



Book of

POSSIBILITIES

IMPOSSIBLE

Bioc

When I was little I never imagined a future with lots of computers. I know a future made of silicon is not a valley, it looks more like this [Figure a].

The future I envisioned was one of biocs. Bio computers. Little animals, pet like, that surround us and augment our lives with more computational and mechanical power.

The woman I fell in love with had a bee bioc hovering around her. It sometimes landed on her forehead and passed on contextual info to her brain. It hovered in front of her eyes in weird dancing patterns when it wanted to communicate something else.

My future house would be filled not with silicon based computers or plastic and metal based appliances but by biocs. A vacuum cleaner bioc, two legged creature with an anteater proboscis. I would have a couple of long armed stubby intertwined octopuses instead of my dishwasher... all animals and plants that would naturally and gracefully compost, just like me, so that life could go on.

My main concern was how to create a symbiotic relationship with the planet in our pursuit for more computational power, comfort and longevity. It was never my intention to dig up the planet in order to achieve it. I know, it sounds impossible.



Figure a

MINE, MIRNY
IN YAKUTIA

What kind of future do we want?

1. The future of something is not necessarily a better version of that something. The future of slavery is not better slavery. We need to constantly question and iterate. [*pg. 12*](#)

2. What we really want is transparent products that reflect ourselves. It sounds like a contradiction, but it is not. [*pg. 22*](#)

3. Technology now leaves huge holes on the planet. Extraction is unsustainable. We want to collaborate with machines to get the best possible solutions. [*pg. 26*](#)

4. We want to design more efficient public services and better living standards for urban populations. [*pg. 32*](#)

5. In the 20th century happiness became equated with distraction. We believe that designing for happiness is the opposite of designing for distraction. [*pg. 44*](#)

6. Values and relationships in a society are strongly influenced by the way money is created and administered. We want to reimagine money. [*pg. 56*](#)

7. Internet users are increasingly hesitant about handing out private information, but we want people to be able to share data, services and experiences safely. [*pg. 66*](#)

8. Products become biased when they are not designed for a diverse group of people. The future we want has more equality and less bias. [*pg. 78*](#)

9. When we, as a company, first started looking into the refugee crisis we had our innovation hats on. We found that technology empowers networks of help. [*pg. 90*](#)

We reimagine the planet one product at a time.

The Impossible family is made of passionate thinkers, designers and engineers, united by a common mission: solving impossible problems faced by businesses, society and the planet.

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*“The future is not what it used to be.”
– My grandmother.*

The future we want is not the future we are going to get. The future we will inhabit is not made by people who reply to the simple question: what future do you want? It’s actually mostly composed of inevitabilities. You know... smaller phones, screens inside your retina, electric cars, no privacy... We think the future is actually quite important. It should not be, inevitable. It should be desired before it’s created. In reality we really want to call these possibilities, not inevitabilities. In order to do so we believe we need to start with... impossibilities.

The Impossible team

A guide to creating the *Future*

FUTURE

The future of something is not necessarily a better version of that something. The future of slavery turns out is not better slavery. The future of travel in the horse age was not obviously better horse travel. Using the same logic, the future of cars may be electric but the future of travel may have nothing to do with cars. At least not the future we want.

For us, solving problems and mitigating the risk of creating inefficient products implies looping through the following algorithm:

Problem, Product, People.

We start by making sure the idea is solving a problem through a product that is used by real people, who in turn want or value the problem solved [solution]. Will the idea have the ability to crystallize itself into a product? A product that when it is run past people will be solving a real problem? It does not really matter which P you start with, what matters is that you loop your idea through the three. Ideas are the true change agents. The midichlorians of change. They permeate the space between the three Ps. Everyone can identify problems, but not that many people believe enough in one idea to subject it to the the three Ps.

Step back. Before one dives into problem solving loops we must step back and assess the value of the overarching idea. If the value is positive then proceed.

If value is negative then invest in the opposite or alternative of that idea. You can and should always step back as far as possible, but there you will not find good and evil abstract value pairs, you will find an orbital perspective containing everything. That is scary: that pale blue dot containing everything.

How do you create and solve for that? How do you solve for a planet? What is the business case for that? It is a lot easier to not step that far back and to keep the problem space at the people level. Talk about target audiences. The planet can wait. No, it can't. Stepping back means we are able to see clearly enough to move our energy into an alternative but it also means we never lose the big picture.

So you stepped back and you made your choice to pursue an idea. Once inside the chosen idea space, you have two choices: optimise or excise. Faster horse or car? If you are already inside a car and an electric engine is not an alternative, create the next thing.

Where does business come into play?

Business allows us to collaborate as a species in vast numbers across intricate value networks. If you are solving a problem through a product, it is very likely you will be creating a business simply because others will want their problem solved and are willing to pay for your product. Just make sure you are really solving a problem and not just creating another, which usually happens if you haven't stepped back enough. Purpose led businesses is the trendy word right now. A concerted attempt at stepping back. Whatever the future of business, it will need to change from the present day resource depletion system to a resource management system. Manage is sexier than extract.

SHOW US THE FIRST
CITY THAT CANNOT
BE SEEN FROM SPACE
AND WE WILL SHOW
YOU THE FIRST
HAPPY CITY.

People. Problems. Products.

All inside a pale blue dot lost in space.

Looping constantly. And what are we really doing? Testing ideas and sticking with those which are able to undergo the three Ps and provide the most rewarding products.

Ideas. The more we think about them, about our biological ability to imagine and believe in them, the more likely an ultimate illusion scenario makes sense. From an idea perspective, what is the quickest path to pleasure, to multiplication? It is the spoken word, then the written word.... When we don't know if we are speaking to a product (machine), writing to one, when we start getting pleasure and value from seamless interactions, then the paradigm will shift. Right now we are still having to type this when it should be the result of a conversation. The products we create still make us do work. Very soon they will not. Work will not feel like work anymore. It will all feel like we are either connected or disconnected. And it already feels a little like that, the present.

Is the future of the city not a city?

Cities are now bigger than ever and seem unstoppable. Why? Because they are solving lots of problems at the people level. The *product* continues to bring value to the majority and we have had enough resources to indulge it. But do these make sense a planetary level? We are social beings, cities solve a lot of resource management problems but primarily they solve our sociable problems. We move to cities because there are other people there. Yes, lots of products too, and problems we can help solve and find our purpose... but it comes down to people.

We have been moving the level of interpersonal connectivity we require to survive to the online space. 200 likes are almost a physical hug... yay. This starts to free up the city from the burden of sociability. Coupled with job automation and reimagining cities becomes an exercise in inevitability. It all seems to make sense, but when it does, we look at the picture and it is not the future we want. People wirelessly connected to each other [mediated by machines], living in boxes, catered to by more machines. We do not find the underlying idea positive, so we step back. The solution to healthier cities is not primarily digital, or dependent on whether most of our sociable selves go online with our fridges and toasters, it is very much a physical one. Why not reinvent cities by permeating them with nature, rather than surrounding them with it? Show us the first city that cannot be seen from space and we will show you the first happy city. The new idea is rewilding and it involves embracing randomness. Let's run that through the three Ps.

200 LIKES ARE ALMOST
A PHYSICAL HUG

Ideas are anchors

Ideas come in value pairs. It is possible to start off with democracy and end up with an oligarchy or kleptocracy... The idea of democracy has not evolved much, but its implementation has and so it needs to be checked against its original idea. It's the perfect case of an idea that needs more efficient and transparent productization – how we go from an idea to various functioning institutions.

Thinkers, tinkerers, hackers. We need to look at democratic institutions and processes like horses and come up with cars.

That may mean deprecate certain institutions for completely different ones or simply... go electric. Whatever the journey, it is vital that we keep assessing if the initial idea and underlying values are still present.

Travel has so far been seen as a positive solution to many of our problems. However, if we consider the planetary perspective, we will see that the execution of that most wonderful idea has caused an imbalance. The future of travel is not no travel. We just need to use very different products and services to the ones we are using now. The idea does not change, but the execution of it does.

The future of travel may have little to do with physical movement and more to do with a high definition illusion.

The idea of slavery will not disappear, but as ideas come in complementary pairs (yin yang dynamic) we have been globally investing more into the yang of slavery: equality. We are still not there but the future we want does away with certain ideas simply by shifting the energy invested into their counter parts.

What about the future of shopping? No shopping? Dating? Insurance? Money? If we apply 'the future we want' logic, I don't want shopping, I want access to things. I don't want to date, I just want to meet the right people. I don't want to have to buy insurance, I want a caring society. I don't want to vote for people, I want to vote for issues. I don't want VR, I want R.

The future of something may be the very abolition of that something.



Better *mirrors*

MIRRORED
PROTEST SIGNS

MIRRORS

In Standing Rock a group of protesters huddle up. They are carrying large mirrored shields put together by Cannupa Hanska Luger. All shields should be mirrors.

1500 miles away, outside Lisbon in a small room within a palace from the 1800's, Robert Scoble stands at the front of a seated circle of techies. The topic is the future of VR/AR. Mixed reality is the future. "It will change everything: education, business, entertainment... Man, it's so big. If you're not doing this now you will miss out big time." Miss out on this new reality?, I ask myself, or miss out on a different way to look at the same reality?

At the end of a very long office in London's South Kensington, Ali who heads Babylon Health, gathers his people and points at the future. The future he wants is one where I can navigate my body and befriend my organs. Where emotion and education go hand in hand. Oh liver, I can see you complaining about last night's party. The mirrors Babylon Health are building bring intelligent and visual diagnosis into play. You will be able to look at your own body through your mobile and connected devices. Explore and learn about yourself in a completely new way.

In a secretive office in Silicon Valley I am given an EEG helmet and asked to look at an image of a lion. There are no cameras in the room, only my eyes. The helmet is connected to a printer that prints a fuzzy rendition of the feline I was looking at. The next step is to improve its accuracy and then start rendering our thoughts and thoughts in movement. After that we will be able to navigate our dreams and delve deeper into the dynamics that drive us. The ability to record what our eyes capture will change the way we look at cameras. The ability to record and replay our thoughts will change the way we look at ourselves.

In a downtown Lisbon studio, Kwame tells me about the way we interact physically with each other hasn't really changed much in spite of all the technology available to us daily. You wake up in the morning and you choose clothes which will not change until the evening.

"Can you imagine being able to change your clothes just as easily as swiping a screen? The communication potential is huge." "This morning" he shows me, as I point a camera at his body, "I feel like a red dragon". And voilà, as I look through the phone, a red dragon appears to surround Kwame's body. "When I look at others I want to see their real selves. I may also want to see what we have in common. And all this without having to exploit a Bangladeshi kid so we can have cheaper and more expressive garments. It should all be digital, dynamic and truly personalised." Why? I ask. "Because that is the future I want", Kwame utters.

A Ghanaian farmer is given a phone with which he maps his land. For the first time he is able to get an accurate image of his land and with it estimate the amount of credit needed for seeds. The same use case applies to tribes in the Amazon as they struggle to protect the territories they have been guardians of for millennia. "Unless you hold that mirror up near the stars and share it with others, they will not believe we are the guardians of so much land," tells us Shakay, a Shuar chief. For these people, the mapping app is the mirror they were missing.

Technology has an uncanny ability to help us create better mirrors of ourselves and our behaviour. It also adds a historical dimension to an otherwise momentary experience. The new mirrors we are looking at have history and as such help us build identity. This makes them powerful tools, no longer the simple object or metaphor we hang on a wall.

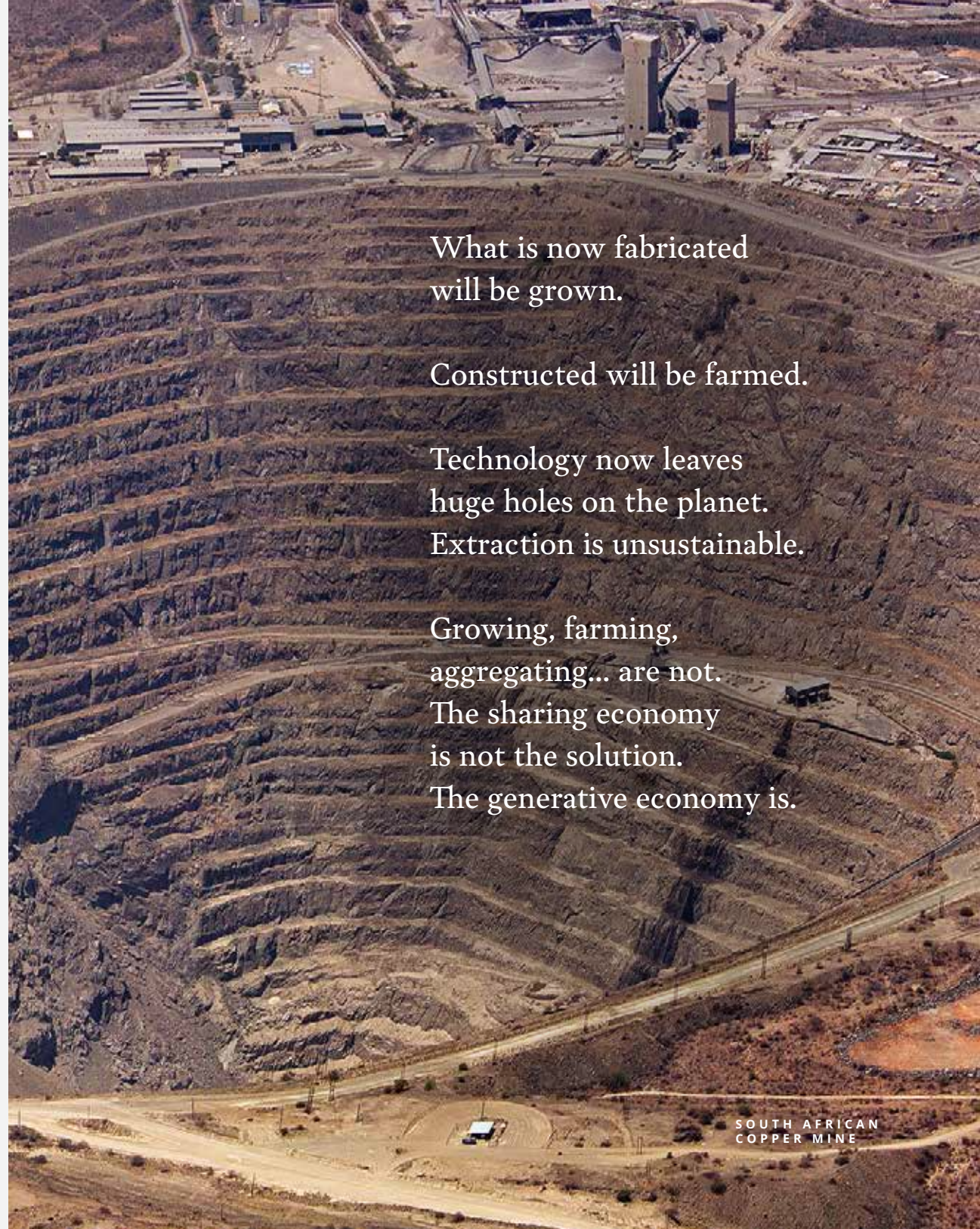
What user data can your product mirror? What can you reflect back to your users? Products that have a good 'mirror index' will always fare better than those that don't. Boots pharmacy loyalty cards have an amazing mirror index potential, they know more about individuals' health in the UK than the National Health Service. Imagine when they start mirroring some of this data as opposed to simply using it for marketing purposes.

The quantified self movement went through a rebirth but it only took off when the mirrored data became more social. The phone itself has partly become a social selfie-machine. At first selfies were enough, very soon an industry was born to prettify them, to augment the (wo)man in the mirror.

What we really want is transparent products that reflect ourselves. It sounds like a contradiction. It's not. Transparency means we do away with planned obsolescence and extreme inequality.

Reflection means we assign meaning to the user's presence. As consumers (conscious users) we want to know what our impact is in order to be able to change it. We can only create consumers when we start treating products like mirrors.

Generative *design*



What is now fabricated
will be grown.

Constructed will be farmed.

Technology now leaves
huge holes on the planet.
Extraction is unsustainable.

Growing, farming,
aggregating... are not.
The sharing economy
is not the solution.
The generative economy is.

How can we solve the holes on the ground problem? By sharing more assets? Yes, to an extent, but the sharing economy is not the solution. By outlawing planned obsolescence? That will also help, but it's still not the solution. By getting people to buy less? No. By fundamentally changing the way products are made. That means using processes that create products in fundamentally different ways. By growing them, by aggregating and by refactoring. In order to do this we need machines to start solving design problems in an autonomous evidence based way.

Generative design AI means we will be collaborating with machines in order to get the best possible solutions. Humans start the creative process, machines autonomously finish it. Design tools will get nervous systems. They will sense context and design for it in ways we cannot.

One of the core reasons for design being responsible for the huge planetary ecological devastation is that the creative process is done in an echo chamber. Once you include a nervous system into the tools we use to create, the creations will necessarily be more connected with the outside world. That is what a nervous system does.

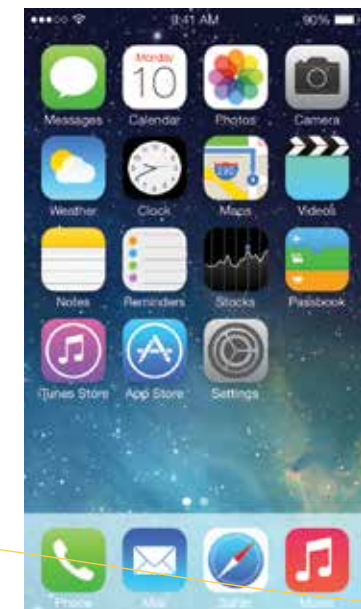
Inevitabilities

We started off with a very practical exercise. We lined up various iOS home screens, from 2008 to now.



a

2008



b

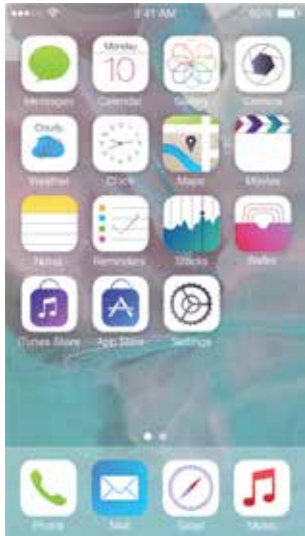
2016

A, B, (C) Can you guess C?

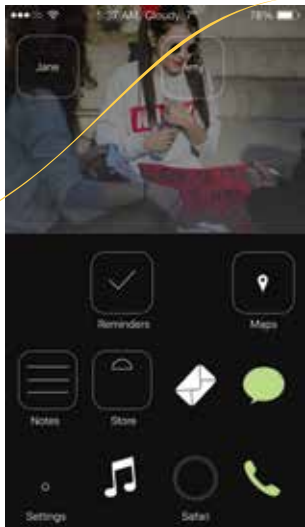
We asked our designers to create C.

This exercise helped us think deeper about the role of machines in innovation. C could have in fact been created by a machine (and it will be soon enough) but it won't look like the C.

C
now



It will look more like this:



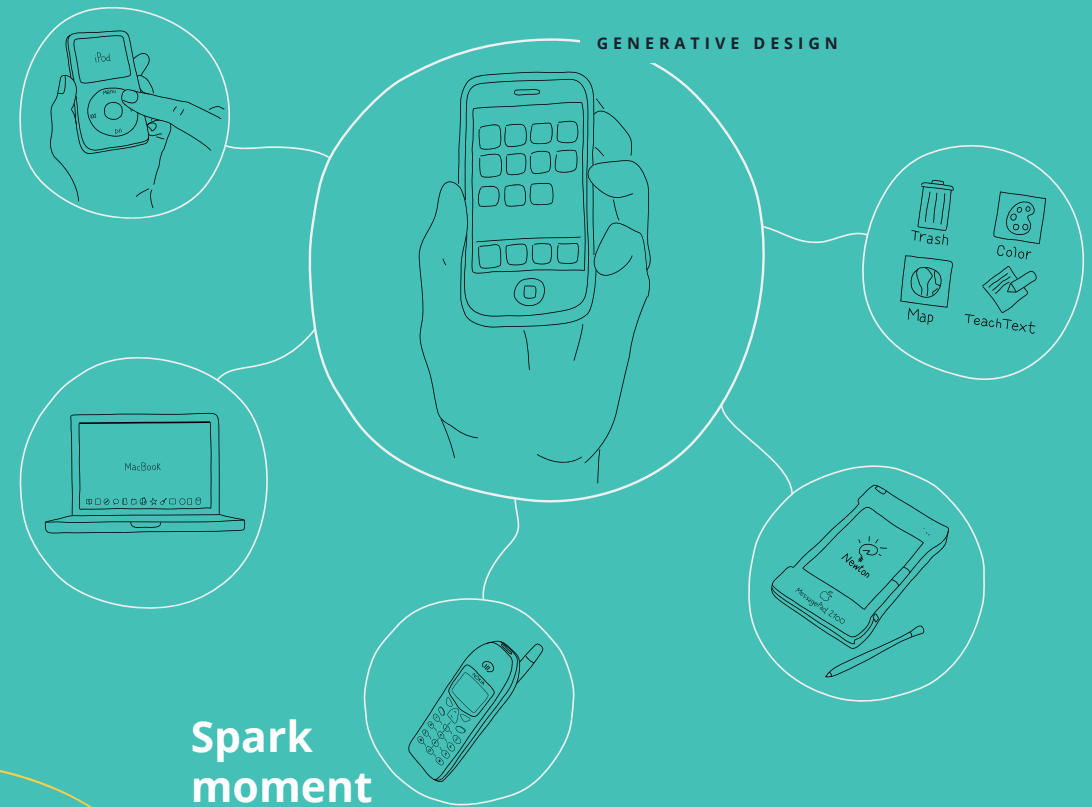
AI could've designed C in this progression, but if the operating system had an embedded generative design tool with a nervous system, it would learn from how the user uses the phone. C would look very different. It would just be a moment in a continuously evolving product.

Generative design tools which have nervous systems i.e. sensors that can read physical input and convey it to a cognitive unit, will mean the end of authoritarian design and authoritarian brands. The end of the designer as we know it. Tools that truly react and serve the user will discard branding guidelines in order to better serve the user.

The new breed of digital and physical products will not be enslaved by empires of style. Its aesthetics will be derived from an evolving relationship of value with the user. This first new breed of generative designed objects will be more like pets. Creatures that co-inhabit your space and you can't just put in the bin because they are evolving.

For this we need to shift the way we create digital and physical products away from discardable moments in style and treat them like creatures. Evolving creatures.

We use machines to help us with the design process but they don't design, not just yet and they play very little role in the creative process.



Spark moment

Generative design will solve the A, B, C problem. We have already argued that C, and B for that matter, should be done by machines, but A is different. In order to get to A you need a spark moment. The moment you know the problem at hand will be solved, however incrementally. The moment of conception, a little like life. The conception moment is not the product of linear thinking, but it is the product of a randomised, networked creative process. One that brings into the same time and space different minds, histories, variables... to solve one or multiple problems. The configuration of a spark moment is *zygotic*. All these different molecules coming together to create life. To create something that can be multiplied (as most products as well as organisms are).

That is the only way we can start covering those mining holes that dot the planet. With life.

The day London *woke up,* and turned all its kettles off

It is estimated that by 2050 almost 70 percent of the global population will live in cities. We want to be part of designing services that will lead to more efficient public services and better living standards for urban populations, and help solve existing urban problems.



The projection for global urbanisation is that by 2050 there will be **6 billion people living in cities, making up 2/3 of the global population**. It also puts immense pressure on cities' infrastructures, making it necessary to control – in real time – urban necessities such as transport, energy and water supply and flows of people.

For the first time in history, the majority of the global population live in cities. The global population keeps on growing, predicted to reach 10 billion in 2056¹.

Will the city wake up one day, as if with a will of its own, a name, a higher purpose, and turn all the kettles off? Or maybe the city will grow with us and teach us more efficient ways to boil our water? Is data collection via the Internet of Things, feeding AI engines, the solution to our exponentially growing cities?

People will continue to migrate to urban areas in search of opportunities and meaning. Africa and Asia still remain the most rural continents but that too is changing because we, the folks innovating, are so focused on the small moving parts of the Internet of Things that we've forgotten to lay down a vision. What if the vision was rewinding coupled with smart sensors, rather than just sensors and the inevitable AI?



TOP 5 FASTEST GROWING CITIES

by annual population growth

(Data: Guardian, 2015)

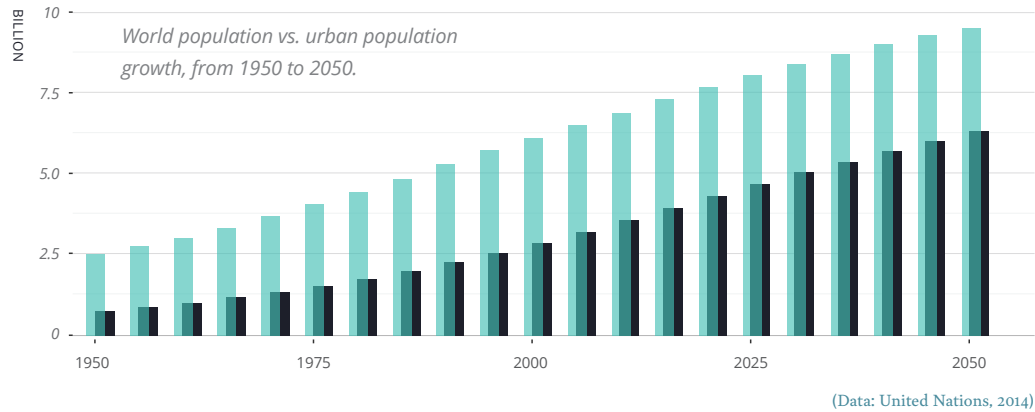
CITY	GROWTH
1. Batam, Indonesia	7.4%
2. Mogadishu, Somalia	6.9%
3. Ouagadougou, Burkina Faso	6.8%
4. Xiamen, China	6.7%
5. Yinchuan, China	6.1%

TOP 5 LARGEST CITIES

(Data: Worldatlas)

CITY	MILLIONS
1. Tokyo-Yokohama, Japan	38
2. Jakarta, Indonesia	31
3. Delhi, India	25
4. Manila, Philippines	24
5. Seoul-Gyeonggi-Incheon, South Korea	23





Growing cities to create citizens

The projection for global urbanisation is that by 2050 there will be 6 Billion people living in cities, making up 2/3 of the global population.

Urban population is growing in number as well as diversity. Along with this growth there are physical, environmental and social problems that need to be solved urgently. Overpopulation, poor air quality, lack of access to nature, loneliness and fear of the stranger are typical problems for urban areas.

These are big challenges that need to be tackled by governments on policy level but also by businesses and a purpose driven startup community of citizens. Good urban infrastructure (government), combined with smart technologies (businesses), wearable devices (citizens) will spawn behaviour changing services. We want to create businesses that catalyse meaningful connections between people and reduce car ownership, contributing towards cleaner air and improved trust among people.

You can argue that cities will become 'smart' when the various live data feeds from infrastructure, services and people are joined up, and processed by Artificial Intelligence. We argue that cities become smart when its citizens become smarter. When citizens start making informed choices as easily as they currently make emotional choices.

The pulse and flows of people, goods and information – all computed by AI is inevitable. Ah, the optimum city. Will the city wake up one day, as if with a will of its own, a name, a higher purpose, and turn all the kettles off? Or will the city grow with us to teach us more efficient ways to boil our water?

CITIES



Cities driving innovation

Innovation that drives the economic success of cities needs an ecosystem, an environment where smart people can inspire each other, 'infect' with new ways of thinking and create new opportunities.

It takes more than just smart people, but diversity and creativity as well. After all, creativity is about connecting ideas, and diversity avoids groupthink.

Open spaces and common areas facilitate interaction and connections in companies, and in cities these shared spaces are parks, cafes, festivals and exhibitions where people go to meet and exchange ideas. They are opportunities to get exposed to new ideas and new ways of thinking, almost like getting exposed to infectious diseases.

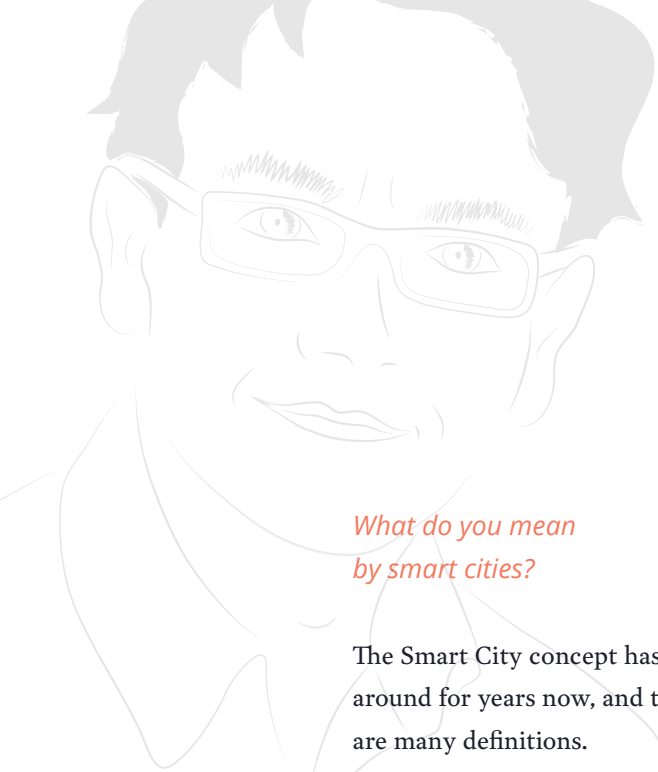
The denser a network of connections is and the more central an individual's location in the network is, the more likely they are going to be exposed to novel ideas. From exposure onwards it is up to the individual to evaluate the new information and decide whether to make use of it or ignore.

“With our days and nights increasingly stretched across the vastness of megacities, we’ve turned to these smart little gadgets to keep it all synchronized.

It’s no accident that the most common text message, sent billions of times a year all over the world, is “where r u?”

Urban planner, Anthony Townsend

As long as innovation is the surest path to wealth and success, many people will gravitate to whatever is the most effective way to innovate. Right now, that means going to cities.



Interview
with Andy
Hudson-Smith

Professor of Digital
Urban Systems at
University College
London

*What do you mean
by smart cities?*

The Smart City concept has been around for years now, and there are many definitions.

*We define 'smart' as
self monitoring and
reporting technologies.*

Making a city smart nowadays means tracking the urban system through sensors to understand it and eventually optimising the system. However, this is still pretty dumb: there is no real two-way communication, we have urban models made out with lots of technology and data, but the city hasn't changed to its optimum state just yet.

In five to ten years' time the

Internet of Things will kick in: there will be more networks and more truthful data, and Artificial Intelligence will be able to process those data and make them more useful. Things become smart when you take human out of the system, and this will probably happen in 50 years' time: London will have its own AI network that knows how to perform in the best way and algorithm machines will run the urban system.

*How's that supposed to make
people's lives better?*

A city that operates at its optimal level means a more efficient habitat for people to live in. If you run a city at its most efficient, you can improve people's lives by, for example, reducing air pollution or making it easier to navigate through places.

However, there is the argument that non smart cities are more unique and charming: London is chaotic, with its crazy traffic of cars, buses, bikes and people, but

"WE ARE AT
THE TIPPING POINT
OF THINGS THAT
ARE BEGINNING
TO WORK."

maybe that is part of London's vibe. But world is changing, technology is moving very quickly, and it's beginning to shift into people's lives and the way we live in urban systems is changing rapidly.

*What do you think are the biggest challenges with
Internet of Things and Smart Cities at the moment?*

The challenge is mostly technological: human-computer interface, Artificial Intelligence and power source. We are at the point where there is a lot of hype with the Internet of Things, but if we take a step back, we realise that is not working. There is no real unified platform and so there is no real perceived use of these data yet.

If we look at our daily life, we see more and more smart objects: we can turn on our lights with the sound of our voice, we can have sensors around our houses to make them more secure. People are more keen to buy smart objects because they are starting to perceive them as useful. This will happen with cities as well. The challenge is to set up a network inside the system that is truly useful, with a two-way communication. We are at the tipping point of things that are beginning to work.

What kind of future do you want?

I want that technology and wearables are used to understand people more, and use them to create closer relationships. We live in very self-based economies and

societies, where empathy is lacking. Technology can make it easier for us to understand each other better, and create deeper and more empathic connections with other people, things and animals. Starting from groups and communities, data sharing will bring nations closer, to the point where even human culture might change.

I think the human nature will kick in and pull the breaks on, asking "What are we doing? Why are we doing this?". There is no Internet of Things but Internet of Me. We can block the machines taking over. I become the Internet of Me and then the Internet of Us as we share our data and our heart beats.



PORTLAND
WOMEN MARCH
AGAINST HATE



PUNK

IN TIMES OF AUTHORITARIANISM THE ARTS GO PUNK. YOU WANT A REAL TREND, THIS ONE IS A GIVEN FOR THE FORESEEABLE FUTURE. BUT IT'S A DIFFERENT TYPE OF PUNK. IT'S SUBTLE, SIMULTANEOUS AND LURES YOU WITH BEAUTY BEFORE VOMITING EMOTIONS INTO YOUR LAP.

<TRUMP RE-INVENTS PUNK>.

THE EMPEROR
HAS NO BALLS



CREATING BEYOND

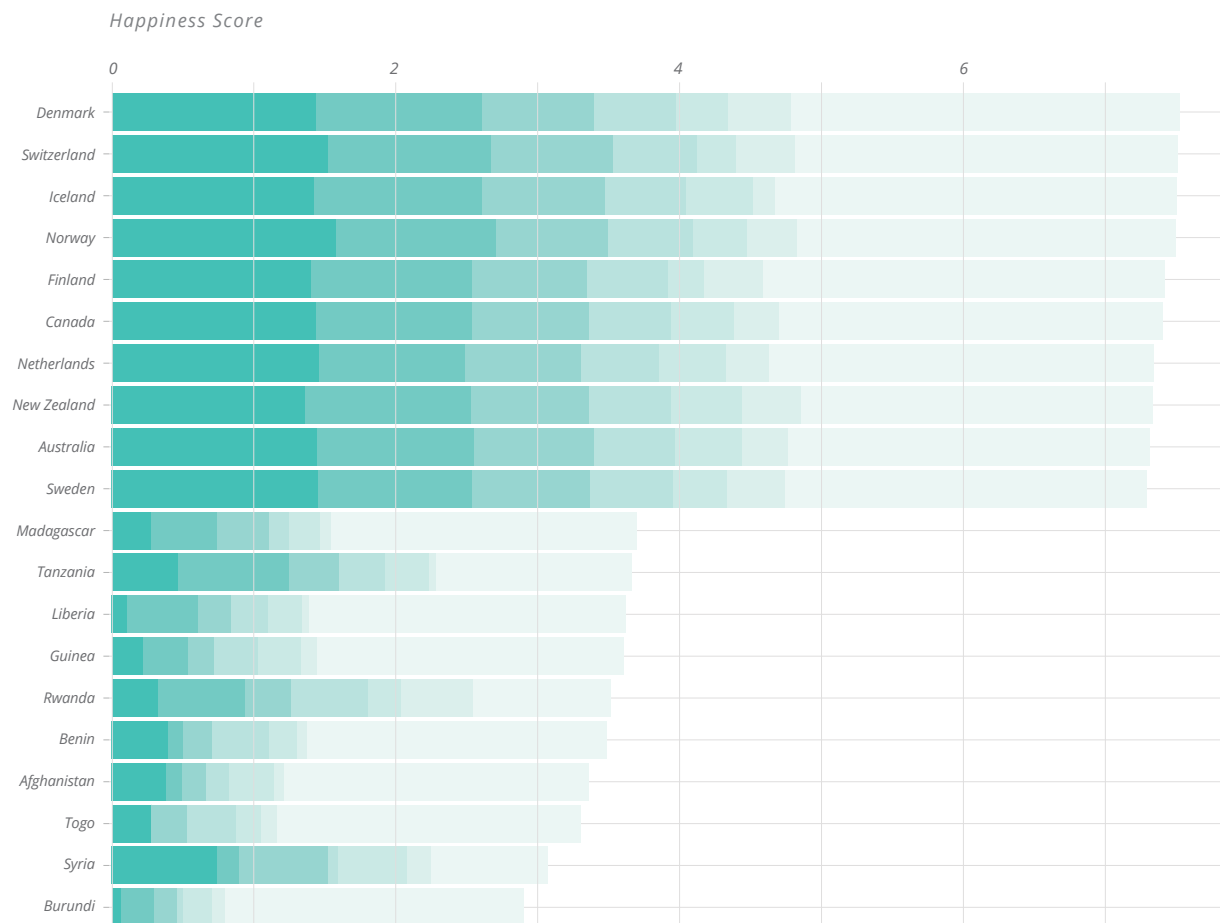
*<insert happiness
hormone here>*

Happiness Score

Studies show that happiness improves as incomes rise, that richer citizens enjoy better wellbeing than poorer, and that people in richer countries are happier than those in poorer ones. However, growth in national wealth is not always accompanied by increasing national happiness¹.

Economic growth is often achieved at the cost of sharply rising inequality, increasing social exclusion and damage to the natural environment. The best way to promote happiness on a large scale is to maximise economic growth, making sure that as many people as possible in society take part and are able to enjoy higher incomes and thus improved wellbeing².

However, according to the World Happiness Report³ more important for happiness than income are social factors like the strength of social support, the absence of corruption and the degree of personal freedom.



(Data: World Happiness Report, 2016)

Elements of Happiness Score

- GDP per capita
- Social support
- Healthy life expectancy
- Freedom to make life choices
- Generosity
- Perceptions of corruption
- Unexplained residuals

Measure the success of corporations

Most corporations still operate under a primitive authoritarian rule which anchors happiness in distraction. It's the same dynamic you see in most large countries: keep the great unwashed entertained whilst we rule. We believe that happiness in corporations is measurable and is created by cross-pollinating small teams in decentralised, purpose driven and transparent structures.

For corporations to achieve happiness they need to establish internal and external transparency. With transparency comes shared consciousness, which empowers individuals as well as teams. If everyone has access to the same data, individuals in the company will become agents for distributed problem solving and corporations can make use of the wisdom of the crowd.

One of the benefits of transparent corporations is improved communication: Individuals will start cross-pollinating teams, if you allow open communication channels and embrace new tools. Transparency is pointless without flexible and efficient communication.

What about the purpose of the corporation? A purpose unites to a set of higher values, and gives meaning to the corporation beyond profit. We all aspire to be part of something meaningful, and being part of a purposeful company can satisfy that need to some extent.



How do you measure transparency, communication, purpose?

Can you apply the same metrics you do to GDP or Bhutan's Gross National Happiness (GNH) as the indicator of success?

GNH is built on the promotion of sustainable development, the preservation and promotion of cultural values, the conservation of the natural environment, and the establishment of good governance. We should be able to promote and measure these at a corporate level, but can we forecast happier workers and a more balanced environment?

We would like to drive toward Gross Corporate Happiness (GCP). Business is the biggest planetary change agent on the planet. We change the way businesses run by focusing on GCP and we change the planet. That is what is at stake and certifying organizations play a major role in this.

Social enterprises, purpose driven businesses, Yunus social businesses, B Corps... let everyone know you are running a business with purpose beyond profit, but most importantly, certifying organizations sets targets so businesses can do better, not just financially but on a number of fronts, ecologically, socially... It's not enough to say you are good, next year you have to *be better and happier*.

Engineering *happiness*

We know that the relationship between money and happiness is surprisingly weak. Wealthy people live longer⁴, but they are not significantly happier.

Innovation is being pushed by a West Coast set of lean methodologies and agendas, by very talented and driven people who in the past decades have changed the planet with their products and imagination.

If you sit down with the idealists and visionaries of the Silicon Valley, you will quickly realise that their ultimate personal goal is not happiness but longevity. In fact, most of the 20th century innovation that took us from an industrial to a post modern society, was aimed at increasing longevity. Happiness became equated with distraction.



Can you design for happiness?

Impossible Labs wants to help people live happier and more fulfilling lives.

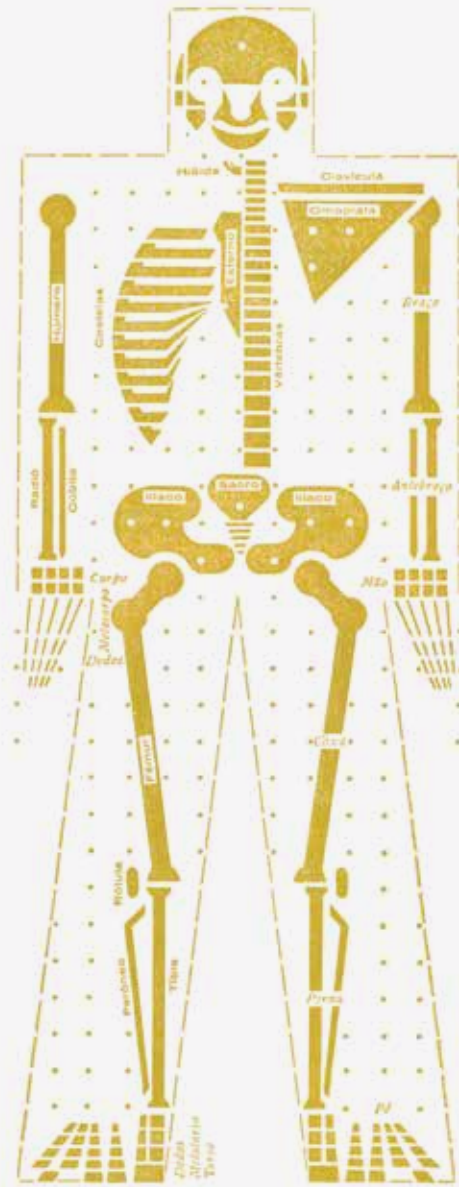
Momentary pleasure and happiness from a bought item can lead to a cycle of rising expectations and aspirations that ultimately become so high that nothing feels quite good enough.

Studies propose people would spend less money and get more pleasure by eliminating debt from overspending, 'recycling' positive experiences by reminiscing, renting instead of buying, and focusing on achieving inner personal goals instead of how one should be seen to be living⁵.

"I am part of that strange race of people aptly described as spending their lives doing things they detest to make money they don't want to buy things they don't need to impress people they dislike"

Writer Emile Gauvreau, 1941

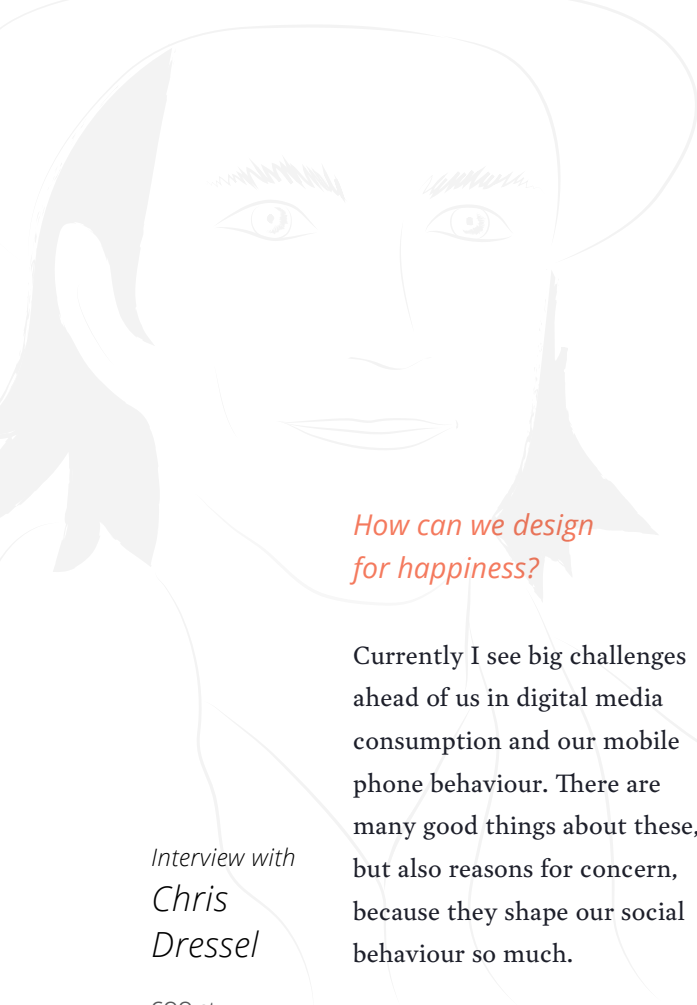
We design products and services that encourage prosocial behaviour, creativity, positive relationships, and help create experiences. In short, we want to create services and experiences that make the everyday life – relationships, work, finances, health, leisure – better for everyone.



We believe that designing for happiness is in fact the opposite of designing for distraction. It is a lot closer to designing for longevity.

So, as longevity farmers, what are our learnings designing for happiness?

1. *Products should aim to be invisible: a vehicle for experiences. An object oriented reality leads to unhappiness. A life full of willing experiences is a happier life.*
2. *Products should aim to add value to users for as long as possible. Planned obsolescence leads to more products. More products lead to unhappiness*
3. *Products should mirror users. Products that help users better understand their presence and behaviour will lead to necessary awareness for true happiness to occur.*



How can we design for happiness?

Currently I see big challenges ahead of us in digital media consumption and our mobile phone behaviour. There are many good things about these, but also reasons for concern, because they shape our social behaviour so much.

There is evidence that our digital media consumption is growing and it is more and more passive. It will be very interesting to see how we can move that towards a pattern that is a lot more conscious and creative, a lot more meaningful and not just consuming and soaking up one video after another. We need to

figure out how to change our digital and mobile behaviour so that we are interacting in a way that adds value to our lives.

What would you say are the biggest design challenges for a more equal economy in the future?

We've seen a big rise in shared economy where resources are used in a more efficient way. Currently the biggest players are Uber and AirBnB, and they seem to be very beneficial for people using them. However, there is a lot of hidden exploitation and the real assets – ownership and especially the profits of the companies – are not shared. We have to figure out a way that not only the production means are shared, but also the ownership and profits. This is currently not happening.

*Interview with
Chris
Dressel*

COO at
Impossible Labs

" WE NEED TO
FIGURE OUT HOW TO
CHANGE OUR DIGITAL
AND MOBILE BEHAVIOUR
SO THAT WE ARE
INTERACTING IN A WAY
THAT ADDS VALUE
TO OUR LIVES. "

Reimagining *Money*

Values and relationships in a society are strongly influenced by the way money is created and administered.





Cash can cost up to 1.5 percent of a country's GDP, which is approximately five times more than the cost of non-cash alternatives¹

Values and relationships in a society are strongly influenced by the way money is created and administered. Money is a unit of measure, a store of value, a medium of exchange.

Money is created out of nothing as bank debt, and it encourages short-termism, continuous growth pressure, regular recessions, concentration of wealth and erosion of social and natural capital².

In the conventional financial system national currencies sustain scarcity while fostering competition, rather than collaboration, among their users. National currencies also encourage individual accumulation of wealth and punish those who do not follow that principle³.

Innovations in technology and the growing resentment of traditional finance have made way to fairer and more transparent ways to exchange value, save, invest, finance and to insure against risk.

Canada, Sweden, Netherlands, United Kingdom and Australia are leading in cashless transactions, with up to 80 percent of consumer spending being cashless, whereas in Egypt, Nigeria, Indonesia, Russia and India less than 40 percent of consumer spending transactions are cashless⁴. However, ongoing and projected improvements in digital and payment systems infrastructures will pave the way for consumer acceptance and subsequent growth of cashless transactions.

Collaboration between finance and technology sectors is essential for reinventing financial markets in general, but the businesses that offer attractive financial products and deliver outstanding customer experience – simplicity, speed and convenience – will be the winners.

Alternative economic models

Often the first step in technology adoption is to create a digital version of a physical object. Instead of digitising existing national currency, why not create a completely new model?

Outside of traditional financial systems, we already have peer-to-peer lending (LendingClub, Prosper), crowdfunding (Kickstarter, IndieGoGo) and of course cryptocurrencies (Bitcoin, Ethereum).



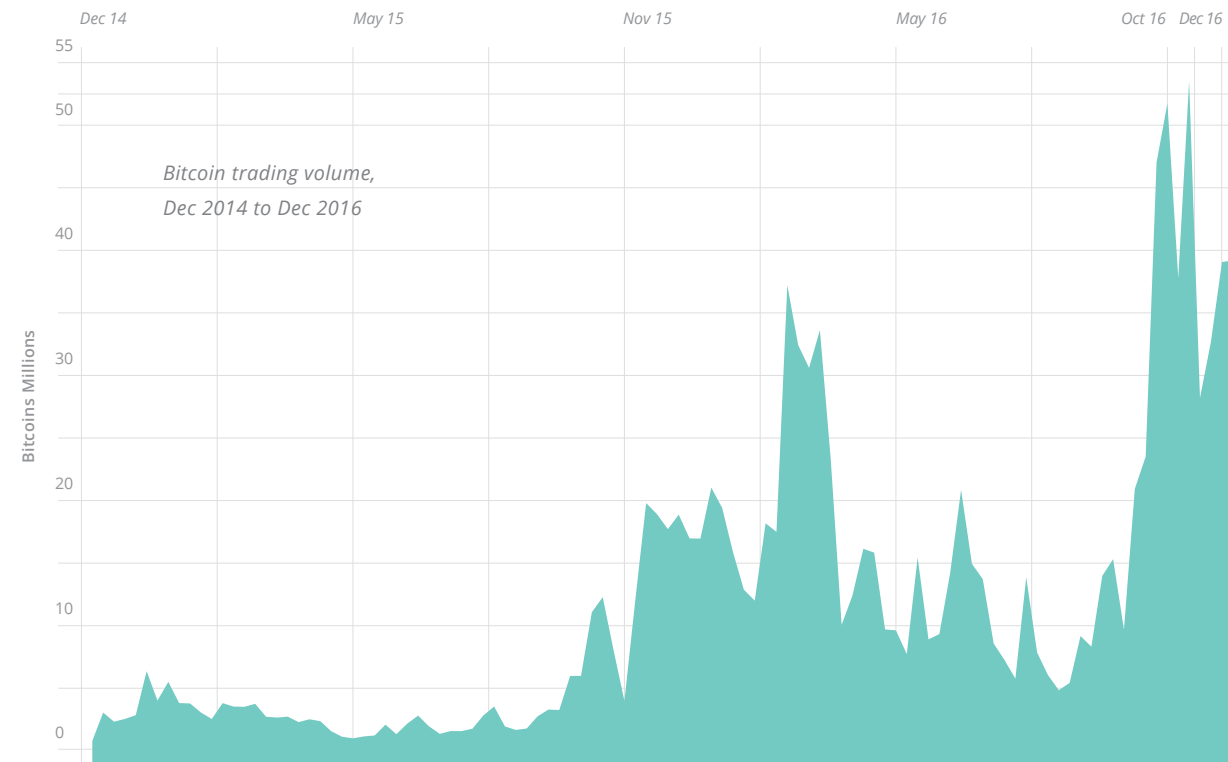
Cryptocurrencies

The novelty in cryptocurrencies is not that they are digital currency but that they are a decentralized and a relatively anonymous payment system. Cryptocurrencies use distributed ledgers for peer-to-peer exchanges of electronic value without the need for intermediaries⁵, such as national central banks. The emergence of cryptocurrencies coincides with the elimination of cash in many countries.

Estonia, Denmark, Sweden and United States, among many other countries, are at the forefront of taking cryptocurrencies in use.

The Danish government has declared that they do not consider Bitcoin to be a currency and therefore will not seek to regulate its use, whereas the Swedish government has declared cryptocurrencies as a means of payment and therefore they will come under regulation⁵.

(Data: data.bitcoinity.org)



Energy as currency

In Ghana, West Africa, the energy supply infrastructure is not stable and therefore the users suffer from regular power cuts, sometimes continuously for 2-3 days. This is a problem for a country with a mobile phone uptake at 128 percent of the population, where mobile banking and other telephony services are popular.

Power Bank Phone is unexceptional apart from its 10,000mAh battery and a USB port for charging other devices. The owners of this phone can charge other people's phones and devices in exchange for products and services – turning energy into a currency⁶.

Storage has long been one of the major challenges especially for renewable energy, and Power Bank Phone is a portable solution for that in Ghana.

CHARGING STATION
IN GHANA

Reputation

Reputation of an individual is how we measure someone's value outside economics. Credit reputation score by e.g. mortgage lenders and reputational scoring in Sharing Economies tell about how reliable an individual is expected to be. An aggregated reputational score could consist of your education, credit reference, social media, employment history, transactional records, connections and memberships⁷. This could be turned into a numeric Reputation Currency, where each individual has own share price and shares. A person could invest in other people's futures, such as purchase reputational currency of an undergraduate student hence funding their tuition, and then gain from their increasing reputation once they have earned their degree. Or investing in a homeless person's reputation

currency and then help them improve their life by e.g. getting education, and helping them find a job, and ultimately reap the benefits of their improved reputational score. It would be extremely lucrative to help people who have fallen on hard times.

However, Reputation Currency depends on each individual's willingness to share more or less everything there is to know about them. Would you give up your privacy for this economic model?

Interview with
Chris
Sharpe

Insurance
entrepreneur

Insurance is considered a financial product, but what's the purpose of it?

Insurance is an elegant solution to some of societies' difficult financial problems, it spreads risks from individuals to the larger community and provides an important source of long-term finance for both the public and private sectors. The origins of modern insurance came after the great fire of London with small communities clubbing together to pay for fire engines and protection.

And that is the same today: insurance makes it possible for people to own expensive things, borrow money against buying expensive things and for business to borrow and operate. It is sort of the essence of the sharing economy, people clubbing together to help each other out. There is something very beautiful about pulling together with your community to look after each other.

How do you think technology has impacted the insurance sector?

I suppose the essence of insurance hasn't changed much; it is still collecting premiums from the many to pay the claims of the few, but recent advances in technology have made a real difference to the market. Motor insurance, for example, uses telemetry, so that if you are a good driver you can show off about your driving and get a lower premium on your policy. Same sort of thing with health, where we can connect to a certain wearable technology and gym memberships to monitor your health, and if you are healthier you are a better risk for the health insurance. A similar thing happens with connected homes, where there are smart technologies for detecting fire and other security that make homes safer.

Some of this has a very positive effect on motivating positive behaviour, for example for driving: if you drive better you are lower risk so you will attract a lower

premium. But there is a flip side to this as well: if we segment the market and we select the best drivers, the best homes, and the fittest and healthiest people, what will everyone else do? Everyone else will have to pay more. So you need be careful with what you wish for, and insurance companies work when there are large numbers of people, because large numbers of people behave predictably. If you take out the best 5 or 10 percent, the other 90 percent are going to attract higher premiums, and if you keep segmenting you are going to be left with people who are uninsurable. That is when insurance breaks down and makes it unaffordable, and that is why I am slightly worried about insurance becoming a middle class product for good risk only.

How is risk currently assessed, and do you think it could be done differently? For example, if each person's risk could be assessed by a Reputational Score like in some sharing economies?

Your credit score is already used in motor insurance although it has nothing explicitly to do with how you drive or what car you drive. However, it is the most important predictor and most correlated to whether you are going to have an insurance loss, so your credit score is incredibly important. If you look into the data that we offer to Facebook and Google it is perceivable that in the near future our reputation and behaviour on social media will start impacting our risk rankings.

Previously insurance companies had the most data about people, but that is not the case anymore. You can see Apple, Google, Facebook, Amazon and others thinking and looking at the insurance industry because they know more about us that we know about ourselves.

Previously insurance companies had the most data about people, but that is not the case anymore. You can see Apple, Google, Facebook, Amazon and others thinking and looking at the insurance industry because they know more about us that we know about ourselves. Insurance business is a very different service model, but I can certainly see them being involved in distribution in the future and them being very good at it.

Private, *highly sensitive*.

Do not read.
Do not share.

Internet users are increasingly hesitant about handing out private information. We design products and services that encourage sharing, but respect privacy.

PRIVACY

On Jan 10, at 5:22 PM, [redacted]

[redacted] wrote:

Dear [redacted],

[redacted]

[redacted]

[redacted]

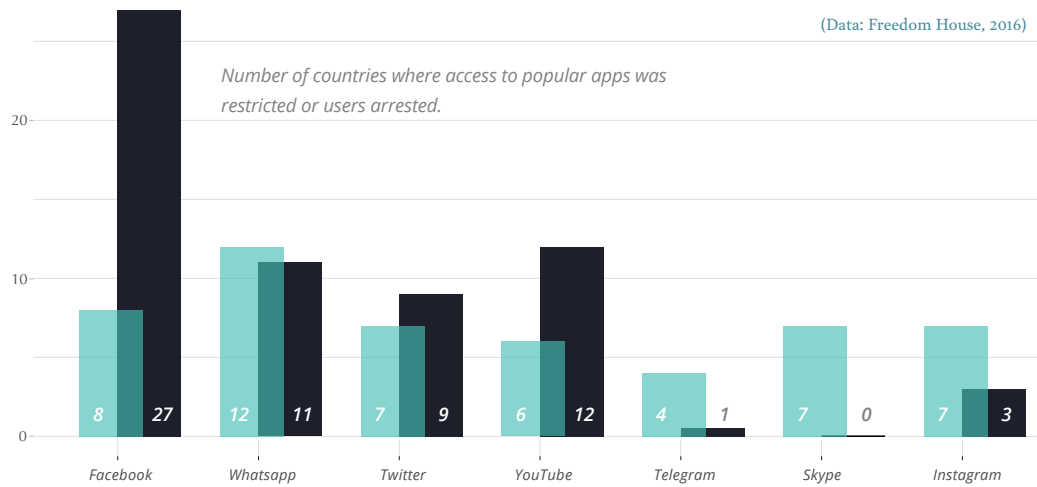
[redacted]

[redacted]

Let me know your thoughts,

[redacted]

(Data: Freedom House, 2016)



■ Restricted access
 ■ Users arrested

“Arguing that you don’t care about the right to privacy because you have nothing to hide is no different than saying you don’t care about free speech because you have nothing to say.”

Edward Snowden

How comfortable are you about your telephone operator or favourite app provider knowing where you are and who you are in contact with, and what information you search and read online?

Would you decide against going to a social or environmental demonstration knowing you could be forever linked to a group that the current or future government may consider a sabotage movement¹?

While we adore wearable devices and apps that can help us make better decisions in our everyday lives, AI smart home devices that respond to our every voice command and live information about how busy a shop or bar is, we feel that many consumers are not fully aware of what data is collected and how it may be used. Data about your behaviour and interactions can reveal your political and religious beliefs, your tastes and desires, what you care about, and things that even you aren’t aware of. This isn’t necessarily a problem, unless it is misused – now or in future – to limit your freedom of expression and freedom of association.

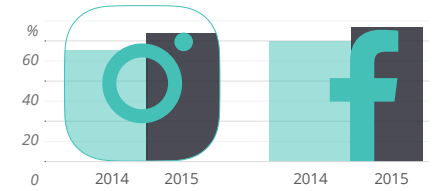
According to research by Ofcom², there is a trend among social media users to make their accounts more private, which indicates an increasing level of awareness of privacy issues on social media sites. Two-thirds of Facebook and Instagram users say they have changed their account settings to make them more private. However, there has been no change since 2014 in the extent of internet users’ willingness to enter personal details online, apart from providing their home address. Two out of three adults say they are happy to provide various types of personal information online, or would do so despite having security concerns about it. Internet users are least relaxed about entering their credit or debit card payment details online. One in four internet users give inaccurate or false details online to protect their personal identity, and the majority give as little personal information as possible.

1/4 of internet users have given inaccurate or false details on some websites to protect their personal identity online. More than 8/10 say they tend to give the minimum amount of personal information required online.

According to Ofcom, 16-24 year olds are more likely to share each type of personal information (real name, phone number, credit/debit card details, email address) online, except home address details, which they are equally likely as all internet users to share.

PRIVACY

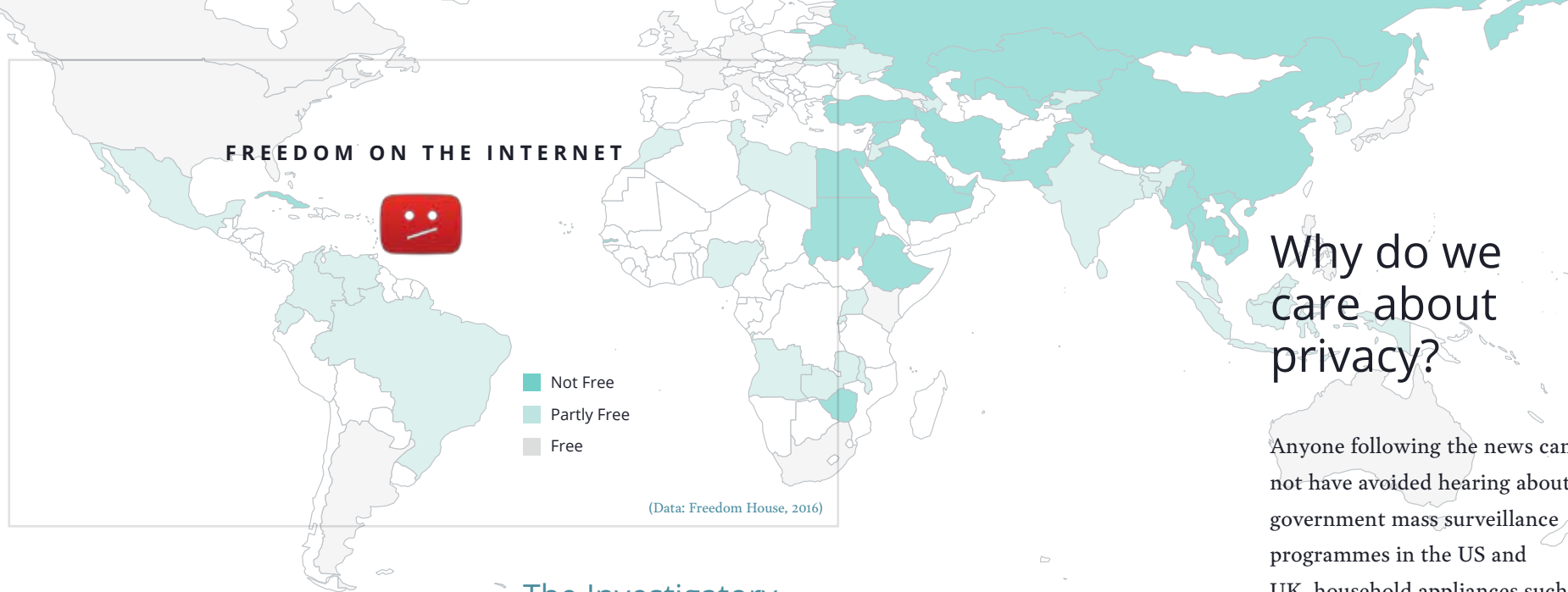
Percentage of people making their social media profiles more private:



(Data: Ofcom, 2016)

In 2015, compared to all adult internet users, 16-24 year olds are less likely to have concerns about personal online privacy than people in other age groups.

There are other demographic differences in how people share private information, for example men are more likely than women to share each type of information among friends of friends, while women are more likely to share information only with friends. The context and conditions of the transactions matter for most people making decisions about sharing their information in return for a product.



Risk-benefit calculations include e.g. the circumstances of their lives, whether they consider the company or organization offering the service to be trustworthy, what happens to their data after they are collected, especially if the data are made available to third parties, and how long the data will be retained³.

For instance, 54 percent of Americans consider it an acceptable trade-off to have surveillance cameras in the office in order to improve workplace security and help reduce thefts. But a scenario involving the use of a smart thermostat in people's homes that might save energy costs in return for insight about people's comings and goings was deemed acceptable by only 27 percent of adults. It was seen as not acceptable by 55 percent.

The Investigatory Powers Act

A new bill giving the UK intelligence agencies and police the most generous surveillance powers in the western world passed into law in UK on 17 November 2016⁴. The Investigatory Powers Act legalises a wide range of surveillance tools for the security services, unmatched by any other country in western Europe or the US. The Act does not provide strong protection for journalists' sources, which may discourage whistleblowing. Anyone opposing government activities, such as environmental or human rights policies or international trade deals, may find themselves under scrutiny. The Act legalises hacking by the security agencies into computers and mobile phones and allows them access to personal data, even if the person being surveyed is not suspected of any wrongdoing.

Why do we care about privacy?

Anyone following the news can not have avoided hearing about government mass surveillance programmes in the US and UK, household appliances such as smart TVs listening in on conversations, or about identity thefts by criminals aiming to wreak havoc with credit cards.

There has been a rise in privacy consciousness since 2013, which appears to be leading to decreasing willingness to share almost all types of personal data online. However, 16-24 year olds are not particularly concerned about personal online privacy⁵.

Location, facial and voice recognition metadata is captured on a vast scale with wearable devices such as the Snapchat

PRIVACY

Spectacles, and it is not only the wearer that is affected, but everyone in their vicinity. Instant sharing, fun design and low price make Snapchat Spectacles particularly attractive to younger consumers.

Nobody can assume that their online activities are private or secure.

In 2016, social media platforms, communication apps, and their users around the world faced greater threats than ever before in a backlash against growing citizen engagement, particularly during politically sensitive times.

Of the 65 countries assessed by Freedom House⁵, governments in 24 obstructed access to social media and communication tools, up from 15 the previous year. Governments in 15 countries temporarily shut down access to the entire internet or mobile phone networks, sometimes just to stop users from disseminating information through social media.

Designing for privacy

In general, Internet users are increasingly hesitant about handing out private information in exchange for free services.

If privacy is not expected as default anymore, is it something to be purchased?

Many technology experts predict that in the near future a minority of people will have the resources to protect themselves from the surveillance of their data³. Privacy may become a luxury good.

Impossible Labs use Human Centered Design to understand the user needs and values. We have designed products with an understanding that some users wish to protect their data. For example, we designed a 'privacy impact analysis' feature for Fairphone 2 showing users a ranking of low, medium, or high, based on what data their apps have access to.

Impossible Labs considers privacy and data of the user throughout the lifecycles of the products we design, starting from the initial design concept to launched product, its use and eventual disposal.

Impossible Labs' privacy design principles:

1. We are privacy proactive, not reactive. User privacy – from legal requirements to feelings of invasiveness – is considered throughout the design process.
2. We encourage sharing, but respect user privacy. Many products we work on are based on the knowledge that the users want to share information with their social networks, and are able to do it to the extent they are comfortable with.
3. We like transparent products, from transparent supply chains and honesty with the users to open source code.

Interview with
Martha Lane-Fox

Businesswoman, philanthropist
and public servant

Do you think people are interested in privacy and counter terrorism measures?

There may be people who think that the public are fairly disinterested in this issue. I disagree wholeheartedly. We need a more detailed, complex and timely debate around the enormously complicated issue of legislating for counter terrorism activities, and what it does to everyone's privacy. The UK government was slow to react compared to the quick review by America of the oversight and security services post-Snowden. A YouGov survey found that only 6 percent of people believe that the UK government have a

coherent data strategy, or that it would affect them directly. Another poll said that just 2 percent of people trust the government when it comes to their data. That is immensely important reason for putting more effort into building trust and engagement among exactly the groups that this legislation is trying to reach.

Why do you think trust towards the government in this matter is so important?

People are now moving towards using the dark web – a place where it is very difficult to collect any data – and towards more and more encryption. At one end of the spectrum is a start-up company called Wickr, which makes it possible for communications to remain completely secure. Imagine sending a message that is never stored on any server anywhere. Not only does it disappear remotely in your hand but also it never stays on the network. The founder of Wickr has had enormous success in building her app, quite understandably for many people who believe that they should have a private mechanism for communication, and that the Snowden revelations have shown that systems are not safe or secure. Then we also have Facebook, which has a sub-site on the dark web so that its customers can feel safe.

If we do not listen to what the world is doing and move and engage with it, allowing people to feel that their concerns around security are being addressed, there is a danger that we will take a retrograde step with counter terrorism policies and legislation.

How do you feel about privacy on the web i.e. the relationship between the government's claims of the need for surveillance for security vs the need of citizens to curtail government power?

Privacy and security are incredibly important and in fact governments can be quite two-faced on the issue. On one hand, we have many agencies in government who are quite rightly concerned about the security and safety of people's personal data and protection from identity theft, while at the same time other agencies who want to spy on everyone and tend to make a lot of noise about terrorists and paedophiles (without any evidence that mass surveillance is in any way helpful in those areas) to distract us from the fact that they are undermining safety online.

If privacy is not expected as default anymore, is it something to be purchased? Is it a privilege for the rich?

Actually, one of the most important and powerful tools for security against surveillance

ONE OF THE MOST
IMPORTANT AND POWERFUL
TOOLS FOR SECURITY
AGAINST SURVEILLANCE
IS ENCRYPTION...


is encryption, which consumers are increasingly demanding everywhere. Encryption works because it is math, and math works – and math doesn't cost anything. The vast majority of chat apps are quite rightly moving to end-to-end encryption and it doesn't cost a thing. I believe this trend will continue and that consumers need to demand more encryption everywhere, such as for email.

Interview with
Jimmy Wales

Internet
entrepreneur
and co-founder
of Wikipedia



OSCILLATING



Phones became smart phones. Toolboxes with shops attached. Very soon it will just be a lens. A connected lens. Right now we are constrained by the architecture of the finger and the eye. Very soon only the eye and the voice will matter. The mobile is a lens. A lens through which we see the world. We will oscillate between opacity (full VR immersion) and semi-opacity (augmented reality). The mobile will help us oscillate.

Computer says
I'm a dog
and proceeds
to order dog
biscuits



We want to design products for every type of user, and believe that to achieve that, design teams need to be diverse.

Technology has a diversity problem.

It becomes obvious when a photo of a black man gets wrongly recognised by an algorithm as a primate animal rather than a man¹, when an app encourages users to tag streets of ethnically diverse urban areas as unsafe², or when women get injured in car crashes more often than men because cars are tested with male crash test dummies³.

Products become biased when they are not designed for a diverse group of people, which in some cases makes an app and its creators look racist and in the worst case a biased design has lethal consequences for a large group of people whose dimensions have not been considered.

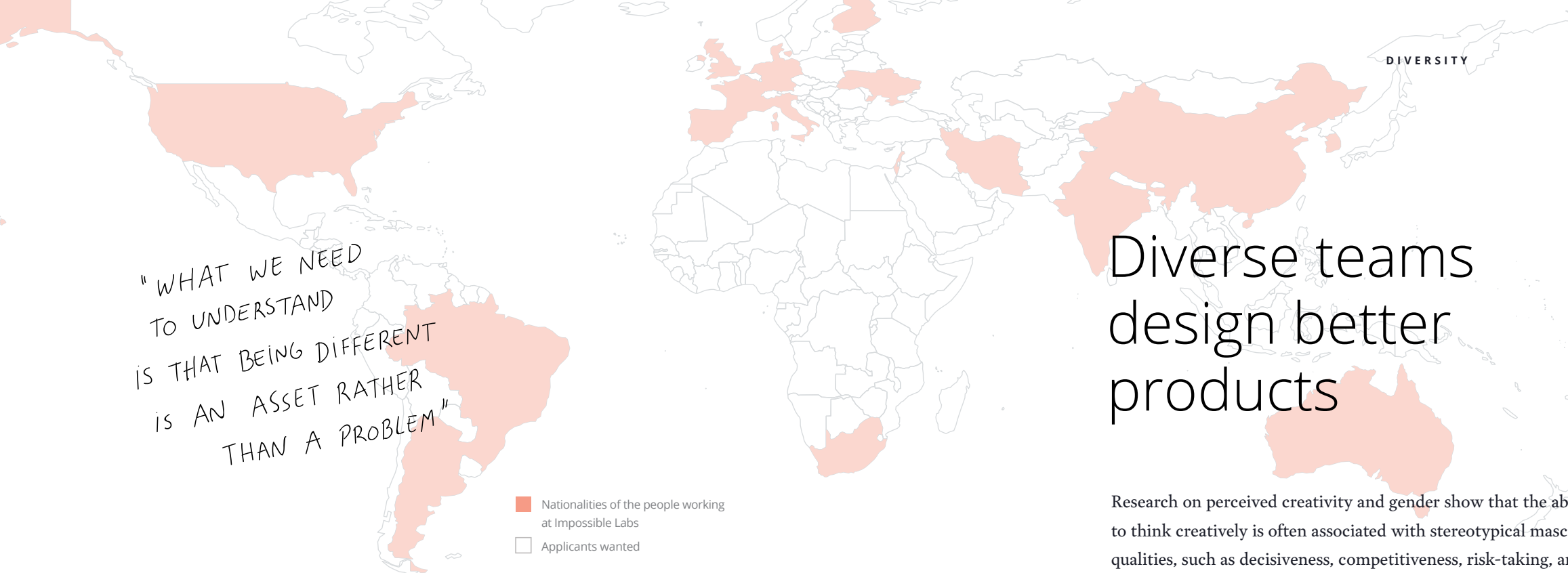
Diversity, slight, extreme or anywhere in-between, is not a challenge to be addressed. It is not a problem. The inability to appreciate it as an ongoing work of natural beauty and wonder is the problem.

We are aware of the differences but instinctively explore and embrace them as opposed to those who worry about them or pretend the differences don't exist.

Despots throughout history have tried, dismally, to control or eradicate diversity.

It never ends well for them.

Go figure.



DIVERSITY

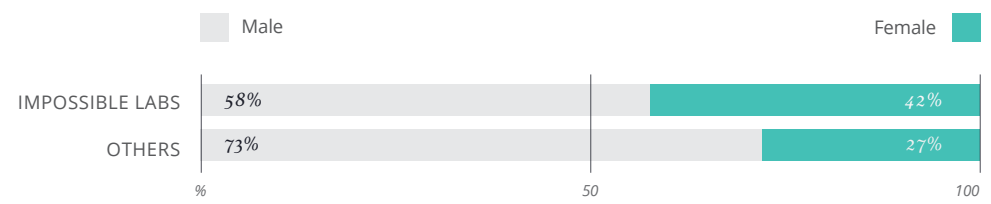
"WHAT WE NEED TO UNDERSTAND IS THAT BEING DIFFERENT IS AN ASSET RATHER THAN A PROBLEM"

Diverse teams design better products

At Impossible Labs we have people of 21 nationalities, from all the continents apart from Antarctica. Most of us live and work in another country than where we grew up in, and many of us studied in yet another country. For example Kwame, our CEO, was born in Angola, spent childhood years in Brazil and Germany, studied in Portugal and the US, and now lives and works in the UK. His passport says he is Portuguese, but his cultural heritage is much more than that. He is multi-local.

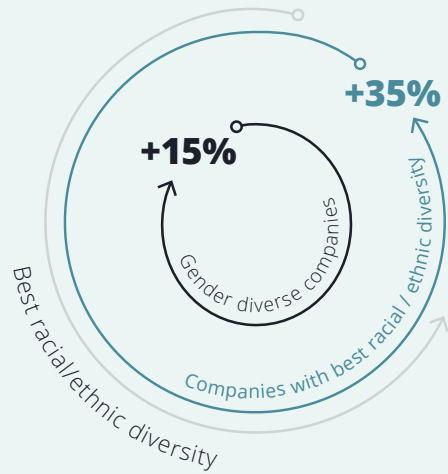
We believe that by having diverse design teams – a variety of nationalities, genders, social and cultural backgrounds, sexualities – Impossible Labs is ensuring that products we work on are assessed and designed from a wide range of perspectives. Making sure that the company culture is inclusive is the starting point for creating diverse design teams, such as having women in senior positions.

Research on perceived creativity and gender show that the ability to think creatively is often associated with stereotypical masculine qualities, such as decisiveness, competitiveness, risk-taking, and ambition, whereas qualities associated with women, such as cooperativeness and supportiveness, are not associated with radical creative thinking⁴. These stereotypical perceptions create systematic bias in the way that men and women's creativity is evaluated, and are leading to a situation where senior design positions are often held by men.



Gender split of Designers and Developers at Impossible Labs vs. other similar companies

(Data: Impossible Labs staff data & Invisionapp, 2016)



Gender diverse companies are 15 percent more likely to financially perform better than their industry average.

Companies with **best racial/ethnic diversity** are 35 percent more likely to financially perform better than their industry average.

The opposite is also true: companies that are the worst on gender, racial and ethnic diversity are less likely to achieve above-average returns. Companies with diverse workforce are able to recruit top talent, and improve their customer orientation, employee satisfaction, and decision making, leading to a cycle of increasing financial returns⁵.

Being different is an asset

Diversity benefits companies, leading to greater creativity, better decisions, better products and ultimately better financial performance of the companies⁵.

This makes sense intuitively, but there is also evidence in support of diversity: research on 366 companies has discovered a connection between diversity and financial performance. Gender diverse companies are 15 percent more likely to financially perform better than their industry average, whereas companies with best racial/ethnic diversity are 35 percent more likely to financially perform better than their industry average. The opposite is also true: Companies that are the worst on gender, racial and ethnic diversity are less likely to achieve above-average returns. Companies with diverse workforce are able to recruit

top talent, and improve their customer orientation, employee satisfaction, and decision making, leading to a cycle of increasing financial returns⁵. Apple, for example, has been attacked on their lack of diversity on its board of directors⁶, and it is seen to be having an effect on its products. While the iPhone is not the only phone that comes in pink in a lazy attempt to appeal to female consumers, it took Apple until iOS9 and the Apple Watch before the users were able to track menstruation cycles. Half of the world's population are women and menstruation is part of women's health and wellbeing, so it is time for health monitoring applications to take that into consideration.



DIVERSITY



Interview with
Jee Park

Design Director at
Impossible Labs

You worked on Azimo [online money transfer service] and that is a product for very diverse users. How did you make sure it was working for everyone?

As a designer, it is an interesting challenge to design for such a wide user group: people from over 100 different countries and with different technical abilities. Everyone has their own needs and challenges and it's obviously not possible to design for every single person, but we made sure we included as many different target audiences as possible in our user testing. When we designed the Beta version, the launch was

planned in six countries, so we invited men and women who were between 20 and 60 years old and originally from those six countries. We later scaled up, but I think, generally, it's important to go small and low tech first, testing every first step, and then add more technical solutions little by little, so, overall, you make sure you include everyone.

Some people believe that women don't want to use wearable technology because they are designed by men. What's your view on that?

I don't agree with that because I don't think it's a matter of designers being female or male. I think what matters is how much consideration and effort you put into designing with and for diverse groups of users. There was a lot of gender bias in the past, because user testing was exclusively run with men. I think now, with the digital world, that's changed. We're reaching a point where the shapes created are

desirable for both genders.

Bias for me is not about who's designing, but who you considered when you were designing it. If you design something only considering male users just because they currently are the main audience, then you are, by default, creating a biased product. But if you are a good designer, you listen to different users and empathise with them to create inclusive products.

All of us have unconscious biases, how can designers address biases that they're not even aware of having?

Designing in mixed teams is a good way to approach unconscious biases. When you don't know what you don't know, having a diverse team, whether it's gender, age, ethnicity, or different cultural and social background – it's a great solution. You gain different perspectives, different voices and interesting points of views. But if you can't have that, just make sure you put yourself in someone else's shoes, with role plays or interviews and user testing with different people, and empathy.

What is more of a challenge for designers nowadays, is the Artificial Intelligence, machine learning reality. With machine algorithms, unconscious biases are perceived more acutely. For example, some companies value the Klout Score

DESIGNING IN
MIXED TEAMS IS
A GOOD WAY
TO APPROACH
UNCONSCIOUS
BIASES.

of a person when screening for new employees. The Klout Score is a machine generated online influence score that depends on your social media activity. A more introvert person, or someone with very little online activity will be automatically excluded from the job.

The problem is that machine bias comes from the algorithms we designed. Machines can't really understand the context, and so us as designers or engineers need to take all different scenarios into consideration to ensure that the algorithm doesn't generate biases.



How your
grandmother
saved the world
whilst you
stayed home
watching Netflix

STILL FROM
LIGHT IN
DARK PLACES



UNHCR CAMP

Impossible people

Just like a person drowning and trying to grab onto anything to stay afloat, volunteers are using existing platforms, Facebook, WhatsApp, PayPal... anything available to organise themselves and channel help where it is most needed.

When we first started looking into the refugee crisis we had our innovation hats on, but the main solution we came to witness was not a technology one.

Instead it was, and is, a deeply human one: ordinary people trying to help. So in the following paragraphs we are not going to end this book with more text on innovation and technology. We are simply going to celebrate impossible people.



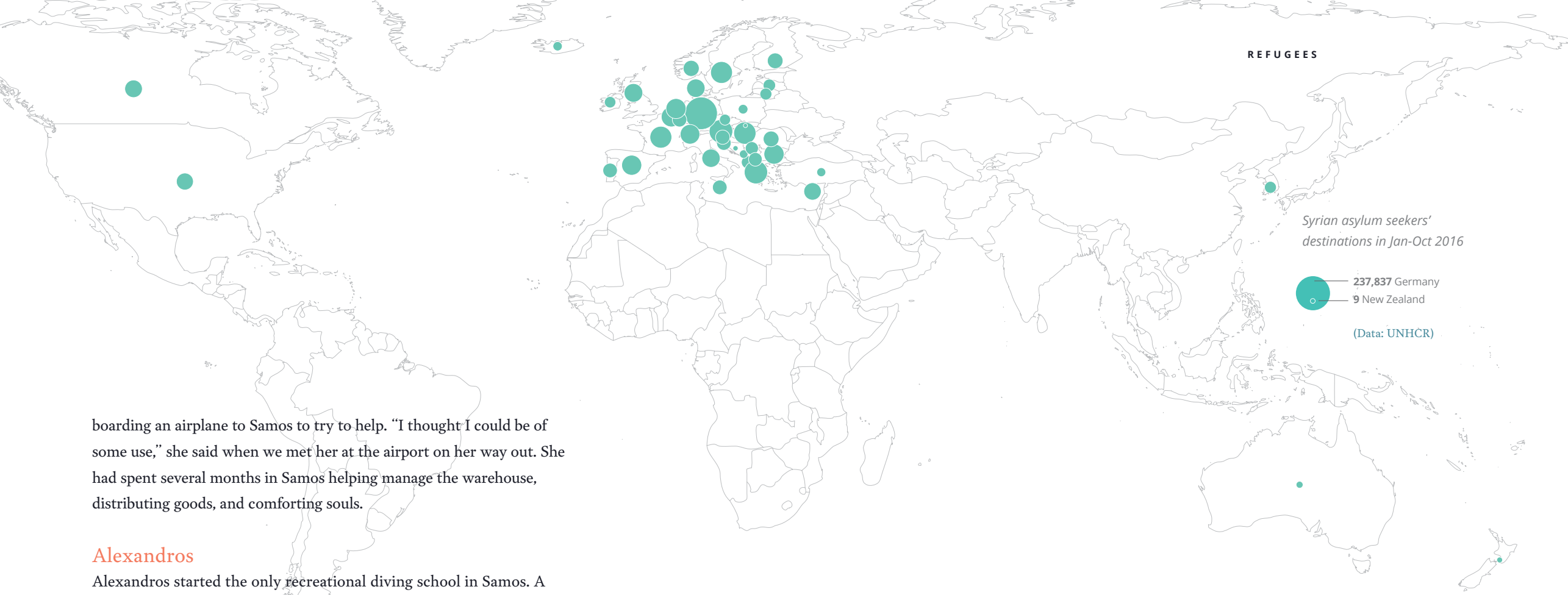
We visited the island of Samos and made a short film about the grassroots response to the crisis, “Lights in Dark Places”. Samos rises above the Mediterranean only 1.2 kms from Turkey and as one of the geographic protagonists in the refugee crisis it has become a magnet for impossible people: local and from around the world.

Katina

In 1939 Katina’s family was forced to emigrate from Samos to Syria, where she was born. A few years later they returned. She spent some time in Athens and the mainland, got married and in 1983 bought a piece of land on the coastline in Samos. There she grew gently older by the sea, surrounded by beautiful flower gardens, and where orange trees line the entrance. One night she heard noises outside, and opened her door to 42 people. They were refugees from Iraq and their boat had crashed into the beach below her house. She washed their clothes, offered them food and a place to rest. Since then Katina has continued to do this for hundreds of refugees and migrants as they reach the shore in the bay. She has set up a little shed, covered in lifejackets like wallpaper, to get people’s attention from the sea. So far 2015 has been the busiest year for her, when just in one night 13 people died and only 11 survived in a sinking boat. That night a man passed her a baby who was blue with cold. She took the baby to her shower and ran warm water over him. She watched him come back to life and it was, she says, a miracle.

Sally

At the airport we met Sally, an artist in her 70s who lives in San Francisco. When the first people started arriving on the islands, fleeing conflict, she couldn’t bear watching the news and so responded by



boarding an airplane to Samos to try to help. “I thought I could be of some use,” she said when we met her at the airport on her way out. She had spent several months in Samos helping manage the warehouse, distributing goods, and comforting souls.

Alexandros

Alexandros started the only recreational diving school in Samos. A hobby he took on in between being hotelier in the summer and a construction worker in the winter. In the summer of 2015 the first wave of people crossing from Turkey, in boats unfit for purpose, started arriving in Samos and neighbouring islands and Alexandros started receiving calls for help from the coast guard. Since then Samos Divers has morphed into a rescue and recovery operation.

To this day they have rescued over 800 people from drowning and retrieved dozens of bodies from the ocean. “We have to retrieve the body, with utmost dignity, and bring it to his or her family to achieve closure.” he says looking out at the beach on a particularly windy day. “We do this because a missing person can really destroy a family”.

You get the picture: one of impossible humanity.

“Lights in Dark Places” is available to watch at impossible.com/impact.



AERIAL VIEW
OF THE ZA'ATRI
REFUGEE CAMP

**CREATING
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