage, though: i.e. using research to keep making new things. We're talking about a willingness to try things out, an openness to experimentation." Bremer jots down "hi-tech experiments" on the mind-map.

"There has always been a close link between new knowledge and new applications here," he explains. "The region's economic development started in the 1950s with the Stanford Industrial Park, a research and industrial estate right next to the university. It quickly transpired that many people didn't want to just find things out, but try them out as well, and so lots of people who had worked in electronics companies or who had just graduated from Stanford set up small companies with a view to turning the results of research in to new ideas and products. The Valley," he says with a wink, "has always been a place for nerds and for people who like tinkering. It was a culture of experimentation," he continues, "which made technically-minded people feel at home here.

Basically, they got the chance to play around and try things out – and were able to defend their discoveries against resistance, too.²⁰ In this culture, it was the techies who were hiring (and firing) the businesspeople as they needed them, not the other way round. In many ways, it suits the German focus on engineering," adds Bremer, "but it just all happens a lot quicker," before pressing on with his whistle-top tour of Valley history. "As computer technology spread in the 1960s and 1970s, Silicon Valley started to attract more and more hi-tech software firms – and software scales far more quickly than semiconductor production. So essentially, these companies struck oil – and, as ever when oil is discovered, the prospectors came rushing in to try their luck, too."

“All this created the ideal conditions for even more – and ever more ambitious – experiments, which is how got to what are called the ‘moonshots’ and the rule that Silicon Valley innovations strive to be ten times as good as that of their closest rivals. Essentially, it was a matter of higher, faster, further – and, in some cases, crazier!”

Bremer’s voice goes up a pitch: “You think I’m exaggerating, don’t you? Or at least embellishing things? I might be! But that’s what we need to do here – to tell exciting stories, adventures, tales of daring, of going for it against all odds!” His eyes flash as he lists the projects which did indeed seem crazy – and have revolutionised how we live: “There’s Google, a search engine whose very name signifies a 100-zero figure!²¹ There’s Facebook, a social network considered powerful enough to influence the election of the US president! Then there’s Elon Musk, a man whose stated mission is to colonise Mars! This – all of this – is the world of unicorns that captures people’s imagination – and the world that Silicon Valley is delivering with hands-on experiments.”

“But enough of that,” says Bremer, interrupting his own unstoppable flow, “else I shall lose myself completely in my admiration for legends.” I am, I have to confess, relieved to see Bremer touch down again after this sudden jump into the stratosphere. “An important point here in my view,” he says after a short pause, “is that all of these gigantic plans are dependent on lots of small experiments. In the widespread industrial model of thought, many of us assign a great deal of importance to the genius who has a ‘Eureka!’ moment and then works on perfecting this inspirational invention. The concept here is that everything starts with The Big Idea and that the rest of the work is a long process of eliminating its imperfections. *The Valley philosophy, however, is quite different: here, there’s no shortage of ideas; it’s getting them implemented fast that counts.* And implementation starts with experimentation – with an MVP, minimum viable product. Getting this product to the customer is a good first step; the product is then tested and improved, tested and improved, until it’s absolutely unbeatable.”²²

Before I can even ask for an example, Bremer is explaining one: “Take Google’s search engine: they conduct between 5,000 and 7,000 experiments – every year.²³ It’s not like they were the first to that, though: Thomas Edison went through thousands of experiments before he found the right combination of things to make the light-bulb work.²⁴ What is fantastic about digital products, though, is that you can test various versions of the same product alongside each other by serving one group of customers with one version and another group with another.” Bremer moves onto the next illustrative example here: “In a recent interview, Mark Zuckerberg said that one of the things he was most proud of was the Facebook test framework: at any one time, there are probably around 10,000 different Facebooks in operation – not one single one.”²⁵

The idea is that, in a fast-changing environment, working this way allows you to test the waters more quickly and work out which way the current is going. Traditional companies, however, have a lot of difficulty carrying out small-scale tests on real, live customers, because every experimental project team each test they want to conduct has to run through the same organisational structures as large-scale projects. It's the long path to go-live through various decision-making instances which takes time: development, sales, production, logistics ... All the discussions, committees, authorisations weigh down on the experiment from day one. It's an extremely expensive and very slow way of working," explains Bremer. "Silicon Valley companies are organised differently: small-scale experimentation is standard practice, and the point of decision is, quite simply, put off until after go-live. As such, many – sometimes thousands – of versions of a product are tested with customers, and it is the data from these tests which decides. So it's not only far, far faster, but also more effective and more cost-efficient by a huge factor."

"I have to say, Dr. Bremer, that my experience confirms a lot of what you say," I reply when he looks at me to see if I'm still following, "but there's one thing we haven't mentioned yet that I would have expected to see on our mind-map in the 'Experimentation' section." Bremer smiles encouragingly: "Be my guest! A mind-map is there to be added to, so please do share your thoughts."

"Well, one thing I see happening is the democratisation of the possibilities to do things independently. YouTube videos, maker spaces, blogs and forums, hackathons ... It has become possible to involve far more people in creative processes than ever before; and if nothing comes of it, it doesn't matter."



Quick experiments, quick implementation

A product of the lean start-up approach, the minimum viable product (MVP for short) is one which has only the most necessary functionality needed to be used by customers. Their feedback as users is then the start of an iterative process in which continuous improvements are made in a rapid-fire series of version launches.

This whole approach makes it easier to move on when something doesn't work." "That's an interesting thought," replies Bremer, "and it also applies to staff: they don't stick with companies which aren't working." He's bang on the money, I think to myself as I remember what I didn't like about my last job and why I've decided to move on. And I feel myself getting nervous about what is going on back at home and the challenges I am likely to face when I get back.



THE MENLO PARK MAGICIAN

Over 100 years ago, a gifted inventor, skilled marketer, and serial entrepreneur was also carrying out experiments in a place called Menlo Park – albeit not in Silicon Valley, but rather in American’s industrial powerhouse at that time, New Jersey: Thomas Alva Edison opened a laboratory in 1876 and, one year later, brought out a genuine innovation in the form of the phonograph. Two years later, he managed to produce a market-ready incandescent lightbulb – albeit after he (like many before him) had failed time and time again to find the right construction. In fact, he tried out more than 6,000 materials until he found one suitable as the element. Yet for Edison, the lightbulb was really a means to an end: what the sharp-eyed businessman actually intended to do was to electrify America’s cities. To build up enough demand for an expansion of electricity grids, however, he had to get the right product onto the market (the gas industry had done the same thing previously).

Nevertheless, Edison made a crucial error which cost him his reputation (and a lot of money to boot): he backed the wrong technical standard. Rather than alternating, Edison worked with direct current – and tried, in what became known as the War of Currents, to establish it as the standard against the AC system of his competitors, George Westinghouse and Nikola Tesla. It was to be the latter two and their alternating current which carried the day as the key to widespread electrification. While Westinghouse did very well out of this success, Tesla, the highly-intelligent inventor and physicist with over 280 patents to his name, didn’t get very far – but nevertheless has the honour of being the patronym for a much-hyped electric car manufacturer from Silicon Valley. Yes, the name Tesla isn’t the brainchild of some branding agency, or even of Elon Musk himself, but rather a pregnant reference; one can only hope that the company has more financial success than the eponymous inventor, who died penniless and forgotten. Edison fared rather better, and when he passed away in 1931, President Hoover asked all Americans to turn off their lightbulbs during the funeral to pay the inventor their last respects. What a gesture!

“How do you mean that?” I ask Bremer to get him to say more: I feel that the discussion has reached an exciting point. Nevertheless, I’m also slightly distracted and keep glancing at my smartphone, which, as we speak, is receiving various messages from the people I am in contact with at my potential next employer, AutoInc. – despite, I think to myself, the fact that it must be the middle of the night in Germany now. I don’t want to interrupt our conversation, however.

Non-competition

“There’s a very specific link between the mythology of the early days of Silicon Valley on the one hand,” says Bremer while he stretches his limbs (probably to try and shake the jetlag), “and a peculiarity of Californian labour legislation.” With that, he adds another branch onto our mind-map, writing “Non-competition” and then crossing out “Non”.



“Californian labour laws render the standard non-competition clauses in employment contracts void,” explains Bremer,²⁶ “and that means that members of staff in a company who have become dissatisfied with their employer – or simply get a more lucrative offer elsewhere – can simply disappear out of the door, taking their knowledge and experience with them to other companies in the same business area or even to direct competitors.” Bremer adds that there are no legal work-arounds or ways of trapping people on gardening leave by keeping their salary flowing – and that businesses in California are, as is to be expected, not exactly strong advocates of this state of affairs. There is, however, no shortage of studies which attribute a considerable economic effect to this way of regulating changes of employer, allowing as it does the brainpower of knowledge workers to coalesce quickly around business models in which it can make the greatest impact and thereby providing a strong boost to productivity.

“How does this fit together with the myths about the beginnings of Silicon Valley?” I ask. Bremer appears to have been expecting the question: “Well, in the late 1950s – i.e. back when Bill Gates and Steve Jobs weren’t even in school yet – there was something of an employee uprising at semiconductors manufacturer Shockley, whose eponymous owner (and Nobel laureate) was notorious for his poor treatment of workers. The result was that eight very talented young men left the company at the same time to start their own operation in what was, at the time, a promising new business area: transistors.²⁷ They were the first whom managed to put an integrated circuit onto a silicon chip, thus making history – and giving the Valley its moniker.

The ‘Fairchild Eight’, as they became known, and their ventures are now the stuff of legends,” adds Bremer: “They are said to have sealed the deal between them by all signing a dollar bill; the connections and networks which grew up around them – and the numerous companies which grew out of them – are now part of the mythology, too.” Bremer gives me a couple of the best-known examples: Gordon Moore and Robert Noyce went on to found Intel, while Eugene Kleiner (who had fled Nazi persecution in Austria) would later join forces with Tom Perkins, formerly of Hewlett Packard, to set up famed investment fund Kleiner Perkins.

“The absolute brass cheek of the ‘Fairchild Eight’ – simply setting up another company was not something people did back then – seems to have acted as a wake-up call to other Valley firms, who realised that they would have to do everything in their power to keep their staff. That meant whacking up salaries, building sports facilities, and offering a genuine sense of purpose; it also led them to give their employees as much freedom as possible in designing their workspace, the opportunity to provide feedback on management style, and an exciting mission. Competition for staff was hard, so the companies had to adapt themselves to the best workers, not vice-versa. That has shaped the way the Valley works to this day,” summarises Bremer, “and I think that shows you how certain elements interact which might not be immediately recognisable on the face of things.”

While we’ve been talking, things have quietened down around us in the HanaHaus, and the heavily-tattooed hipster-types behind the coffee bar are now very demonstratively shutting up shop for the evening, so I suggest to Dr. Bremer that we move on somewhere else to continue our discussion – not least because I’m starting to get hungry. “Great idea,” replies Bremer, “and I know just the right restaurant. We’ll have to get a move on if we want to get food there, though,” he says.

We soon find ourselves in nearby San Mateo in a Brazilian restaurant named Espetatus. Before we’ve even ordered, Bremer has got the mind-map back out on the table and is delivering a résumé of what we’ve just discussed. The waiter comes by and we – as one does in a Brazilian restaurant – opt for a very meaty main course. While we wait, we sip our glasses of red wine and get back into the detail of how Silicon Valley operates; Bremer jots down the next important component, venture capital, the fuel which powers the multitude of experiments going on here at any one time.

Venture capital ecosystem

“All companies need capital to finance their growth – and, more importantly, they need the expertise of experienced investors so that the capital they receive has the desired effect,” begins Bremer. “This is something German companies should have a good understanding of: the role Deutsche Bank played in financing German industry is very much comparable with how venture capital firms are helping companies in the Valley today.” Bremer illustrates his point with a few examples: “Without Deutsche Bank and its forward-looking financing of growth strategies, companies like Siemens, AEG, Mannesmann, Bayer, and BASF would not be what they are today.”²⁸ And just like Georg von Siemens, leading board

member in the second half of the nineteenth century, offering hands-on support to help young industrials grow, today, too, it isn't just money, but experience how to scale start-ups at speed which is needed." Bremer asks if I'd like him to explain in more detail – although the question seems somewhat rhetorical.

"As you can see, I've written more than just 'venture capital' on our mind-map: I've written 'venture capital ecosystem'. And why have I done that?" he asks, before answering his own next rhetorical question: "Because money alone isn't what makes the difference. Sure, in 2017, 25 billion dollars of venture capital flowed into the Valley and into San Francisco – that's about 15 percent of the entire start-up finance released worldwide, or, to put it another way: an unbelievable amount of money!" I nod appreciatively. "What is crucial, though," says Bremer, "is who puts the money into circulation and how. There are around 50 major investment companies here in the Valley, many of whose names are now very well-known indeed: Sequoia Capital, Kleiner Perkins, Caulfield & Byer, Accel Partners, and Benchmark Capital, for instance."³⁹ Taken with a network of consultants, recruitment companies, and other service providers, they are the real backbone of Silicon Valley because they create something which the other copy-and-paste Valleys of this world don't have: an ecosystem which channels the money to where it needs to go." Bremer pauses for a moment: "Israel is probably the only other comparable environment. China isn't doing too badly, either, but the situation there is completely different. We'll come back to that at another point, though.



Service eco-system

Alongside numerous service providers such as consultancies, marketing agencies, and recruitment firms, venture capitalists are part of the tightly-woven Silicon Valley eco-system. Without this functioning network, money can't be channelled towards the most promising ideas to turn start-ups with good ideas into companies which scale speedily and sustainably.

"Let me explain the ecosystem issue to you first," he continues, doing his best to keep the mind-map visible to both of us as a waiter sets down several plates of food on the table. "Mr. Mahlich, one example, if I may. Just a few blocks away from here in central Palo Alto, there's a legal practice with the impressive name of 'Wilson Sonsini Goorich & Rosati' which is primarily specialised in protecting intellectual property in the area of new technologies." He pauses for effect: "It employs 1,500 people. And that is just one of the many companies specialised in the legal side of hi-tech – one of the many companies the venture capitalists need in order to protect their investments. After all, the whole thing only works if investors can protect the products they are pumping their money into. Every researcher at Stanford, everyone at Google and Apple and one of the thousand start-ups here can get an instant check on whether they can patent their idea or not, and this kind of infrastructure is decisive. You name the discipline," expands Bremer as our meat platters cool, "there are specialist service providers: marketing agencies help to place brands globally before they can be imitated, while infrastructure providers make sure that innovations are able to cope with growth and don't break down faced with high volumes. Those are just a few examples," he concludes, "so the big companies don't just have the money, but also the experience and the network they need to get ideas from the garage and blow them up into multinationals more or less overnight."

Optimism: 'paying it forward'

"Then," continues Bremer, "there are the 2,000 or so assorted small-time venture capitalist companies – soldiers of fortune, prospectors panning for digital gold here in the Valley, but who nevertheless make a contribution in their own smaller way. Quite a lot of them are actually scouts sent by classic corporates with a shopping list on which they tick off good ideas and new hires in an attempt to inject some innovation into their flagging motherships – stat! The open secret, though, is that the treatment doesn't really work because they don't have the network and the entrepreneurial drive necessary. One of the managing partners of this kind of outfit self-deprecatingly, but accurately characterised it as 'stupid money'. And there certainly is something to the idea that *it's the smart venture capitalist who makes an investment smart.*" At this point, I simply have to say something – perhaps something undiplomatic: "Rumour in Germany has it that you yourself made a few investment errors at the start before you got the hang of things ...?"

"Oh yes!" nods Bremer knowingly. "Very expensive errors they were too! So expensive that they still serve as cautionary tales today. You know, now, I feel able to laugh about them, but not at the time." Bremer looks into the middle distance briefly. "It was around the Millennium. I'd decided to jack in my job as a consultant and make my money as a private stocks trader. My strategy was simple: bet on every horse the Dot-Com boom sent into the race. New media, online shop systems, virtual marketplaces – you name it, I bought stocks in it. The only problem was that none of the companies had a business model, and that's how I learned that growth alone is simply not enough." Bremer has the relieved air of the man who has just made a difficult confession. "But there you go: every failure has the seeds of a new beginning in it," he says happily, making a vague waving gesture with his hand as if to say: "Easy come, easy go!" and move the discussion on.

"Right," I chime in, "and isn't that just part and parcel of being a pioneer? Every now and then, you have to change course or you encounter serious resistance. After all, from what I hear, they say that every good digital entrepreneur has driven at least one company off a cliff." "Failure is never pleasant anywhere – not here in Silicon Valley, either," says Bremer with a wry smile, "even if the tour guides for executives from elsewhere like to idealise the 'culture of failure'. Nevertheless, there is something to the idea, perhaps simply because there is more failure here. As Jeff Bezos so aptly put it, with experiments, there is always a risk of failure, else they wouldn't be experiments. Or take our countryman Andreas von Bertcholsheim, one of the Valley's most prominent German-born personalities. He boils it down to a simple dictum: *'If one idea doesn't work, there's always another one out there.'* In his view, what's more, you simply can't afford to fail in Germany."

Before that idea has even had time to settle, Bremer sets off again: "That's an important point, too, because as you've just said, failure doesn't mean the end of your career, but rather the beginning of the next attempt. You might simply see failure as the annoying side-effect of trying to strike gold, as the tonnes of rock you encounter beforehand. For every unicorn in the Valley, there are thousands of defunct companies you've never heard of. Here, however, they take an optimistic approach towards the low statistical probability of success and don't let themselves to get discouraged by the systematic failures. Technological development means there is always another new opportunity, after all, and

whoever you talk to here, everybody knows the story of some hero who managed to pick themselves back up off the floor following a crushing defeat. They are the legends of the Valley, legends which have been told across the globe. You can use them as the basis for a whole life philosophy if you want. Or just think of Jack Ma," he says breathlessly, "who has had untold success with Alibaba – but who, previously, notched up bankruptcies at an terrible rate.³⁰ He was able to get back up again every time, though, and has become one of my own personal heroes. His story is a real motivation to just keep trying, however hard it gets. Or think of Steve Jobs," he continues, before I can mention the name, "who was thrown out of his own company – and then called back in to save it." "It's the stuff of Ancient Greek myth!" I interject. "It is indeed," says Bremer with a chuckle, "except that people stay on friendly terms with each other. After all," he adds, his finger jokingly raised in the patronising manner of a pontificating professor, "the competitor of today could be the customer of tomorrow. So it's best not to burn any bridges."

Once again, I feel reminded of the meet-up this afternoon: there was an underlying feeling of relaxation and cooperation that quite fascinated me. The common understanding seems to be that there's enough to go round and that, if we all share, then we'll all come out of it smarter and faster. Then again, that doesn't quite tally with the homeless people living in tents in San Francisco, with the endless trailer parks to which low-earners are permanently confined. A shadow clouds this rosy view of things – perhaps visibly so, as Bremer seems to read my mind. "We're hearing a lot in the news at the moment about how greedy corporates are getting, but the overall approach most people have here is generous and helpful. If you want to understand it, try watching *Pay It Forward*, a film about the idea that if you voluntarily gift something to somebody, they will pass it on. It's like a positive snowball system: by everyone doing each other favours, the whole system gets better for everyone." Bremer might be aware of how cheesy this sounds, so he reins it in slightly: "Now, obviously, in the Valley, everyone has their motives, so it's not all done out of pure altruism. The results, however, are unarguably effective." I'm still not entirely convinced, and it probably shows, so he continues: "Yes, obviously, some of the big companies here are actually quite insular: Apple, Tesla, Microsoft are not exactly known for their collaborative approaches. Nevertheless, talents switch between them with a high degree of regularity – after all, their offices are only a few miles away from each other – and offer each other a helping hand every now and then, both in professional and personal contexts. Even Steve Jobs, idolised as the archetypal lone genius, was, in fact, often to be found at Valley social events in the 1990s listening intently to first-generation guys like Andy Grove from Intel and jotting down their pearls of wisdom; and later, he did his bit for upcoming ideas-people. In fact, there is a fantastic story about he and Jeff Bezos gave the inventor of the Segway, Dean Kamen, a real dressing-down..."³¹ But look at the time! It's got late,

so shall we agree to continue this tomorrow?" says Bremer, clicking his pen and looking round to order coffee.

As I sip my espresso, I start to try and order my thoughts. "If you think about it, this sharing culture is a very important part of networking," I venture, "because you can keep an eye on opponents past and present – and get to join in with things you wouldn't have managed alone. I'm thinking of the word 'frenemy' here..." I chuckle, and Bremer nods.

We part for the evening and I get back to my rental apartment, but can't get to sleep for quite some time: everything I've experienced today keeps going round in my head; I seem to be alternating between childish excitement at the sheer wealth of possibilities and feelings of complete powerlessness. I note that I want to be a part of it, but don't see how I can. At the same time, I have a vague sense of foreboding: my phone didn't stop receiving messages and e-mails all day – it was on silent, but the screen was constantly flashing on and off, signalling intense activity on the other side of the world that I will need to deal with. Not until tomorrow, though, I say to myself, tomorrow ...

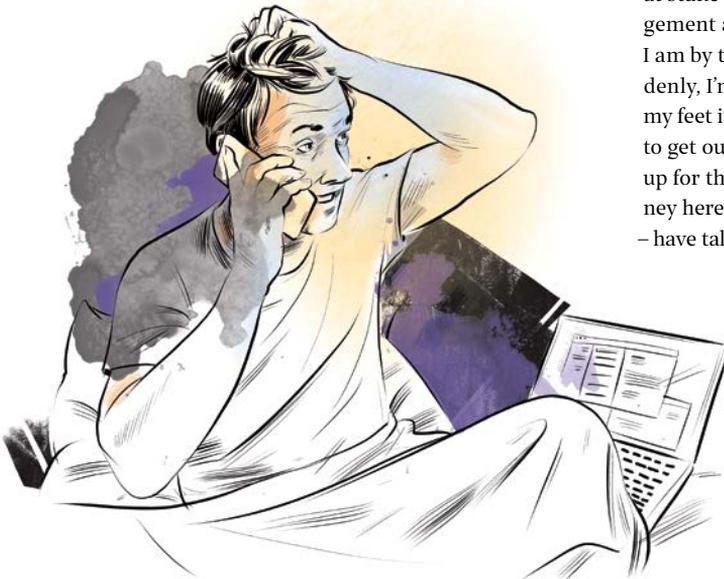
One call (to action) changes everything

It's about six when I get up, drained from jetlag and a short night's sleep. I'm still groggy as I open the first unread e-mails in my inbox – and then suddenly, I'm very much awake: “Peter Mahlich is accepted to the Board of Management of AutoInc. on the terms of the agreement at hand...” Suddenly, I understand why I have so many new messages, unopened e-mails, and missed calls. In Germany, it's now the middle of the night, so surely no-one would pick up if I were to ... I check the time at home: actually, it's only 9pm there. And before I can make a call, my phone rings: it's the office of the Chairman of the Board confirming the good news. In just three weeks' time, I start in one of the most desirable jobs in the industry. As your average Silicon Valley dude might say: “Holy shit!”

We schedule a meeting and then, after we've hung up, I flop onto one of the chairs in this tiny studio that I've rented for my stay in California. I'm exhausted, and – as it periodically has done since my days as a student – the story of Sisyphus comes into my mind, who betrays the gods and is subject to their fury. His eternal punishment in the underworld is to role a huge stone up a steep hill, only for it, just before he reaches the top, to escape his grip and roll back down to the bottom of the valley. Every time, he has to start right from the beginning.

Thus far, in my own career, I've generally known roughly how far up the hill I am. But now? Am I at the top, or back at start again – facing a much steeper gradient with a much heavier boulder? Has my stone actually made it to the top, as a reward for all my efforts to actually be allowed to take on this kind of task? Or do I now find myself faced with a new challenge – and with a stone which has rolled back down the hill?

The first thing I do after this reverie is to call my partner Clara. After all, this will mean more than just a few changes to our life together; as a successful lawyer, though, she understands what is at stake – and even offers me encouragement after she realises how awed I am by the scale of the new task. Suddenly, I'm full of energy and shoving my feet into my running shoes: it's time to get out, get some oxygen, and get set up for the day. With this news, my journey here – and the journey in my head – have taken on new degree of relevance.



“The future is already here – it’s just not evenly distributed.”

William Gibson

A pact to learn together

It’s exactly 9.30am when I pull open the door to the Starbucks in which I’ve arranged to meet Bremer. Today has us scheduled to visit an innovative start-up, or rather a corporate venture backed by Bosch to manufacture sensors for consumer goods and, above all, mobile phones. Nevertheless, this morning’s news seems to make all of the interesting things I might see there pale in comparison, so now, it’s me doing the talking: I tell Bremer that I’ve got the job and, before he can get so much as a word of congratulations in edgeways, I propose a deal. “Dr. Bremer, last night, you were kind enough to answer several of my questions; what is more, you know AutoInc. very well. So would you consider mentoring me in my new role – you know, as a kind of digital coach?” Bremer doesn’t seem inclined to refuse, so I continue: “I’d like us to define an agenda which will allow me to take a systematic approach to learning what I need to know in order to really drive the digital transformation in a company like AutoInc. forward – and make sure I can take both management and staff with me on the journey.”

Bremer is clearly impressed by my new position and, now that I’ve finished talking, takes my hand and shakes it at length. For the first time, he seems to be having trouble phrasing things: all he manages to say is “Congratulations! It’s a fantastic job!” Then: “I... If... I would be very happy to be a sparring partner for you. It’s what I became a

consultant to do, after all. In terms of the agenda, I’ve got a rough idea of what we might do. It’s not finished, but ... What it would mean, though, Mr. Mahlich, is that we’d need to do quite a bit of travelling together. As science fiction author William Gibson once said: “The future is already here – it’s just not evenly distributed.”³²

“So we’ve got to go to places where we can see even more of the future already? More than here?” I ask, openly astonished. “Of course,” says Bremer, “because the future is not only unevenly distributed: it’s a different future in every place. But one thing after another. Let’s shake on our deal first,” he says, extending his hand again. We agree to a two-month schedule, and suddenly, I’m rearranging my mental diary to squeeze in eight weeks before I hit AutoInc. running with a plan for the first hundred days. I can almost physically feel the pressure of time – and the weight of questions. What should I do first? What do I need to start preparing? I want to take on the challenge, rise to the task, and start playing in the big leagues; and I want to avoid being the clueless newbie who falls down at the first hurdle. A famous Steve Jobs quote comes to mind: “It’s my turn to put a dent in the universe!”³³



Mahlich gets onto the starting blocks

- Meet-up in the Valley
- Brain-gain
- Hi-tech research
- Experimentation
- Non-competition
- Venture capital ecosystem
- Optimism: 'paying it forward'
- One call (to action) changes everything
- A pact to learn together

China! Or maybe Israel? Wanderlust!

- Beijing traffic blues
- China forward
- A plan for China
- Shalom, Tel Aviv
- Japan disrupts the disruptors

The four areas of the Digital Value Economy

- Creating digital user value
-turning products into experiences
- Operating in learning cycles
- making agile cycles out of linear processes
- Designing bi-modal organisations
-bringing scaling and innovation together
- Evolving leadership techniques
-ushering in the era of post-heroism

Creating digital user value

Letting your mind wander

Story: The habitat of the digital user

Mobile individuals: older, wealthier, and more numerous

Urbanisation at break-neck pace

The customer is always on

Knowledge transfer reversed

Shopping for products becomes shopping for experiences

Attention: a limited resource

Real time: a *Red Queen* life

Virtual communities and digital states

Producing the Digital Self

Analysis:

Creating digital user value

The economy of digital experiences

Convergence is the secret ingredient

Ecosystems beat brand management

Action:

Experiences become digital

Communicare (~ feedback loops)

Perfect access (~ omnichannel and de-frustration)

My value (~ personalisation, status, self)

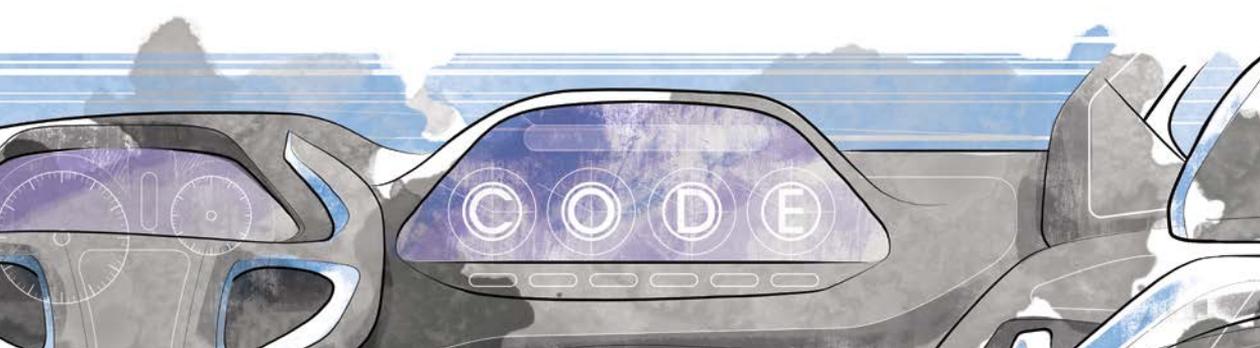
User contribution (~ co-creation)

Communities (~ social)

Collaboration

(~ open ecosystem)

HIPPOS and digital user value



Operating in learning cycles

Informal chats

Story: The entrails of the digital beast

The astonishing expansion of the data machine

The data jungle needs a data strategy

Learning machines to channel the data flood

The end of Hellfire Missiles

Added value in context

Analysis:

Digital innovation cycles

HMI and data channels: the victory parade

Evolution in value-centric increments

Divide and conquer using pace-layered architectures

Action:

Innovation @ Digital Speed

Hoarding data capital (→banking on USPs)

Design thinking (→creating experimentation capability)

Open innovation (→celebrating 'not invented here')

Universe of (micro-)services (→modular recombination)

Tech trendsurfing (→working the labs)

OKR vs. KPI (→bridging horizons)

The elevator pitch

Designing bi-modal organisations

Story: Of whales and schools

Organisation is what makes us successful

The Greiner growth model

Organising innovation: exploring vs. scaling

Scaling aims for dominance

A foot in the door: corporate venture capital

Innovation requires open organisations

Analysis:

What are hybrid organisations

Agile organisations: doing or being?

Birds in the hand and birds in the bush

Innovation and culture, a challenging duo

Action:

Building hybrid organisations

Defining the purpose (→means to ends)

Organising hybrids (→experimental forms of life)

Weaving networks (→from interfaces to seams)

IT in DevOps (→multi-speed IT)

Trimming planning (→adapting pace)

Alliances for talent (→improving employee experience)

Evolving Leadership

Story: The L-word—Leadership

The importance of leadership

The danger of conservationists

The rediscovery of leadership

Analysis:

Post-heroic leadership

Leading (yourself better)

New work and new teamwork

Optimising self-awareness

Action:

Leadership and mindset

Leadership compendium (→describing good leadership)

Feedback as routine (→offering opportunities to learn)

From CEO to CDO (→Chief Development Officer)

Financing risks (→trial and error)

Storytelling to build bridges (→coordinating birds in hand and bush)

Thinking in ecosystems (→increasing network performance)

And now?

Business as usual?

Author's postscript

The digital avant-garde is not invincible

You have been informed about risks and potential side effects





上海南京路

五洲大藥房

金

五洲

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