Technology

connected society

Design and Technology: two elements that cannot exist without each other. Design articulates the desires, dreams and aspirations of humans while technology expresses how people cope with changing and the manifest shift of possibilities. In the world of design and technology, it is always exciting to spot pivotal moments. For example, moments in time when for a certain reason the effects of a new technology reach a bigger audience, moments when things change overnight and – in this case - the magic becomes visible. This often happens when you least expect it, or in places where it isn't supposed to happen.

Photo: Unfold Design Studio

Margot Nijkamp-Diesfeldt | The Netherlands
Red Bluejay Foundation | Managing director
www.redbluejay.com

Humans and their technology

Photo: NASA image from Spitzer space telescope

The more you think about the relationship between humans and technology, the more interesting the exploration becomes. There is interdependence on many levels. Take technology away and life, as we know it, comes to a complete stop. The same holds true for human contact; despite our individualism, we cannot miss it or replace it – no matter how social the media. We often forget that technology is requested, researched, adopted, operated and paid for by people. Engaging with technology requires trust in people and companies/brands. Humans suffer greatly from fears directly related to the loss of control.

Technology generates a gap between the well-to-do and the less well-off. Being able to process an overload of information can literally save your life. Higher educated people with access to technology have the highest chance of being cured from cancer, because they inform themselves and take charge of their medical trajectory.

Because we, humans, research and create technology, it often leads to very clever copies of how we, humans, function, loaded with sensors and wireless communication. In some aspects, the copies are not nearly as good as the human originals. Technology lacks the subconscious and intuition that we humans are equipped with. The ‘gut feeling’ protocol has not been copied in our A/D converters so far – mostly because we don’t know how the original works. There is no 'I have a hunch' in M2M, even if the system is self-learning. And hopefully, technology will never be too spontaneous.

Technology has advantages over humans, too! Once technology gets the answer right, it can reproduce the result.

We humans are less robust in our performance. We are flawed in our mixed signal processing because of our changing emotions. Our reference frame is hardly a solid algorithm. Our memory is selective to say the least and our data storage is nothing short of a personal Hollywood movie, with 'me' in the leading role. One advantage is that technology does not have an 'off-day' because the kids were fighting over the iPad ;-)). We humans are so smart; we create copies of ourselves to improve our own performance!

Jo De Boeck | The Netherlands
Imec | Chief technology officer
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Thank you, Things

Design and technology are intimate. Every thing contributes, through a sense and a signal, to the total picture. The total picture may drift.
Due to a significant underlying cause, aspects of life may start to change gradually. Habits like diet and sleep, feelings like stress and anxiety, perceptions like safety and security... They develop and drift unnoticeably, through micro-events below the resolution of the daily eye.
Not a single signal from the smartest of things will timely trigger an alarm. Too little, too late. A crowd of signals though develops into a pattern. Insignificant data points stored by our surroundings, for our own good, without any intervention, anonymously and privately.
Insignificant alone, clever together. In our phone, the doorbell, the hallway, the pillow, the car key, the coffeemaker, our electronic diary, the keyboard... The pattern becomes clear, the preventive signal sounds, intervention is on its way.
Thank you, Things.

Photos: Medisana VitaDock

Herman Tuininga | The Netherlands
SallandElectronics bv | Managing director
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Mass customisation

Claytronics is an abstract future concept that deals with the creation of programmable matter. Claytronics are tiny balls of electronics, which wirelessly communicate with each other and can assume various shapes and colours. This brings me straight to the developments around 3D printing. The synthetic 3D printers have been around for a while, but now there are even 3D metal printers. Also in my own field of expertise – electronics – things are developing fast. What to think of printable conductive paths and even printable batteries? Imagine the infinite number of possibilities they will open up to designers, stylists, and consumers. It is not inconceivable that in the future, you can download the latest model of a design lamp from the other side of the world and put it together on your own 3D printer. Obviously, the product hangs in the 'cloud' and is controllable via your smart phone.

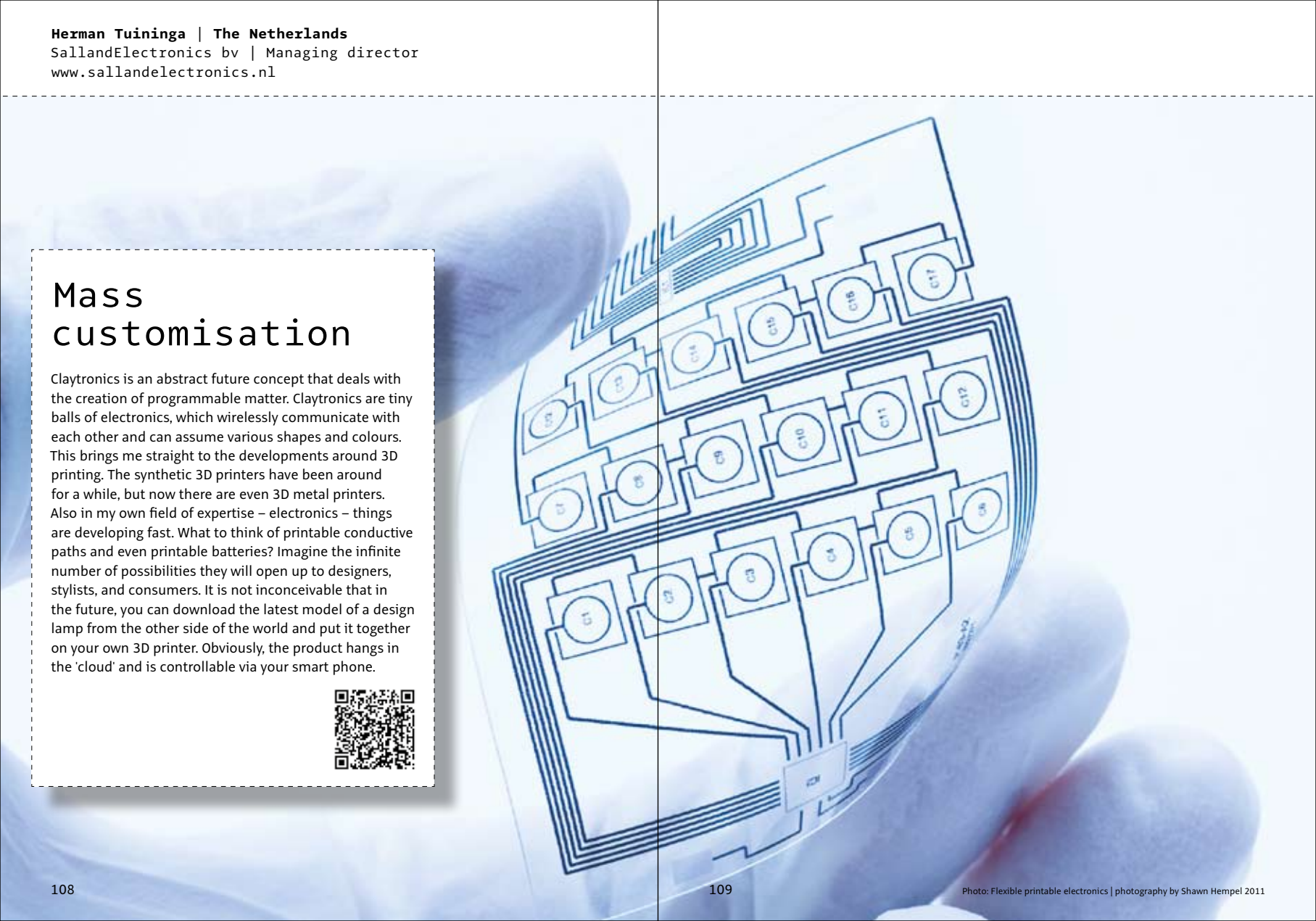

Photo: Flexible printable electronics | photography by Shawn Hempel 2011

Nur America | The Netherlands
Newness | Founder and Director
www.newness.nl

Technology and the connected society

The 21st century is about people, society, and social innovation. We do things open, networked, collaborative, distributed, collective, and bottom-up.
Technology creates the ability to communicate, share and innovate. We see empowered individuals who are new developers, informed individuals who manage their health and steer a vehicle in traffic. Evolutions in technologies and social attitudes change how we connect with each other. Technology and design help us unleash the passion, creativity and meaning in ourselves.
Internet technology contributes to democratisation of things. Information is now available to all on the web. Low-cost and cloud-based technologies foster innovation. With devices and smart homes connected to Internet, it becomes possible to locate, identify, monitor, and control things through technologies such as RFID, sensor networks, and energy harvesters. Location-based mobile advertising platforms enable companies to target users in real time.
Internet technology brings with itself also uncertainties such as security and privacy.

Photo: Technology changes the way we connect

Kees Eijkel | **The Netherlands**
Kennispark | Director
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Humanity and technology: together forever

Humankind has used technology throughout its history to survive, to support well-being, to communicate, to protect people from harm, to move goods, or people, to entertain, play, and learn. The role of technology has become ever more important, its use ever more pervasive throughout the ages. The necessity to cope with the great challenges that face humanity in the future again underlines our need to come up with better solutions based on better technologies. Our ability to increase our technological skills will define our future, both in coping with the challenges that we are confronted with and in creating a better world that is a great place for every person to live in. That is why I believe that investing in research and the development of technology is an investment in the future of mankind. Even in economically difficult times.

Photo: Vela cycle trainer by Lunar EU Studio

Paul 't Hoen | The Netherlands
Holst Centre | Chairman
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Technology intimacy: who's in charge?

Our relationship with technology is becoming emotional – we get depressed when our smart phone breaks down.
We are psychologically dependent. Technology is getting under our skin and into our brains, and is grabbing our souls. New-borns start using an iPad even before they master speech. Their brain is wired by using iPad apps. Later their brains will be directly connected to the games they play.
Networking technology is creating a higher-level organism with its own goals and drives. What these are, we can only guess; it is growing too complex. We seem not to be in the driver's seat. We are riding a roller coaster, and trying to define the curves and bends while we are kicked in all directions. Most of the track is in the dark; only now and then do we catch a glimpse of what comes next. Is design using technology, or is technology using design?

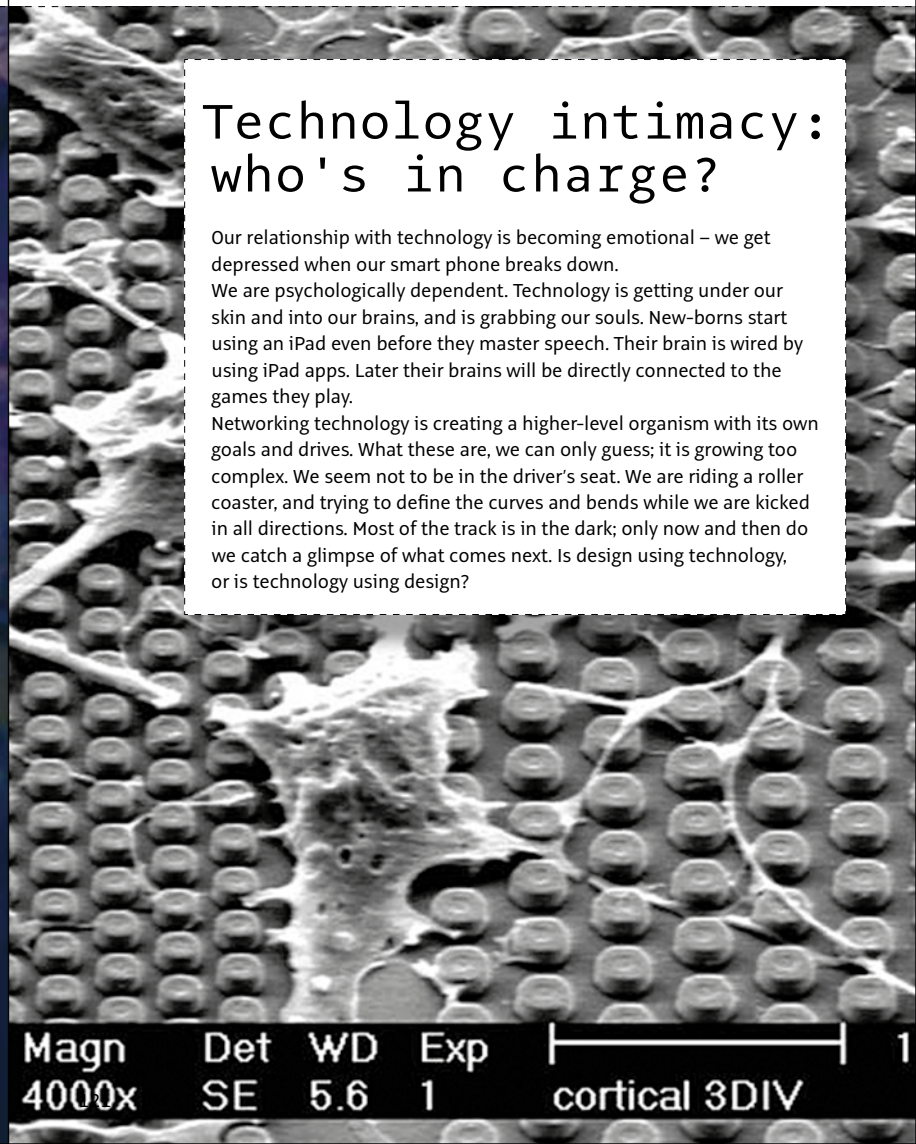

Photo left: Sleep monitor prototype © Holst Centre
Photo right: Neurons grown on a chip © Imec

Michael Rigby | The Netherlands
Keele University | Emeritus professor
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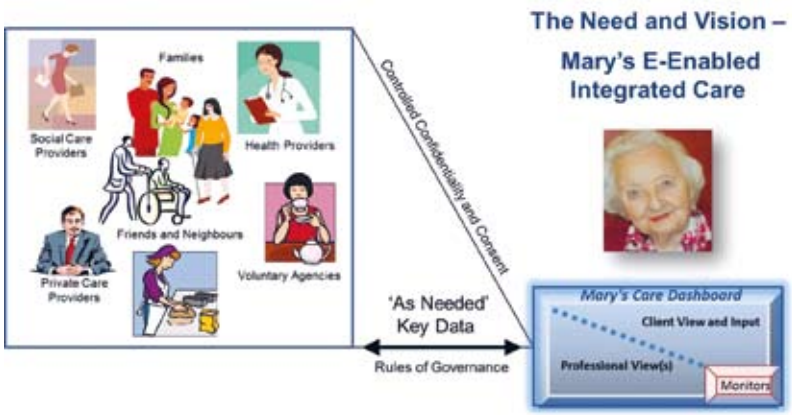

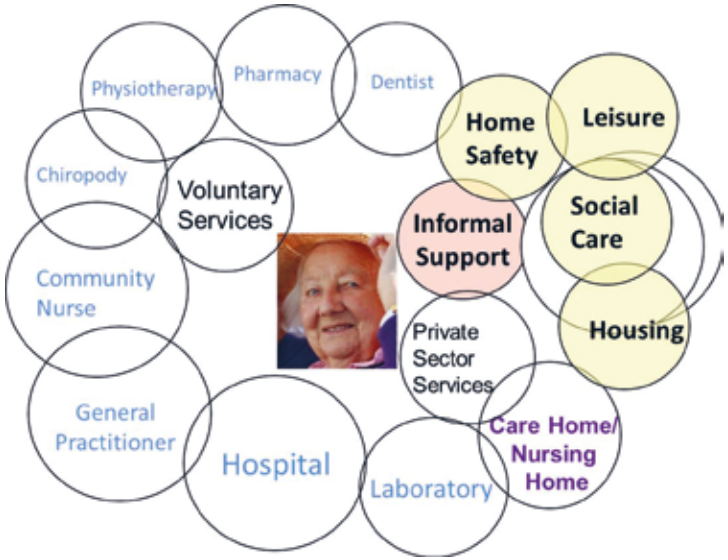

Designing for Mary's Care

Mary represents a growing section of European society – elderly people who are able to live at home, but because of increasing frailty, moderate chronic diseases, and lack of accessible family support, are at risk of rapidly deteriorating health. Modern society has created many services to help people like Mary.

But they are split into clusters, such as Health, Social Care, Housing, and others, each separately funded, managed, and regulated, and each comprised of individual experts. As a result, Mary is surrounded by uncoordinated Islands of Excellence, when what she needs is Coordinated Care. Information technology could help in many ways. But like many elderly, Mary is not comfortable with ICT - she does not understand it, and is frightened of the things she reads about. The challenge is to design a device acting as a care 'dashboard' that is also seen as a warm and friendly link to outside help.

Illustrations: The Design Challenge - Mary's missing 'Dashboard' and Mary's Islands of Excellence

Rick Wielens | The Netherlands
NineSigma Europe | CEO
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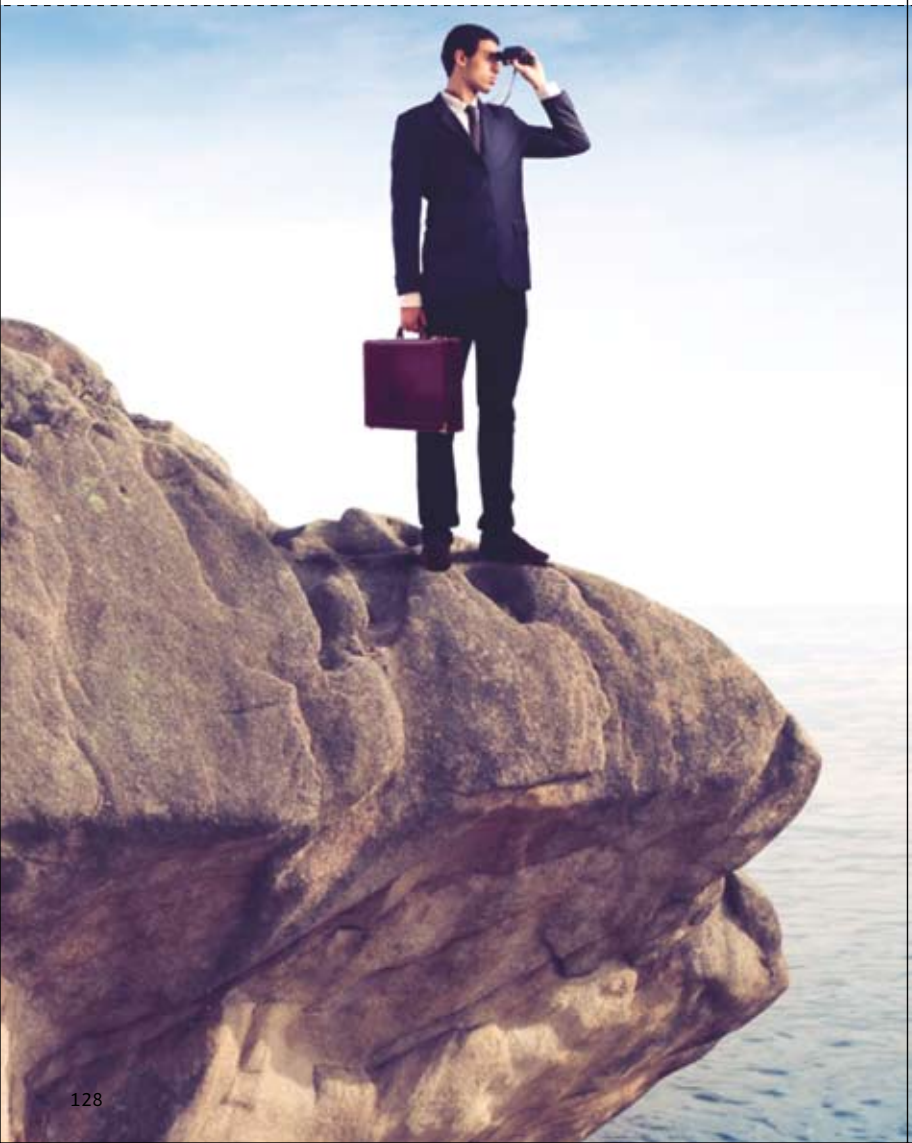

The future of technology is sharing: also in technology

There are four signals of change that allow us a glimpse into the future technology innovation: meshing of assets, half-life of technology information, the shift to smaller companies in innovation and the rise of China in innovation. I am only discussing the first but you can read the rest on BLOINC (blionc.ninesigma.com). Meshing of assets: Your smart phone is a good example of how many different technologies need to come together to create the 'awesome' functionality, from the nano-coated screen and the fire-retarding chemicals on the board to the back lighting of the screen. The future is bright for companies that excel at combining assets and the younger generation already lives in that new paradigm as they are used to sharing. It is not the ownership of but the access to technology that defines success, and young people start assuming that required assets are already there and can be shared...

Photo: Looking beyond the obvious, Copyright NineSigma Inc.

Alexander Mans | **The Netherlands**
Various companies | Entrepreneur
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Plotting your course

In the past five years, I have founded, managed or implemented the ideation behind several technology companies in the field of IT, automotive, healthcare and aviation. Whether the company succeeded or failed in monetising the product, it has become clear that starting a new business these days is less costly and that creating a large consumer base has become easier than ever thanks to the Internet and the growth of people's online presence and interaction.

One of my former businesses failed and went bankrupt because we were trying to sell directly to large numbers of end-users, creating massive overhead costs. Therefore, my advice on this matter would be not to try to do both when you sell to large numbers of customers unless you have the team, funds and stamina to expand your company over time. The best alternative would be to distribute or licence to others in your industry.

Photo: Tesco Homeplus Virtual, subway store South Korea