

FUTURECHECK®



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EUROPE IN 2020. TOWARDS A NEW GOLDEN CENTURY, A SILVER CENTURY, AND BACK TO THE MIDDLE AGES

Future Essay. Open Letter to Thomas Friedman, Jeremy Rifkin & Richard Florida

-So, what is life like in 2020? What inventions will be the telephone, TV & car of 2020?

-Here is how Europe can prepare for the future

-With multiple chances for business & government innovation

Dear Mr. Friedman, Rifkin and Florida,

Yes indeed, you are right. The world is getting flatter and we need technology, creativity and talented people to survive. We have to deal with wealth worldwide, not poverty anymore. Europe possesses a very strong and very positive legacy. It can and will survive 2020, but it is necessity, not choice, that will drive us. We loose low and high end jobs, disappearing into the technology and into other countries. We loose our educational strength. Europe is too rich and too lazy. Europe needs a dream, a focus. Please permit me -- an independent European futurist, a native of the old continent, and proud of it -- to outline European survival in 2020.

So, what's life like in 2020?

*We will witness an acceleration in change and an overall sense of insecurity. Due to globalisation, 2020 is **flat**, with less trade, knowledge and entry barriers. 2020 is filled with nomadic people in a constant flow of short and semi-permanent stays all over the world, creating a constant brain and workplace circulation. Due to digitalization, 2020*

is **virtual** with intelligent houses, cars and streets. Basically, it is one giant video camera. We will gain and lose privacy. 2020 is **transparent** and, as a result, **hyper competitive**. Every one knows your achievements and your failures, and only highest quality will survive. Government and law enforcement will turn digital and invisible: less bureaucratic, more powerful. In this world it is difficult to lie or to hide. The mix of bits, atoms and genes will cause a **production and services revolution**, such as: printing products at a distance; personal selfservice dashboards for customers & citizens; and low cost, high quality virtual mobility tools. These inventions will have the same effect around 2020 as telephone, TV, and automobile had in the 20th century...

All of this may lead us into a new **Golden Century** -- which we will need to tackle the enormous energy and congestion problems of 2020. In some ways, 2020 resembles the **Middle Ages**. Back then the city provided safety, stimulated trade, and made children grow up very fast. The world will be crowded with old people with a lesser drive for innovation. It will make traditional social security unaffordable, but it will also create a wealthy grey market: **Silver Century**.

2020 is about customer power, self control and self service. It is about personalized services around global commodity products, about making technology invisible. It is about simplicity of choice, about identity and lifestyle -- the only real cliff hangers in the fast world of 2020. Such a world needs flat & flexible organisations, and creative people with a drive for success.

The trend of globalisation, no matter how powerful it is, can be reversed. The following emerging counter trends might do the job. Unmanageable congestion problems. Global energy wars. A failure to stop low talent immigrants, thus creating major safety and social security problems. A failure to attract top talent immigrants, thus creating a fallback in research and innovation.

Any European dream worth the name must recognize these trends and counter trends and must have answers to them. What we need the most, is **energy, passion and enthusiasm**. The energy derived from a shared goal, a goal that every normal citizen understands and embraces. We need the European equivalent of a moon landing. In fact, we need **multiple moon landings in 2020**. Here they are. We need to be energy independent and self sufficient. We need global, individual portability of pensions, education possibilities and health care. We need to implement smart law enforcement. We need to develop low cost high quality virtual mobility tools. We need to take advantage of the Silver Century. We need to lead the production and services revolution. To maintain our wealth, we need to make our organisation flexible & creative. To maintain our civilization, we need a straight back and a secular society.

A dream is not about dreaming. It is about taking action! If in the next 15 years we land on all these moons, we will survive. So, let's start innovating now!

As an independent European futurist and regular public speaker, I have the privilege of presenting the future and sharing my ideas with many different audiences. Four of these audiences, at the end of 2005 and the beginning of 2006, made me think about Europe's future, and write this article.

For Philips Research and a Technical University in Holland, I presented the future of nanotechnology. It was a distinguished audience of wise professors, whom I seated in the left corner, and ambitious young students, whom I seated in the right corner. Place of action: Eindhoven, The Netherlands. I showed images of technology and even more images of creativity and communication, images of *people*. There in Eindhoven I witnessed a flow of energy, of pioneering spirit, but afterwards, I became worried. If I were asked to repeat this presentation in

2020, would the right corner still be filled with youngsters? *Qualified* youngsters? Or would it be empty, meaning I would have to hold my presentation in Bangalore, India?

Then I helped the united top of Dutch civil servants to think about government in 2015. Most people in the audience were convinced of their ability to cope with 2015, whatever the situation might be. That may well be the case for each one of them individually -- all smart people in fortunate situations -- but I left puzzled with the question: will "the" government be able to cope with 2015? Will government be able to reduce governmental chaos, implement truly digital government services and taxes, keep society secular, and ready for the rat race for global talent as well? The question remained unanswered, and that was my second worry.

Then I addressed the Dutch Top 100 of police chiefs, and a bunch of mayors and public prosecutors. Interactively, we shared ideas about the future of safety. What safety scenario's are most likely in 2020? Again, I shared images of technology, but above all images of renewed authority. Decent citizens have so much to gain from embedding hi-tech into the safety business process, and these police chiefs were absolutely willing to do so. The police winners of 2020 will be the upcoming creative leaders that are capable of combining all of these challenges. I remember vividly one critical remark. A police chief told me his concern. That technology might well boost crime solving rates but it would destroy civil rights at the same time. I am convinced this is not true. Using a proper mix, crime solving can rise to a stunning 50% with no loss of civil rights whatsoever. Due to the essential characteristic of smart law enforcement: only the criminals, *not* decent citizens, are confronted, bothered and checked in a smart world. My main worry: will police officers have enough backbone to regain the authority in the street they lost in the 20th century?

Last but not least, I dwelled in the beautiful, ancient city of Rome. There I had a Question and Answer session with the top 50 managers of a multinational company. We talked about the probable and their desirable future. We brainstormed about the smart deployment of technology based on the user point of view. We talked about making technology invisible. We talked about identity and lifestyle, about simplicity of choice, the only real cliff hangers in the virtual and fast world of 2020. We talked about technology making illnesses disappear, therefore eliminating the need for certain medical devices and functions. We talked about marketing solutions and nearness instead of products. Basically, without saying so, we talked about turning threats into chances. I had no worries after this inspiring meeting!

Europe has serious problems. Hell no, let me rephrase that: Europe faces interesting challenges. Stay positive! The old European economies go down on several international listings. Europe is too rich, too lazy and lacks a dream, a focus. And I am not quite sure if Europe values its liberties and its civilisation enough to fight for it, now that it is being challenged. Europe needs a wake up call.

Thousand experts on five continents told the CIA that the keyword for 2020 is *insecurity*. Old economic roles have changed, old habits have died, old certainties have disappeared. It is necessity, not choice, that will drive us. We have not seen anything yet, because change itself will be accelerating. We might well return to the Middle Ages. Back then, the city provided safety, stimulated trade, and made children grow up very fast. It was also the age of cruelty and intolerance. With the keyword being "insecure", our response keywords must be: "flexible" & "creative" to maintain our wealth, and "straight back" & "indifference" to maintain our civilization.

But hey, let's count our blessings as well! Europe has a very powerful, very positive legacy of civilization to be proud of. Equal rights for women and gays, 50 years of peace, a secular society with a strict separation of religion and government, freedom of press, a powerful knowledge base, low on corruption, high on culture & wealth, still going strong on patents and nanopatents. European citizens are all millionaires compared to the poor people who lived in the Middle Ages. And maybe Europe's biggest achievement nowadays is our humour and self ridicule. I am proud of these assets, and they are going to help us tackle the challenges. Every problem described

here is a chance for innovation and spiritual growth.

Are you fit to tackle 2020?

Do you think *you* are fit to tackle the challenges? Fit for survival in 2020? Suppose it is January 1st 2020. You've got mail! (or something alike). It says you are fired, together with all other European employees. Freelance work and entrepreneurship is the rule, steady employment the exception. Furthermore, the mail says government budget is cut by half. A flat tax is introduced. Half of it is going to be spent on tools for entrepreneurs to *create* wealth, like education, research and innovation. The other half is going to be spent on basics like health care and safety. Social security has disappeared. Government is no longer redistributing wealth, only stimulating the creation of wealth.

So, ask yourself. Would your skills be enough to compete in a knowledge economy where maybe *all* jobs need higher education? Where much work will be footloose? In 2020, all jobs and all organisations will be decomposed and split into various virtual and physical parts. Maybe your entire profession will be obsolete. So the question is, will you be re-hired? Or will you yourself do the hiring?

(Maybe I should not be asking *you*. Maybe your *children* should read this piece and answer these questions, because they will *be* the future and experience it as self evident and natural.)

The answer, of course, depends on the eventual situation in 2020. So, what is life like in Europe in 2020? The following trends will reshape Europe in 2020. Thanks to globalisation, 2020 will be *flat*, with less trade barriers, country barriers and knowledge barriers, but more identity barriers. Thanks to demographics and immigration, it will be crowded with *culturally mixed people* who have much less in common than now and who are generally rather *old*, with a lesser drive for innovation. Thanks to technology (the mix of nano, digital and bio), 2020 will be *virtual* or *smart*. An all-video, all-virtual world in which everybody and everything is online without even realizing it, filled with intelligent machines, buildings and cars. Intelligent machines will be lighter, smaller and will use less energy in a more efficient way. They will sense their environment, sense themselves, able to make decisions and to be repaired at a distance. In fact, every machine will be a mobile phone, talking to their owner but mainly to other machines. Our cars will be connected to other cars and drive themselves, aware of the road and your destination, thereby reducing congestion. It will increase overall security. Uninsured driving? Driving in a stolen car? Exceeding the current speed limit? Impossible.

The combined effects of the virtual and the flat world will change the very nature of every business model, every production process, every service. It will lead to a *transparent*, hyper competitive world and an invisible, less bureaucratic and yet more powerful government.

You ask me if it will be a happy world? Well, that depends on you. On what we do and don't. These trends pose both the problem and the solution. They contain tremendous opportunities for realizing the very concrete dream of a creative, secular and wealthy Europe in 2020. They may lead us to excellence, but missing out on them may well bring us down. Cope or perish! This story is not a story of ideology; it is a story of necessity. There is enough room for growth for all continents and for cooperation between them. A dream is only worth dreaming if you have a path and a toolbox and a plan of action. Here is how to seize the opportunities.

So, what's life in 2020? One big video camera, adult children, your home and the street as living creatures

In 2020, we will always be online without realizing it. And not only we will always be online -- so will our machines, cars and homes. Your coffee machine and the walls in your home will talk to you, and most of the time those machines will talk to each other. We will even have self-cleaning

and self-repairing bridges, cars, tables, homes, walls and windows. Our surroundings, our homes, our streets will be like living creatures, sensitive to us and even responding to our behaviour. You will not be able to tell the difference between the virtual and the physical world anymore. Physical will be virtual and virtual will be physical. The internet grid will merge into the power grid, the transport grid, the grid of shareable machines, the grid of rules, the grid of taxes, the semantic grid.

When you think 2020, think video. Video-dating, video-chatting, video-making-your-homework, video-working-together, in short, video-life. You will be watching movies, chatting and phoning with other people all over the world on the walls of your house. You will work together virtually, you will enjoy sports together virtually, you will date virtually. You can keep in touch with your (grand)parents by taking them into your house virtually. Daily eye to eye contact combined with automated medical checks, using the giant video walls. Like in the Middle Ages, but without the lack of privacy that was so common in those days. Life will be very intense with lots of partly pleasurable and partly unavoidable sensory and information stimulations. The silent printed images that surround us now, will come to noisy life in 2020. In the streets we will be overflowed with personalized video walls. It will not be possible to escape the huge and noisy video advertisements. Two possible scenario's: either we get used to it, or it leads to government regulation.

In 2020 the world is one big video screen, one big video camera, one big mobile phone. In this transparent world, it is difficult to hide. The mobile will be the most important lifestyle instrument and small camera's will be all over the place. We will be filmed while drinking, walking down the street, having sex, fighting, doing our jobs, without prior notice or permission. We will lose our geographical privacy since our GPS-location is always available. We will have the (non)privacy of the celebrities of today. VIP-spotting will turn into neighbour-spotting. Private communication can and will turn up on internet for public display without the user's permission, and it will undermine public trust. These new facts of life may well lead to an increasingly exhibitionist culture in which porn images are street images, in which sex is not private but (semi) public, fun to share or to watch. Even at present, teen boys and girls use video chat sites to masturbate live, anonymous or even face visible, for any virtual visitor passing by. Fun! Share! This situation is, literally, unique in the history of mankind. What will it do to us? I don't know...

Due to the incredible amount of easy means of communication, children will be exposed to adult content in all thinkable ways at a very early age. They will get used to kicks, they will need more kicks and even more extreme kicks. Just staring out of the car on the way to the holiday destination, or feeling bored, like children in the old fashioned days did, without a screen providing distraction and entertainment, will be unthinkable. Thrill Fun Chill! The ever present mobile phone will give children not only more personal entertainment, but also more personal privacy and personal reachability than they ever had in history (or wanted to have). This will make parent's at-home supervision obsolete. It will pose the biggest threat and the biggest challenge to modern upbringing.

In this fast video world, in this zap & cut & paste culture, children will be adult very early. Adults in a speedy nano-second video culture of psychological multi tasking. They will grow up earlier than ever before. A bit like the early maturing in the Middle Ages. Puberty will be shorter than now and start earlier. Children will be street wise, drink alcohol and have sex at a much earlier age than now. It will be quite normal for youngsters to work and travel all around the world -- if not physically, then at least virtually. They will be extremely critical consumers, which will force businesses and governments to stick to ultimate high quality standards. Their horizon will be broader. It will make our children more socially adaptable and cause concentration problems at the same time. They will probably not be able to tell the difference between private and public anymore, between school yard and pub. Virtually, it's all the same!

In 2020, it will be easy to get to know new people worldwide and to innovate worldwide *and* it will be easy to spread hate worldwide. Back in 1994, I was one of the first Dutch Internet pioneers

with his own website. My first two thoughts back then: *Wow, this means freedom!*; and *Wow, everything will be Web!* Theoretically, I knew the Web would ease the spread of *both* compassion and hate, but I never imagined religious hate and intolerance would mount so easily to such furious heights. Even in our daily life, we tend to be more brutal, more demanding, less polite, less polite. It will probably be more and more difficult to find government leaders willing to take the heat from citizens acting like mad, brutal dogs. We may see global multimedia multinationals with no morals whatsoever, providing deprivated bread & games, like in the ancient Roman Empire, but now for a global audience and with a global moral impact.

All in all, 2020 is the living "experience economy". With less physical and more virtual shops. Consuming will be theater, and theater will be consumed day and night. This fast world with fast emotions and fast hypes and extreme kicks and too many choices will drive us mad and will create a powerful need for counter trends like silence, quietness and slowness, and businesses that organise warmth, simplicity & choices. Two scenario's are possible here. 1, Our notion of embarrassment itself will change, our notion of what is private and what is public. Or 2, We will turn to government and technology for protection against these grave privacy intrusions. We will badly need technology tools to give us back control over our pictures, our documents and our life. We will want technology to enable "personal selfservice dashboards" and "permission instruments", like pictures and camera's and screens that only display if we give permission..

Personal Dashboard 2020. Please give us back control over our life

In 2020, there will be so many companies and governments wanting to communicate with us, that it is impossible to keep overview. There will be so many criminals spamming us, trying to steal our identity and invading our video and locational privacy, that we will feel like losing the battle. In 2020, more than ever before in history, we need control. Control over our personal data, our subscriptions, our financial transactions, our privacy. Control over our communications with the rest of the world. We need a tool to manage all our transactions and personal files and to protect us against identity theft and spam at the same time. A tool that integrates all information, flowing into and out of our mobile phone, our laptop, our home, and gives us the power of selective availability and selective communication. This tool will help us to make choices and create simplicity. We need this virtual driver seat because it is an essential tool for survival in a virtual and transparent future. And we must be in the driver's seat. Not the government. Not the bank. Not a global company. But we. We will be in charge and we *can* be in charge, for the first time in history.

I call this tool Personal Dashboard, a self-service Information Communication and Privacy Control Centre. The next big thing after the website, and a likely bestseller to 8 billion citizens worldwide. Consider it to be your personal manager. With a few clicks, you subscribe and unsubscribe to the newspaper, you order your passport and a pizza, you obtain a residence permit, pay the rent. You allow or block ads. You allow companies and governments and friends to get access to you and to deal with you -- or not. You grant permission to companies and governments to use your personal data -- or not. In this Personal Dashboard, you will have a current account with your government. Government will act truly as *one* government, not as many. The motto is: 1 government, 1 face, 1 interface, 1 citizen card -- and your unique dashboard *is* that interface.

The problem is, no one is building Dashboard yet. Sure, there are some attempts, but they are weak. I urge everyone who cares about customer control, to build Dashboard. 8 billion people will buy Dashboard, and Dashboard Company will be the new Google and the new Microsoft of 2020. Stop thinking paper. Stop thinking websites. Start thinking customer power. Start creating Dashboard.

Interested in more detail? Read [Personal Dashboard 2020. Please give us back control over our life. Open Letter to Bill Gates and Larry Page](#)

The mix of bits, atoms and genes. A new Golden Century in 2020

Three major technologies will shape this smart, virtual world. By 2020, digital technology, nanotechnology and biotechnology will have matured and converged into one another, with a full blown impact on society and business. Bits, atoms and genes will blend. The very difference between nature and technology will blur, technology will be organic and nature will be technology. We will have an internet for humans, an internet for things and even an internet for atoms. Technology will change all production processes. We will be able to manage factories at a distance and to "print" products on the spot and remotely. Not only will we "print" the parts of a coffee machine, as is applicable at present, but we will "print" the *complete* coffee machine, including chips, sensors and (nano)batteries. We will even "print" buildings on the spot. We will detect and prevent cancer cells from growing malicious. We will have targeted drugs delivery in the human body, making lots of medicines and medical ads useless. We will have clean water, improved fuel cells, improved and much cheaper solar cells and better, longer lasting batteries. We will have flexible paper that acts like a video screen, is strong like metal, and holds miniaturized batteries as well. A battery and an intelligent paper like screen will look the same, will in effect *be* the same. We will have early Tsunami detection. We will use self aware, self cleaning and even self healing materials, covering intelligent bridges, buildings and factories that are self aware and maintenance poor. And later, let's say in 2040, maybe we will even grow tables on command and print meat at a distance.

All production processes and services will be virtual. The costs of communication and production tools will continue to go down, performance and quality will continue to go up. This will enable newcomers to quickly enter markets that have always been difficult to enter. Business models and government rules will be converted into software, hardware will be less important than the embedded software, because it is software that will make the real difference to the customer. All software will be web, and the web will be in our homes and our cars and our company systems. We will have real-time trusted services, real-time trusted information, real-time trusted communication, and "selfservice dashboards". All of this will make the world a more trusted place, a place of realtime "checked trust".

The mobile will act as a "trust machine". It will be our most important lifestyle instrument. It will probably be decomposed with its core elements scattered all over and inside our body. It will function as communication control center, passport, lie detector (does this taxi driver has a valid license?), bank account, money machine, real time translator, and mechanical nose, checking out air and water quality.

In 2020, it will be easy to get services and products from all over the world *and* it will be easy to boycott businesses and countries. It will be easy to start new business by tapping into a standardized production, payment, services and logistics infrastructure world wide.

We will see a shift in marketing. Permission marketing will be key in personal, one to one communication between company and customer. There, customer will have the (information) power. Customer will be king, not accepting any unwanted spam, determining the value of the company. Marketing will always follow service. On the streets and in public, marketeers will try to gain back the terrain lost, by addressing passengers in an aggressive way. Two possible scenario's: either we get used to it, or it leads to government regulation.

"Golden Century" is the name for the prosperous Dutch society in the 17th Century. I think all of these technology trends will lead us into a New Golden Century worldwide. It will level the now uneven, "spiky" spread of creativity and factories, making the country side much more attractive. It will also cause unpredictable changes in supply chains and in the countries that supply raw materials. Technology will ruin millions of existing jobs, but it will create millions of new jobs as well. In order to respond to all these sudden changes in demand for skills and raw materials, we

need flexibility in systems. Organisational flexibility, labour flexibility, ICT-systems flexibility, flexibility in functions and flexibility in rules. We need flexible and flat organisations where decisions are made fast, at the lowest level possible.

Never before in history, did we have the chance to combine economic growth with sustainability. And it is technology that does the trick! Technology provides Europe with an outrageous opportunity to excel in 2020. And believe me, we will *need* this excellence to survive in a globalised, more Asian world, to protect our wealth as a region.

Unfortunately, my neighbours have never heard of nanofood or 3D-printing. They don't care either. But they may have read Michael Chreighton's doom-seller *Prey* and heard Prince Charles' doom-warnings about "grey goo", so one day they may stop buying nano-enhanced products, like car glass protection fluid or nanofood. We must prevent the development of nano to be staggered the same way genetically modified products was staggered. It is all a matter of image building.

The future is not about technology as such; it is about technology empowered products and services. It is about making technology invisible to the user. The deployment of invisible technology based on the user point of view is essential for the survival of companies and countries. The future is not about products either. All products will become global and intelligent (adaptable, self aware, self leaning) commodities of high and equal quality. The future will be much more about personalized services around those global product commodities. The future will be about simplicity of choice, about identity and lifestyle -- the only real cliff hangers in the fast world of 2020. So we better start organising warmth, simplicity & choices for our customers and clients.

In 2020, global energy needs will have boomed sky high (bad news), due to the decrease of poverty worldwide, especially in China and India (good news). Probably there will still be enough oil and gas and even coal, but the problem is, it is produced in the wrong places: in villain states. We are too dependent of oil providing countries that hate Western civilization, are corrupt, or just powerful & opportunistic. Therefore, we must develop energy independence: self sufficient and sustainable energy sources that are created or won physically nearby. Think bio fuels, fuel cells, nano enhanced solar energy, and inherent safe nuclear reactors (uranium comes from civilised countries like Canada). Maybe we should use oil for transport only.

Another part of the solution is in creating a *distributed* energy grid -- energy that is generated locally in our homes, cars, boats, and even by our very human movements, with the capability to give back surplus energy to the electricity grid. This energy grid will be transparent; we will know in advance if we use too much energy or if it is too costly. Power consumption will be personalized; we will be able to turn off and on the heating in each room at a distance, thus reducing wastage. Hybrid cars use the energy generated on the move, that is wasted in a regular car. Since we need silence and quietness in 2020, we need to develop silent cars and silent plains.

Flat world as an opportunity for excellence

The world is getting flatter. The name of the game is globalisation -- the never ending, ever continuing flow of people, finances, products and services all over the world -- and it is getting steamed up now. Globalisation is very closely connected with and speeded up by the virtual world. First countries became globalised, next it was companies that globalised, now it is individuals that globalise -- and their cultures and crimes along with them, I may add. We will have less national pride and more tribal pride. Our cultures will be mixed, our identities scattered, and we will have less in common.

In a flat world, many barriers will have been erased and blurred. Institutional barriers, trade barriers, knowledge barriers, national borders. Borders between people, borders between straight and gay, borders between man and woman. Borders between organizations, suppliers and

customers. Borders between school and company. New, virtual borders of identity and control will be created instead. Every day's financial and legal transactions will be used to control the rights and duties of the ever increasing flow of immigrants and natives, citizens and business people. Physical government control will mostly be implemented at city-level, not at national level as it is now. Local cities and global companies, not countries, will safeguard us. No one enters without permission! Again, back to the Middle Ages...

Global digital standards will provide us with absolutely minimal transaction costs -- that is, the money, time and transport you need to invest to find, compare, acquire and pay for goods and services. Millions of administrative and routine jobs will be gone forever, never to return. They are all converted into software, into knowledge systems. Only complexity and high quality will survive. In 2020, only highest quality will survive: quality of services, quality of products, quality of labourers, quality of organizations, quality of governments, quality of rules. A flat world needs flat people, flat governments and flat organizations, so to speak.

Young and starting entrepreneurs will like the flat and virtual future. They will be able to tap into a global digital infrastructure and a global logistics system that will provide them with market prospects that previously only big companies had. There will be fewer barriers to start a company and to create new products and services, with production and communication tools being cheaper than ever before in history.

In 2020, globalisation will have absorbed millions of low- *and* high end jobs in Europe and the US. The BRIC-countries -- Brazil, Russia, India, China -- will have swept away the old distinctions between Third and First world. Developmental aid? No way, Sir! That is an old and long forgotten 20th century concept. In 2020, fair trade will have dealt with poverty in large parts of the world. Europe will not have to deal with poverty in the rest of the world but with *wealth* instead -- and that is much more difficult... Poor immigrant cities like Paris and Amsterdam might receive developmental aid from Beijing and Bangalore -- although I hope Europe would be proud enough to refuse...

The world in 2020 is transparent. You will be doing business sitting in your designer swim suit in the middle of the market square, visible to everybody. Doing business in 2020 is like a striptease. Everyone will see what you do, how you do it, what your supply chain is. Your professional, personal and business achievements will be rated by strangers, governments, customers and outsiders. Everyone will be able to see in a blink of an eye if your products and services are in the global Top 5 or in the global Flop 5.

The flat, the virtual, and the transparent together are big boosters of customer power and customer self service. And boosters to a hyper competitive world in all branches and all countries and therefore, necessarily, boosters to a hyper innovative world. Which closes the circle. In 2020, only companies and governments that provide the highest customer satisfaction and uppermost supreme quality of service will survive. The old mechanisms of technological and geographical customer lock-in simply will not work any more.

As customers, we will probably be winners. Transparent supply chains and standardized digital infrastructure will make products and services efficient, cheap and of high quality.

As investors, we will most certainly always win. Our money will buy the best of everything all over the world.

As labourers, only the highly educated, the highly adaptable and the highly creative will win. It is the shift from lifetime employment to lifetime employability. The sad and troubling news is that the rest might well loose. Even grounded labour that needs face to face contact, like a waiter in a restaurant, can be replaced, if not partly by technology, then by cheaper legal or illegal immigrants.

As citizens, we will be multiple identity players, not quite sure about our loyalty. Will we be loyal to our global employer, that gives us work? To the nation we were born in? Or to the city we live in right now?

If you are a futurebuilder and an innovator, either in business or in government, then you should take all these trends into account if you want to be successful.

Interested in more detail? Read the [Checklist Successful Innovation In 1 Day](#)

Flat government, invisible government

A flat world implies that countries are forced to level their taxes and regulations. We may well have a flat tax and only a minimum of labour, environmental and safety rules everywhere. Higher competition between countries will lead to a global level playing field with less social security, more "self"-security and "self"-responsibility. Of course, taxing will not be progressive; that in itself is a punishment for success. I even doubt if our *incomes* will be taxed at all. In a nomadic world of part time and semi permanent immigration, we will not quite know where exactly we earn our income, is it? We will probably tax the things that do *not* move or flow, like our houses and our land. On the other hand, in a streaming and flat world, we need global individual pension, education and health care *portability*. A tremendous opportunity for the innovation of social security: less government involvement and more citizens self organisation. Like save for your own unemployment and pension, and choose your own funds to provide for the savings. The same goes for traditional government involvement in safety and education. Collective self defense, home schooling, that sort of thing. I guess we will witness a fundamental shift towards individual and market solutions. Not because government involvement as such is bad -- not at all -- but because it is inefficient.

In 2020, we will no longer be confronted with dumb questions such as *Who are you? Where are you? What is your income? Do you have a ticket? Are you allowed in here?* Obviously, the answers to these questions are already known, somewhere in the network, and therefore it will be quite difficult to lie or to hide in 2020. Lie about our income, lie about our whereabouts, lie about our possessions. Thanks to digital technology, government will be truly paperless and will employ much less civil servants. This loss of jobs in government combined with law enforcement embedded in software will create a rather invisible, yet more powerful government. Let me explain how.

Law enforcement will be real-time and more strict than ever. Intelligence will be embedded in all physical things that surround us. Buildings, doors and elevators will allow or deny access according to the embedded government rules. Digital identities and checks will be integrated into every financial and government transaction we make. It will increasingly enable us to maintain our safety ourselves as well. Point your mobile to the taxi driver and check if he / she has a valid, up-to-date taxi driver's license. Or drives without insurance. Or has tampered with the taxi meter. Point your mobile to that wonderful blue lake and check if it is safe to swim. Point your mobile to that factory chimney (if factories with chimneys still exist) and see if its radiation levels are within safety range. Naturally you do not have to check the elevator; it just does not work if the embedded government license has expired. Checked trust, smart law enforcement.

A target for Police and Justice in 2020 could be: a crime solving percentage of 50% (and not 20% as it is now) in democratic countries, while keeping civil rights, without decent citizens having to give up their privacy. Key words for 2020 are: self control, self protection, self safety. The citizen will act as his own police officer, the mobile telephone will be used as passport and lie detector. Smart, semi automatic law enforcement means citizen friendly enforcement. It ensures that citizens can protect themselves better. Only offenders of the law and criminals, *not* decent citizens, are confronted, bothered and checked. Non-fraudulent persons can remain anonymous; fraudulent persons and people violating the rules, are exposed in real-time. Smart enforcement means less criminal justice and more civil law. It also means that a sizeable portion of police work

disappears. For a smart device can no longer function if it is stolen, so why steal it then? Police officers shall have more effective time on the streets for their monopoly: using physical violence. They will spend considerable less time at their desk.

Thanks to smart law enforcement, the world will be a much safer place in 2020, and the citizens will have more power. Smart innovation by the police and justice departments means: integrating smart enforcement in every day safety processes and restoring the authority of the police officers in the streets. Police heroes start innovating now!

Interested in more detail? Read [Smart Law Enforcement 2020](#)

Urban life, nomadic living, old people: Silver Century

In 2020, we will have many old people in the old world. Many of these senior citizens will be wealthy and healthy enough to afford travel and luxury services. They will pay high prices for high quality travel, entertainment and health care. Later in their life, they will need a personal care industry, backed by "senior technology". A Silver Century will start. After 2025 even with lesser people, since EU population will start to shrink then. Maybe reducing all congestion and space problems...

Aging will probably also make the old social security unaffordable. That is not per se a bad thing, since we had too much financial security for too long for too many people mistakenly called weak or care-needing. We created a whole bunch of government dependent people. Besides, social security was not so social for entrepreneurs and freelancers -- the people that create wealth and jobs in the first place. Maybe the whole idea of someone being eligible for government support simply because he or she lives in a geographical area, is outdated. Or not? If people have to earn their own social security, not benefiting from the funds others have paid for, it means that social security and pension funds must be made flexible and portable. New non-governmental, yet collective instruments have to be invented that offer more individual security than government can offer nowadays. A great focus for government innovation!

The vast number of senior citizens may also reduce the spirit of innovation. Senior citizens have a lesser *need* for change. Therefore, we need bright young people who are willing to learn, willing to contribute, willing to be successful. Unfortunately, Europe has a problem with its youngsters. Too few of them, too little interest in beta studies, too little interest in excellence, loosing basic capabilities in grammar and math. Natives and newbies have to learn again that is essential to strive for excellence and to be polite. We have to visit schools and grab the 10 year olds, we have to create Youngsters Invention Teams like MIT does in the US.

2020 will be filled with nomadic people, in a global flow of short and semi-permanent stays all over the world, creating a constant brain and workplace circulation. In 2020, life globally will be even more urban than it is at present, making the country side much more attractive for footloose professionals and for small factories. Settlement patterns will differ considerably: probably more people living in different areas at different times of their life. New patterns will emerge. Part time parenting, gay parenting, shared parenting will become more common. We may well earn our money where wages are highest, and spend it where cost of living is low and quality of living high. Out of choice or out of necessity. Switching between the sun an the cold in spring and fall. Working during the week on one spot and relaxing in the weekend on another spot. Not permanent but semi-permanent immigration, part time so to speak, more fluid, less definitive.

I call this nomadic living. This continuous drifting will reduce the traditional social glue in villages and neighborhoods. We may see shared citizenship, double citizenship, but also lack of *any* citizenship and *any* loyalty. Nomadic living will enable the quick and global spread of diseases, and it will also contribute to congestion. Europe's most wealthy regions, the metropolitan urban area's, will have severe congestion problems. Maybe so grave that it will drive the economy to a halt. Congestion will also increase the attraction of public transport (at least, that is moving!).

In the same way, booming energy needs may well act as a counter trend to globalisation. Too many physical products moving around, too many cars and trucks, too many tourists, too little energy, too little space for all. Globalisation may well strand in Europe long before 2020, due to the physical impossibility to move anything or anybody around any longer, except under the ground. This would turn Europe into a non-global, much more regional economy -- maybe even into a cultural museum.

To avoid this scenario, it is imperative that we start to communicate and produce virtually: working, playing and gaming together in a high quality virtual world, print products on the spot and produce at a distance. The only fundamental, sustainable way to tackle congestion is to take away the *need* for physical mobility. For moving around like crazy. Less moving around will save Europe! The new high quality communication and production possibilities of the virtual world will offer us the chance to greatly reduce our excessive physical mobility -- of people and goods alike. More virtual shops, less physical shops. Problems are a focus for innovation, providing golden opportunities for new markets.

The climate change provides us with lots of opportunities for innovation as well. A lower sealevel, rising land, water problems, a more sunny Northern Europe. Sun tourism, Danish wine, water management and virtual logistics to be exported to delta areas worldwide.

Again, there are powerful counter trends that may well stop globalisation. How many people will be able to buy a house in 2020? In the beginning of the twenty first century, lots of people became rich. Not because of an increase in labour productivity, no, by sheer luck: rising house prices. These extreme housing prices have turned our houses into objects of profit in a sort of perverted pyramid game, that prevents our youngsters from buying a house. We have created wealth without labour, so I ask myself, how long can this go on? How long can any pyramid game go on? Consuming with borrowed money that we never really earned?

We need an Economic Union, top talent immigrants and a secular society

The European welfare state has brought us many good things, but it also has its negative side effects. It made too many of us lazy, weak and government dependent. It has made too much fuzz about rights and too little about duties -- newbies and natives alike. All in all, it now is a barrier to innovation and wealth, instead of a stimulus. What are the negative side effects? For high quality social security to work, a country needs a demographic stable population, no immigration, and fraud resistance. I've got news: we have none of these. We created a huge collective sector with an uncontrolled drive for growth, forgetting that entrepreneurs pay for the salaries, also the extremely high salaries of the happy-collective-sector-few. Social security grew into some basic right, and we allowed people not to work if they do not *wish* to work. Profiting without contributing. Somehow, granting social security is much easier than stopping it. Besides, social security is not so social for entrepreneurs, the people that create wealth and jobs in the first place. We allowed senior citizens in the collective sector to stop working at 55 and we allowed employers to not hiring people over the age of 40. Government frequently changes the terms of social security, making itself a untrustworthy partner for collective arrangements. There is a continuous struggle between competing government organizations. Too many competing bosses, not enough real bosses.

The European Union started out so rightly creating a single internal market, and then it grew into a monster. It celebrated a common culture that did not exist, added new bureaucratic layers instead of providing a simple structure for co-operation, and spent the majority of funding on protective and outdated farming instead of knowledge building, research and education. In short, it became a mad cash redistribution machine.

Too many youngsters leave high school without even the most basic grade. We put too much

attention and money into potentially criminal youngsters in bad neighborhoods and too little into youngsters willing to develop their talent. We allow youngsters to terrorize their neighbourhood. Decent citizens have become afraid to defend themselves and police has become afraid to use violence. Thus, the rights of criminals are better protected than the rights of victims. Somehow, we accepted all of this and took it for granted.

Immigration can be a valuable resource for innovative people with a drive for success. But it comes in flavors: low talent immigration, illegal immigration and high talent immigration. Immigration should be adding wealth to the hosting country, like knowledge, money or entrepreneurship, but in too many cases, it did not. Instead, it diminished wealth, safety and social glue. Somehow we discouraged top talent immigrants and encouraged low talent immigrants with incompatible cultures. Now we are stuck with communities inside Europe that very aggressively defend and promote their religion and lifestyle. We are stuck with immigrants only schools that qualify as terror school. A hundred nationalities and languages in one square mile is absolute fun in a thriving business valley with a common goal and a common language. In that context, it breeds the best out of people. But it is no fun at all when none of these people speak the language of the country they live in and do not even share the most basic values. Who on earth created this absurd situation, and is the guy fired yet?

Around 2020, the majority of inhabitants of a number of big European cities will be non-western immigrants; many of them Muslim. A reversed colonization you might say. If Europeans are a minority in their own country, where does that leave European identity and European values? According to an Arab think tank based in London(!), the Arab Muslim world lacks freedom, inventions, knowledge, and the open culture necessary for trade and innovation. Muslim immigrants bring that culture into Europe. According to a national survey, Dutch citizens biggest fear is for fundamentalist islam and for social security being diminished by immigrants that give too little and take too much. If the current problems among non-western immigrants will persist (high crime rate, low education level, high unemployment rate, religious intolerance of gays, jews and women) then we are in for big trouble. It would mean a return to the Middle Ages, but this time in the darkest sense of the word: its cruelty, its lack of freedom and innovation. That would undermine the open culture necessary for the existence of a creative class. If the head scarves and Burka's would outnumber the open minded and entrepreneurial immigrants, equality of gays, jews and women will vanish. And where the gays flee, the creative class flees. And if the creative class flees, Europe's inner source for innovation and wealth will vanish.

I know a talented programmer, very intelligent, globally oriented, and Dutch. A guy really "fit for flatness", so to speak. I told him about the problems Europe faces. "So what?", he said. "If Europe sucks, then I move out!" Is this attitude maybe part of the problem? Do we still remember what we stand for? Are we willing to fight to keep our freedom and secular society or will we all flee?

Maybe I am all wrong and it will not be all that trying. Many immigrants *did* and *do* contribute to European wealth, and they are probably sick and tired of hearing about problematic immigrants all the time. The question is: will the good guys outweigh the bad ones in 2020? One of my best friends was born in Iraq. He has a muslim background. He is open minded, friendly, and we always have a big laugh when we are together. He is young, ambitious, intelligent and globally oriented. He is also an entrepreneur *pur sang* and wow, did he as an immigrant contribute to Dutch wealth and Dutch social glue! Much the same, basically, as in India, where muslims are modern, creative and open minded, contributing to wealth and hope instead of fear and doom. It should be possible to repeat that same pattern in Europe -- best long before 2020. So, the question here: is my best friend exception or is he rule? The answer will determine Europe's future.

So, what happens when we can no longer pay for bad decisions? What happens if there is not enough money anymore to keep up excessive spending and tolerance of fraud? We will go back to basics, I guess. Not because of ideology, but out of economic necessity. In 2020, the European Union may well have returned to its roots: an Economic Union. A system for basic economic co-

operation, a mechanism for global standardisation, implementing global technological and trade standards. An Economic Union with flat taxes and flat rules in its member countries, where English is the official trading language. An Economic Union in which immigration is a sure sign of success & wealth, not of cultural incompatibility and exploitation.

We have the choice between two scenarios. The doom scenario and the success scenario. For success, Europe must turn its legacy of secular civilization into our unique selling point. We should stick to the separation of religion and public domain in order to remain our wealth and freedom. We must welcome top talent immigrants from all over the world heading for success and excellence, and make severe demands to the rest. Since physical borders do not work properly, we can use the virtual government and financial borders to grant or deny access to social security and legal, financial life. We must stop tolerating fundamentalism and start being tough. Basically, we need a straight back. We need less "mutual understanding" and more "mutual indifference". If you don't like another person's lifestyle, learn to be indifferent, learn to ignore, learn to smile. Laugh about yourself!

Citizen's values in Europe in 2020

The dream of a creative, secular and wealthy Europe in 2020 will only work if it is based on the shared dreams and values of millions of Europeans. That dream is very, very basic. So basic in fact that we have failed to communicate those basic values to the new *and* the native Europeans. It is time to spread the word again. Day after day. It goes something like this.

Earn your own daily bread, do not expect government to do that for you. Take responsibility of your own life. Take responsibility of your children. Head for success and excellence. Be an entrepreneur. Don't be a criminal. Give to your community and your neighbours. Speak English as well as the language of the country you live in. Don't force your religious beliefs upon others. Gain respect by giving it. Be polite and smile! (PS. If you are looking for a person with more ethical authority than me, please visit Mahatma Gandhi's site.)

No one can predict the future, but we can sure as hell prepare for it. Let's embrace the chances the flat and smart world gives to Europe. The future is flexible, open, and full of chances. All that human energy and spirit waiting to be used! There is not one single future, there are many thousands. Let's focus on passion, not on fear, and let's pick the right one. The one we want to live in. "Do your best and don't be afraid!"

PERSONAL DASHBOARD 2020

Open Letter to Bill Gates & Larry Page. Please give us back Control over our Life

Dear Mr. Gates and Mr. Page,

In 2020, there will be so many companies and governments wanting to communicate with us, that it is impossible to keep overview. There will be so many criminals spamming us, trying to steal our identity and invading our privacy, that we will feel like loosing the battle. In 2020, more than ever before in history, we need control. We will want back control over our personal life, and we will want technology to enable "personal selfservice dashboards" and "permission instruments", like pictures and video's that only display if we give permission. We will want back control over our personal data, our subscriptions, our financial transactions, our privacy. Control over our communications with the rest of the world. We don't want to be available 24/7, we want to be selectively available. We need a tool to manage all our transactions, our

communications and our personal files. We need a tool to protect us against identity theft and spam. A tool that integrates all information and communication flowing into and out of our mobile phone, our laptop, our home, and gives us the power of selective availability and selective communication. This tool will help us to make choices and create simplicity. We need this virtual driver seat because it is an essential tool for survival in the virtual and transparent future of 2020. And we must be in the driver's seat. Not the government. Not the bank. Not a global company. But we. We will be in charge and we can be in charge, for the first time in history.

I call this tool Personal Dashboard, a self-service Information, Communication & Privacy Control Centre. The next big thing after the website, and a likely bestseller to 8 billion citizens worldwide. Consider it to be your personal manager. With a few clicks, you subscribe and unsubscribe to the newspaper, you order your passport and a pizza, you obtain a residence permit, pay the rent. You allow or block ads. You allow companies and governments and friends to get access to you and to deal with you -- or not. You grant permission to companies and governments to use your personal data -- or not. In this Personal Dashboard, you will have a current account with your government. Government will act truly as one government, not as many. The motto is: 1 government, 1 face, 1 interface, 1 citizen card -- and your dashboard is the interface.

The problem is, no one is building Dashboard yet. Sure, there are some attempts, but they are weak. I urge everyone who cares about customer control, to build Dashboard. 8 billion people will buy Dashboard. Dashboard Company will be the new Google and the new Microsoft of 2020. Stop thinking paper. Stop thinking websites. Start thinking customer power. Start creating Dashboard, please. Give us back control over our life in 2020.

Back in 1994, I was one of the first Dutch Internet pioneers with my own website. Back then were the wonderful, amazing days you could view a listing of all the websites in the country -- scrolling down for just one screen... My first two thoughts back then after my discovery of the web: *Wow, this means freedom!*; and *Wow, everything will be Web!*

More than a decennium later, everything *is* Web. The past few years we have seen a new phase: personalized websites. Companies and governments open up their websites to their customers, so that customers can store their files on their site. The likes of MyShell.com, MyGov.nl, MyGoogle.cn, MyVodafone.in et cetera et cetera. OK, it is more transparent, but it is still a mess. We have to log into all those sites under totally different circumstances and with totally different passwords, and our information is stored in numerous different and incompatible ways. This means it is a digital version of the paper situation in which your data is stored in hundreds of databases without you knowing it.

MyShell.com et cetera is just a passing phase in the development towards the ultimate site: MySite.com. Let's take my name for an example: MarcelBullinga.nl -- but in a totally different way. That site is your Personal Dashboard. On that site your rule prevails, no one else. All companies and governments you do business with, may access your Dashboard and write in it. It is the world turned upside down. We do not log into company sites anymore, no, they log into ours!

Right now, both governments and financial institutions from all around the globe are experimenting with dashboard-like concepts. You should not be impressed, it is fractional, weak attempts. They either create a limited, government-only dashboard or a financial dashboard that is linked and limited exclusively to a financial institution or a specific company. Which is simply another form of *customer lock-in*. We need "customer lock-out", we need unlinking... These experiments are valuable only as an intermediate phase towards the ultimate goal. That is what the unique, integrated, user central Dashboard is all about. Only that can give us what we so badly need in

future: checked trust, transparency, simplicity, overview, user control, self control, self service. Dashboard provides us with tools for managing all these aspects. It gives us the power of *selective* availability and *selective* communication in a maddening information rich world. It gives you the power to manage and control your data and your privacy. It gives you the power to manage who may and who may not communicate with you, and under what conditions. It is a spam free and ad free environment. There is no advertising in the dashboard, unless you allow it of course.

How will we use Dashboard in 2020?

Dashboard combines all your personal, unique information with trusted public and commercial information. It is a biometrically safe, web-based environment. It will be the one and only globally trusted environment in which all other people and parties worldwide will find authenticated information about us: our rights to social security, the licenses granted to us by government, but also our identity and our partial identities. That is important, since identity fraud is the basis for many other forms of fraud. In Dashboard future, it will be very difficult to lie. Dashboard will be available from any machine, at any place -- as long as you are online. Since it is an online tool, security and an offline backup are essential.

Dashboard will incorporate and integrate only globally standardized and trusted information and communication flows, and combine these flows with the unique data of each owner. Dashboard is therefore strictly and uniquely personal; it *is* your personal identity. You always log in first, and on the whole globe there can only be one *You* who is online at the same time. One multi-biometrically proven You. We pay with our sweat, so to speak.

In this secure environment you click on buttons that do something for you. You cancel or start a subscription, you accept a bill and pay for it, you search or have an intelligent agent search for you, you chat with someone online and exchange verified partial identities, like your gender or age. No more cheating, no more lying! You start a video conference and you exchange and create visual and textual data that possess your integrated biometric watermark or signature. Dashboard allows you to browse, search, pay and mail (although emailing is just a way of offline chatting, so it will probably disappear as a separate functionality). An intelligent agent knows your likes and dislikes and learns from your search, click and decision behaviour, and gives you personal advice.

These are the functionality buttons in Dashboard:

- *Life Events Manager*. Allows you to manage all your life events, from hospital treatments to pension. Dashboard offers a fully integrated overview of your past, current and future life events. Its user interface is created according to your life events (birth, growth, relations, education) and your roles (citizen, inhabitant, house owner, patient, and your rights and duties as an employer/employee, civil servant, volunteer, et cetera. So, it incorporates and integrates all your existing files.

Dashboard uses and combines trusted data scattered over the whole wide world. It will use trusted data provided by authentic registrations and sources only, both from government and companies, worldwide. Like registrations of income, address, name, professions, taxes et cetera. The unique, integrated user view is generated dynamically each time you access Dashboard.

Some of these sources however will *not* be accessible to the user. For example, you can see your police record but not change it.

- *Choice Manager*. You will use all kinds of third party knowledge systems, helping you in making regular choices, like buying a car, buying a house, starting anew company et cetera.
- *Subscription Manager*. Gives you control over all the subscriptions with companies and governments.
- *Financial & Payment Manager*. Gives you control over all your financial assets and

transactions. Peer to peer spending money and online earning money. Dashboard does *not* offer a new payment system; it offers open standard, integrated access to *all* existing payment systems.

- *Communication & Privacy Manager*. Gives you control over all communication with you and allows you to manage all your privacy settings. Block and allow people and machines. People you chat with, will know for sure you *are* an adult (or a child), that you have enough money to pay for something, that you indeed *have* a license to build a house, et cetera. People you email with, will know for sure *you* sent that (trusted) mail, not a fraudulent spammer.

You decide what happens with your personal data and under what circumstances other parties may use this. You will be able to exercise real-time control over that use -- it is not a matter of blue eyes trust, it is a matter of digital at-a-distance manipulation of data. You will be able to manage in what way your data (and what data) appears in any company database. Maybe the company does not even *know* you are in their database. You grant permissions to any party you would like to use your data in a certain way. You will have real-time generated, up to date lists of all parties that use your data. You can revoke your permissions anytime in real-time, provided you have fulfilled your part of the bargain (for example, a payment).

Basically, all the data that you create (by travelling, by making transactions and so on) is owned by at least 2 parties: you and a company or government. That means that both parties have to give their permission to use and manipulate the data. For that, we will need biometric data, biometric cameras, biometric mobiles and biometric laptops. Your biometric watermark is stamped into the pictures that you take or that someone else takes of you. No one will be able to publish pictures of you on the net without your permission anymore. If someone else publishes your pictures without your permission in a non-permission environment, or if you withdraw a previous permission, the picture goes black in real-time. Not only will Dashboard enable permission marketing, but also permission publishing.

- *Traces Manager*. Gives you control over all the traces you leave when writing documents, creating images, paying your bills et cetera.
- *Identity Manager*. Allows you to manage all your partial identities.

Time line for Dashboard Company

So, we all want that neutral, open standard Dashboard with its unique selling point: the user decides, totally and unconditionally. But no one is building it yet! We need Dashboard Company to create it. Sounds logic, not? The intermediary that integrates all partial dashboards to be developed between now and 2020. The company that creates the Mother of all Dashboards. In the end Dashboard Company will have sold 8 billion Personal Dashboards, and Dashboard Company will be the new Google and the new Microsoft of 2020.

What will investors in Dashboard Company face in the coming years?

- 2007: Dashboard prototype for free on the internet. Basic functionality. People can use it to get control and overview over their subscriptions, warned how and when they should be cancelled, et cetera. Dashboard also displays a partial financial overview. The user still has to type in his data himself.
- 2008: a paid Plus version of Dashboard is introduced. In this version an open payment system is included. More functionality. Hacking of Dashboard invited, but unsuccessful.
- 2009: Due to massive use of Dashboard, companies and governments start to get interested. First organizations agree to access Dashboard files and write directly in them.
- 2015: Dashboard rolled out over the globe. Firm booster to global standardisation.
- 2020. 8 billion world inhabitants use Dashboard.

I urge everyone who cares about customer control, to stop thinking paper. Stop thinking websites. Start thinking customer power. Start creating Dashboard!

SMART LAW ENFORCEMENT 2020

Crime Solving Rate 50%, Civil Rights 100%. Open Letter to all democratic Police & Justice Leaders

In 2020, smart, semi automatic law enforcement ensures that citizens can protect themselves better. Only offenders of the law and criminals, not decent citizens, are confronted, bothered and checked. Smart law enforcement is preventive law enforcement. Non-fraudulent persons can remain anonymous; fraudulent persons and people violating the rules, are exposed in real-time. An intelligent device does not function anymore after it is stolen, so why bother to steal? No more embarrassing pictures on internet put there by angry ex-partners; without the built in permission the screen automatically goes black. From "punishment and fines afterwards" we move towards "preventing rules from being broken".

The mobile telephone will be the ultimate safety instrument. In 2020 it will be used as environmental check, passport and lie detector. It will enable citizens to protect themselves better. Personal camera's will be used for personal safety. We will have "victim technology for victim empowerment". Privacy will no longer function as unlawful hiding place for evil, but as rightful hiding place for decent citizens. In 2020, citizens will have gained back control over their (virtual) life. Key words are: self control, self protection, self defense, self safety.

Thanks to smart law enforcement, the world will be a much safer place in 2020, and citizens will have more power. We will have a crime solving percentage of 50% (and not 20% as it is now), without any loss of civil rights. At last, crime does not pay anymore... Smart enforcement means less criminal justice and more civil law, which is more effective. It also means that a sizeable portion of police work disappears. Police officers shall have more effective time on the streets for their monopoly: using physical violence. They will spend considerable less time at their desk. Of course, fines as an income source for government will have disappeared. That barrier prevented the innovation. Smart innovation by the police and justice departments means: integrating smart enforcement in every day safety processes. Getting rid of perverse institutional incentives, like police fines as a source of government income. And, most important, restoring the authority of the police officers on the streets. Without that, all technology is useless.

Right now, on the street and at home, more and more virtual tools are being used for smart law enforcement. Virtual safety not only means preventing fraud and identity theft, it also mean to be warned before the tsunami arrives. Intelligent camera's understand what they hear and see. In a city, they reduce congestion and street robbery. In our cars, they improve our driving talent. In the train, they prevent potential violent situations to get out of hand. Visitors of a company building first undergo an iris scan and an analysis of their finger prints, before they are allowed to enter. In the football stadion, smart camera's match the faces of the visitors with pictures of known terrorists and criminals, and they detect hidden weapons. Sensors detected in time if toxic gases are being spread. So, what's life like in 2020?

In 2020, law enforcement will be real-time and more strict than ever. Intelligence will be embedded in all physical things that surround us. Buildings, doors and elevators will allow or deny access according to the embedded government rules. Digital identities and checks will be integrated into every financial and government transaction we make. It will increasingly enable us to maintain our

safety ourselves as well. Point your mobile to the taxi driver and check if he / she has a valid, up-to-date taxi driver's license. Or drives without insurance. Or has tampered with the taxi meter. Point your mobile to that wonderful blue lake and check if it is safe to swim. Point your mobile to that factory chimney (if factories still exist :-)) and see if its radiation levels are within healthy range. Naturally you do not have to check the elevator; it will not work if the embedded government license has expired. Checked trust, smart law enforcement.

Smart government

In 2020, we will no longer be confronted with a government asking silly questions such as *Who are you? What is your income? Do you have a ticket?* The answers to these questions are already known. In this truly paperless world with selfservice dashboards it is difficult to lie about our income, our whereabouts, our possessions.

In 2020 the world will be transparent. Our professional activities and our performances shall be available in real-time for everyone. The competition shall increase as our ranking on the Top 5 or Flop 5 will be visual in real-time. However, this does not mean that all of our privacy is compromised. We will have a better grip on our personal data and what we permit others to do with this data. The introduction of *selfservice dashboards* means that citizens and clients control themselves with whom they wish to communicate and what conditions are applicable. *Spam free, ad free!* We determine ourselves who can do what with our data. We will no longer be included in 800 databases and be oblivious about it! In 2020 we will have less and more privacy: our privacy regarding personal communication will increase significantly; however, our visual and geographical privacy on the streets will decrease. Privacy will no longer act as shelter for evil; it will act as the sound shelter for decent citizens. If you do decent things, you can stay anonymous wherever you like. Only if you undertake criminal actions or violate the rule, your anonymity and privacy will be taken away in realtime.

In 2020 there will be no evident difference between physical and virtual. Access to a database and to a building will be the same. Multiple biometric security and encryption will be the standard. Our sweat, voice, skin, eyes and ears will be our safe guard and the key to any kind of access.

The museum piece (the computer!) will no longer be the sole entrance to the virtual world. Having information on one single device and access to that one single device is no longer applicable. It is about access to information, somewhere in the network, not connected to the device used. The world will be one single, large hard disk, searchable on standard characteristics. In 2020 there will be a global, democratic Police/Justice-Google of records of convictions, based on standardised information.

Government will become more and more invisible and more effective. It will no longer produce paper rules and regulations, no, it will produce rules in the form of knowledge systems and software. The government will download licenses and regulation in the form of software and will send this directly to the doors and buildings, in databases and company systems. The elevator of which the license has expired, will no longer function. The government will upload generated and combined statistics, without the need to deprive the company involved of its human time. Payment of taxes will be dynamic and continuous. Payment of VAT due will be effected on the moment of paying the consumer goods by means of electronic payment methods, and will directly be registered in the accounting systems of the company involved and in the governmental system as well. The cash receipt will be in touch with life.

We have abolished our national borders, but boundaries remain to be required. We may well return to the medieval city: there it was determined who could enter and who could not. The present video-traffic control and payment systems for reducing traffic-jams, such as used in London, will be used for this purpose. Moreover, we will be approaching a continuous virtual administrative "border control" at each and every contact citizens wish to establish with the government or a company: is this person authorised, yes or no? Is this the real voice of the client?

Does he lie? This means less possibilities for illegal residence, less possibilities for undeclared work and less fraud with regard to social security.

From punishment after the deed has been done, to preventive law enforcement

At present the method of payment of fines and penalties afterwards is used. After the rule has been violated we impose a fine or imprisonment. Who ever came to this idea? For this is putting the cart before the horse. In 2020 we have come up with something much more clever: real-time or even preventive semi automatic enforcement. By means of a combination of physical and virtual measures the rule *can* not be violated in any way. The most perfect example is the intelligent car with a dynamic GPS-speed limitation and a smartcard-key. This car drives safer and cannot be stolen. An intelligent, stolen device, will automatically provide information on its whereabouts, will report the crime and will subsequently deactivate itself. Stealing will be rather useless... No car will drive without being insured, since no insurance means the car will not start. The number of deaths as a result of the use of alcohol in traffic will go down to zero, since the car will not start if it smells alcohol. An intelligent car need not go to the garage for regular inspection; there is a *continuous* motor vehicle inspection. By means of clever use of payment technology in advance, driving away without paying your petrol is no longer possible. There will be less traffic-jams, since the car has become intelligent enough to connect to all other vehicles on the highway (around 2050). If humans no longer drive the car, there will be a better flow of the traffic and less accidents. Citizen happy, police happy.

Should someone drive away after causing an accident, the vehicle will automatically reveal its identity to the victim and the police. If you behave, you can drive on anonymously for ever. In fact, each and everyone of us can remain anonymous - as long as we behave civilised. The system will only reveal our identity in real-time if fraud or misuse is involved. In short, the citizen will be her own police officer, and the police officer travels along, in the car and in the laptop.

We know where people and things are, at any time. We know the GPS-location of the trucks of the company, but of our children as well. We will thus loose less track of people and things. On the airport, people and luggage will be linked virtually. When a disaster is at hand, all people in the vicinity of the disaster will be warned by mobile telephone.

Self control, self protection, self safety. The citizen as police officer, the mobile telephone as safety instrument

In a smart world, decent citizens and victims are better equipped to protect themselves against crime and nuisance. Let me give a number of examples of *self control, self protection and self safety*.

A smart world with sensors, tracking & tracing ensures warnings in real-time. Think of a what is referred to as a sensor column, located in the chimney of a factory: people living in the neighbourhood are warned if certain environmental levels are exceeded. Think of the GPS-ankle tag, used for (sentenced) criminals with a court injunction, which sends a signal to the potential victim and the nearest police officer, should the criminal reach the vicinity of the victim. Illegal use of space is immediately reported by GPS as well, and this prevents fraudulent use of subsidies.

The integration of the biometric passport (a smartcard) - mandatory in the future in European Union! - in the mobile telephone, is a fabulous means to link identity, rights and duties and to check this in real-time. The mobile telephone will function as a lie detector for citizens. Click and check in real-time whether the taxi driver has a driving license, or whether the bar has a fire license. Regulations and licenses will be integrated in chips in cars and buildings, in doors and humans. Check the doctor, check the travel agency: less chances on fraud and swindling with

counterfeit knowledge. The parking license, the application letter, the certification, the taxes, name and address details: all will be provided with a digital stamp "Approved/Reliable", and the citizen can check this in real-time. As soon as all information sources on the Internet and in the physical world have such a reliability tag, they can all be checked. The intelligent share automatically prevents that it will be sold to or by a certain person within a certain time frame. Intelligent money knows it may not be spent twice; prevents this from happening and immediately reveals the identity of a fraudulent person to the bank or the police.

If children chat, they will immediately know if they chat with a child or an adult, for each and everyone logs on with a guaranteed (partial) identity, such as gender or age. The "child mobile" enables parents to control the communication and payment terms of their youngsters; a nice method against child molesters and debts.

Smart checking, smart inspectors: no inconvenience for decent citizens

We now have mobile laboratories, that immediately report the DNA results on the crime location and match these results with the central database. However, this still involves a period of 8 hours. In the future the detective will have the laboratory available as a chip in the mobile telephone and the DNA-matching will be completed within the hour. (By the way, our appearance can be based on the DNA profile.)

A smart weapon is a transparent weapon. It registers who shoots when, and naturally, it will only shoot if the marksman is (biometrically) authorised.

As soon as all containers in the harbour are provided with a chip including a reliability tag, they can all be checked in realtime. In 2020 inspection means inspecting the cargo by means of a mobile telephone (or something similar). The cargo, in which the chips is integrated, will report any problems automatically and on the spot. Inspection will only be applicable if something illegal occurs! Civilised sources will not be hindered, only criminal affairs will stand out.

Idem ditto, intelligent (body) searches can be performed by remote control: without the need for any physical touching of the body, police officers can scan a crowd of people ("non-physical body search") by using a mobile x-ray-type of device. They can scan on illegal or incorrect objects and on the *lack* of a valid admission ticket. By means of an identity scan or video scan, the match will be performed in real-time. Does the person have a police record? Does the person have an admission ticket? Is the person behaving suspicious or aggressive? The intelligent camera detects rising aggressive situations by listening and looking intelligently, and by asking the assistance of police officers *before* the situation explodes. The difference between intelligent video control in 2020 and the present dumb video control is enormous.

In 2020, we will be able to search not only by typing in keywords, but also or giving in a picture. Techniques to trace digital images back to the cameras that created them -- like tracing a bullet back to the gun that fired it -- can help in the prosecution of child pornographers.

On the other hand, the moment we have smart camera's, angry ex-partners will no longer be able to put embarrassing pictures on the internet or make public private emails without permission. The point is, if the built in permission is revoked, the screen goes black...

Smart law enforcement confronts criminals and does not bother law abiding citizens. At present, the train conductor or guard checks *all* people on the train and bus. Inconvenient and unnecessary. If the train ticket simply transmits its existence to the mobile telephone of the guard, the guard only needs to inspect those people who do not transmit *anything* ... Not *all* persons will be scanned, including the decent, only the suspicious ones.

Smart enforcement means less criminal justice and more civil law, which is more effective. Since physical borders do not work properly, and imprisonment is relatively short, we can use the virtual government and financial borders to grant or deny access to social security and legal, financial life. Revoking a credit card works much better.

No matter how much you signal or detect by means of technology, in the end it is all about taking action, meaning "having the nerve". If a police officer is afraid to interfere on the streets, if a judge sentences too little or too late, if sentences are not carried out properly, if citizen self defense is punished, then overall safety will not be served. We need police heroes. This will increase the limited authority and respect for the police -- which hinders the safety more than any technological system or the best laws. Regain that authority! The rights of the victim and the rights of the decent citizen need to be at the centre of our attention once again, not the rights of the criminal. The other way around the same applies: if the citizen is aggressive, the government is no longer held to pay social securities, supply transport or allow entrance.

In short, smart law enforcement means citizen friendly enforcement. Technology is key in achieving this safer society. Of course, lots of problems can and will arise. Hacked cars, digital infrastructure that is not open standard or too expensive, embedded intelligence that fails in case of an electricity failure. Smart innovation by the police and justice departments means: integrating smart enforcement in every day safety processes -- in small doses, in small steps, whenever & wherever it is possible. Getting rid of perverse institutional incentives, like police fines as a source of government income. And, most important, restoring the authority of the police officers on the streets. Without that, all technology is useless. All of this will take lots of years, but who cares? Safety heroes start innovating now!

CHECKLIST SUCCESSFUL INNOVATION IN 1 DAY

20 Tips for Futurebuilders and Innovators in Government & Business

So you are a futurebuilder, an innovator. You want to prepare your country, your profession, your company, your government for the future. But you do not have much time. No big deal. Let me guide you. Here is how you travel from the present to the future. It takes just one day. Learn to know the probable future, then create your desirable future, then create an Innovation Plan. It is as simple as that. Do the futurecheck in the morning, have lunch, and innovate in the afternoon. Follow these tips and you will be successful in 2020.

PS. Including free formula for the ideal government

1. **Probable future.** In 2020 the world will be global or flat & virtual or smart; transparent & hyper competitive, filled with old and mixed people. Also, it will be continuously changing and therefore insecure. As an innovator and futurebuilder you will have to take all these trends and their counter trends into consideration. U must know the probable future in order to sketch your own desirable future..
2. If you want to use scenarios, please do it well! Scan the futures that *others* foresee or want. Name the global trends and counter trends, which you will need to take into consideration with *each and every imaginable future*, and translate these trends into your local or regional

conditions. Basics are the expected and probable changes and extrapolations in the field of technology, demographics, immigration and culture. Together they shape the *probable* future. Let me give you a few hints...

3. In 2020 the world will be virtual. Routine administrative and control activities will disappear into software. Laws, business models, activities, positions, professions, cars, houses: all will be a knowledge system, all will be software, all will be web. In 2020 the world will know less monopolies, trade and knowledge barriers. Customer lock-in will be very difficult. Top quality is the sole survivor: quality of services and quality of products, actual quality and emotional quality. Quality of services is not related to lowering costs, but to the creation of added value and simplicity for the user. The definition of "added value" needs updating continuously.
4. In 2020 the world belongs to the users: customers and citizens. Allow user groups to co-innovate and to value your existing services & products. Use customer complaints as a source of innovation. Assume a maximum of self control & self service from clients & citizens. By managing the complexity for your clients and citizens and by providing options for choice, your company will continue to add value and be profitable. Organise in such a way that the user is not confronted with complexity, in the form of selfservice dashboards for your clients that integrate all their information, communication and transaction needs into one single user interface.
5. In 2020 the world will be transparent. You are at the market square in your swimming trunks, and everyone can see what you do, how you work and perform. As a standard you are evaluated and rated by clients and governments, as a standard you are categorised in a Top 5 or a Flop 5. You do not want to be in the Flop 5, do you?
6. In 2020 only top quality will survive. Innovating is: organising that future top quality. Relate your present products and services portfolio to the standards of 2020: what will *then* no longer be competitive, what will *then* have ceased to exist due to virtualisation, what will *then* have crossed the border, where will low quality have gone *then*? Which of your products and services will turn into commodities in the foreseeable future? What remains after such "meeting the standards" exercise, is your *competitive core quality* and the *competitive core people* with whom you will survive and excel.
7. **Desireable future.** There are issues on which you have little to no influence, and issues that you *can* influence. These are the ones you should focus on. Now it is time to think about your *desireable future*. Phrase what you would like to achieve and visualise it with images or a video. Phrase your mission in one single sentence and one single image, plus a number of sentences related to the limiting conditions and methods. Make use of the transparent world. Rate yourself! Enhance your listing! What places do you occupy *now* in a number of relevant benchmarks and what places do you *want to* occupy in the near future?
8. **Innovation Plan.** This is where many organisations stop, however that is money lost. Innovation is action! The most exciting is yet to come. Plan what you will need to do tomorrow in order to *achieve* your desireable future. What should you do? What should you not do? What processes, buildings and people will you need to abstain from? Make a plan to go higher up the value chain. Create a time schedule (present - 2010/2015/2020) and include tangible sub results. Phrase in terms of actual services and products based on the clients point of view. Anyone can grasp that: the people on the shop floor as well as the top and the clients. Important: search and find the seeds of the future in your own organisation! Name and support 3 powerful projects and project leaders that in fact now already embody the new future vision.
9. There has to be a burning need for innovation or you will not innovate at all. Newcomers preying at you? On the verge of loosing a monopoly? New laws that force you to change? Good! Imagine a world in which transaction costs and switch costs are absolutely minimal. Innovate based on that idea. Imagine you no longer have a monopoly position and no longer can profit from technological customer lock-in. Imagine you are the biggest competitor or a newcomer with no legacy. Then start freshly. Ask yourself: what changes would *an outsider* make in your organisation?
10. Organise life moments in order to (double) check the futuristic view and the intermediate results and to keep your people on their toes. Always start with showing the integrated futuristic view, this will keep everyone on edge. Allow persons with high and low responsibilities to present what they have built or accomplished and how this fits the

integrated futuristic view. Think of new forms to motivate. User satisfaction is your standard. Invite clients, citizens, competitors, sponsors and friends. Invite a shadow panel of colleagues or competitors, who will comment on your innovation results. Take an Idols-vote. Provide rewards for team efforts. Ask someone outside what he would do if she were boss.

11. Often, innovation is not about complete renewal at all. Usually, it is about smart combining and copying. Combining the top and the shop floor, combining the young and the old, combining new technologies with old concepts. Virtual innovation (the innovation of business model, back office and services) will in the long term increase your global competitive position; physical product innovation is of lesser importance. Avoid lawyers. Get young professionals and entrepreneurs onto the stage. Live! Sparkle! And if you want to sparkle, stop attending bureaucratic meetings. Diminish co-ordination time and increase fun time.
12. Make your organisation flat. Level all information. Standardize it, make it transparent and let it flow. Get rid of all people in your organisation that act as sneaky little information monopolists. Demand and reward information sharing and co-operation within the organisation and the chain. Reward efficiency, reward innovation. If your business model or your rules punish efficiency and innovation, change them into rewards.
13. In an ever changing world, flexibility and creativity are the most valuable assets. Bring both assets into your head, your organisation, your ICT-systems, your decision making. Make decisions on the lowest level possible. If you are a small business, act as if you are a multinational. If you are a multinational, act as if you are a small business.
14. The future is not about technology, yet the smart deployment of technology based on the user point of view is essential for the survival of companies and countries. So it is your duty to make technology invisible. Market solutions and nearness instead of products. The future is not about products. All products will be global commodities. They will have global high quality and will be intelligent: adaptable, self aware, self leaning. The future will be about personalized services around those global and intelligent products. The future will be about identity and lifestyle, about simplicity of choice, the only real cliff hangers in the virtual and fast world of 2020.
15. You want some key words? OK. Here they are. User involvement is decisive. Creativity is decisive. Technology is decisive. Talent is decisive. Leadership is decisive.
16. Leadership is: A) inspire all to everything new and B) leave the old behind (processes, objects, and people). Find the balance between command / central and creativity / freedom.
17. Are you working within the **government**? Then this is the formula for an invisible & more powerful government: "1 government, 1 face, 1 interface, 1 citizen card." And: "1 problem, 1 problem chain, 1 problem solver, 1 problem solving chain, 1 problem solving financial chain, 1 area, 1 leader."

First tackle the governmental chaos in which you operate. Stop establishing new governmental organisations, use only existing ones. Reduce the amount of leaders in 1 square mile. No competing bosses anymore! Be brave. Dare to fire bosses or yourself, get rid of organizations.

Then reduce and integrate existing rules. Stop making new ones. You think of creating a new rule? First call in the Paper Police! The Paper Police makes sure the rule is coherent with existing rules and that it does not cause any (extra) paper trouble for citizens and companies. Start turning rules into software so that they can be maintained in an intelligent, semi automatic and therefore much more efficient way. In general: few rules, tough maintenance.

Third, get rid of perverse institutional incentives, like police fines as a source of government income. Create positive incentives, that for example lead to more professionals and less managers. That reduce a multitude of financial streams, accountability places and accountability moments, to 1 stream, 1 accountability place, 1 accountability moment. Make sure decision power is at the lowest level possible.

Fourth, get digital quickly. Become paperless. But remember: digital infrastructure is to be built by central government, not by local government. (Unless of course central government is weak.) Anyhow, use open chain standards, central methods of identification and payment, and never ask a citizen something that is already stored somewhere in any government network. Stop asking dumb questions, please!

At last. Turn all civil servants that loose their jobs due to technology into safety and education professionals.

18. Naturally, you will not do all this futuring and innovating on your own, as a visionary but lonely CEO slash creative person. Nothing would become of it. You need to motivate your employees and colleagues to use their energy and talents. At the same time you will need to excel on content and process, on ideas and people. What is more fascinating than that?
19. So, you better start futuring and innovating now. Will it take you months or even years, loads of money and a battery of futurists like me? No. You don't have the luxury of that much time and you don't need it either. It takes just one day. Do the futuring in the morning, have lunch, innovate in the afternoon. Just make sure to repeat that day after one year. And no, you do not have to hire me; never underestimate your own qualities! Yet, it is a fact of life that strange eyes prey. And mine are blue...
20. Most important: enjoy what you are doing. Organise warmth, simplicity & choices for your customers and citizens. Do your best and don't be afraid!

Independent European Futurist and Guest Speaker Marcel Bullinga is an exclusive member of the international speakers agency SpeakersAcademy.nl

You want to have a Future Conversation with Marcel Bullinga as well? Mail to info@futurecheck.nl

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