

lumiblade

insider

The OLED Lighting Magazine

Issue 01/2015

Innovation with playful ease

Lumiblade Innovators Club
member #001 presents
two innovations in one

Research for Smart Lighting

An unusual quartet of experts in
search of the light of the future

Tomorrow's window made today

Smart windows with integrated
OLEDs guarantee a good mood –
regardless of the weather

Focus:
Innovation





**creativity is
thinking up
new things.
innovation is
doing new things.**

Theodore Lewitt

Dear reader,

Welcome to the first edition of Lumiblade Insider, the magazine providing answers and raising questions about OLED light. OLEDs are changing the world of light. What impact could this new technology have on our lives and work? What possibilities does it offer us?

Each issue offers fascinating insights and surprising food for thought highlighted by the context of each title theme. In this issue we deal with innovation and the people that make it happen: How does innovation come about? What conditions does it need? Why do we need it at all?

The OLED is considered the light source of the future and innovation is therefore a prerequisite for its success. Since the establishment of the Lumiblade Innovators Club last year, we have witnessed many people and companies around the world who have approached OLEDs in

convincing and completely new ways. Sebastian Scherer – Lumiblade Innovators Club member number 001 – is one of them. Find out why he is in fact a double innovator and what it is about working with OLEDs that so fascinates him in this issue. In an interview, artist Thomas Emde reveals why he believes light will give rise to numerous patents and why he developed a complete OLED lighting series. A research group at the University of Art and Design in Basel (Switzerland) busied themselves scientifically with OLEDs and came to the conclusion that light could be more intuitive, communicative, and intelligent in the future and that the OLED is perfectly cut out for these new tasks – an exciting vision behind the urge to innovate.

But enough introduction. We wish you an enlightening read about OLEDs and innovation and many new insights and ideas.

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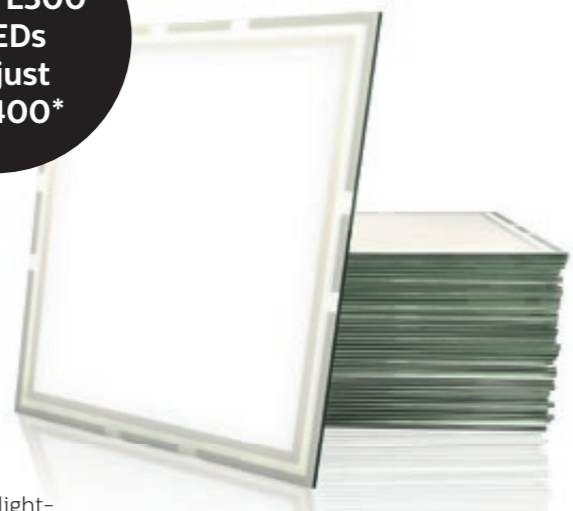
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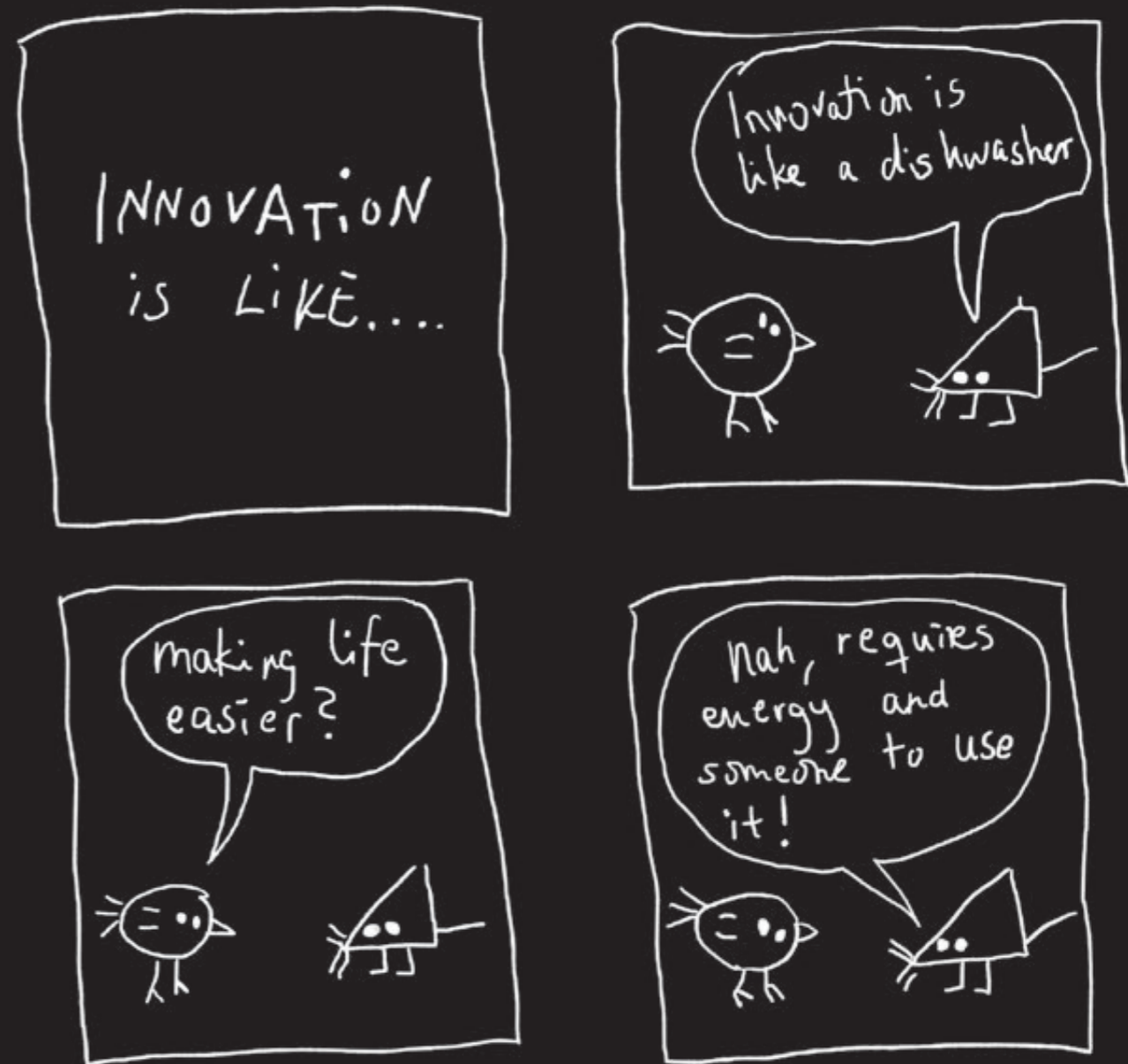
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for just
€ 2,400*



It has never been easier to enter the world of OLED lighting. Our new starter package gives you access to 40 of our most advanced ever OLED panels. The Brite FL300 comes not only with a slim design and homogenous light output but also features 300 lumens. This makes it the world's brightest commercially available OLED capable of being used in functional lighting applications. Start working on your future in lighting and order your package today.

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What drives innovation?



Why are some nations more innovative than others? If you had to answer this question you would probably list a number of factors such as the school and higher education systems. You might even mention access to technology and R&D facilities. In all cases you would be right. The national infrastructure in both the private and public sectors plays an important role in enhancing knowledge in the population. Another major factor for companies and countries seeking to increase their innovation potential is the quality of their human capital. Is this enough to achieve this goal?

The most innovative countries

The Global Innovation Index 2014 shows the leading nations for innovation in the world today.

“Sometimes when you innovate, you make mistakes. It is best to admit them quickly, and get on with improving your other innovations.”

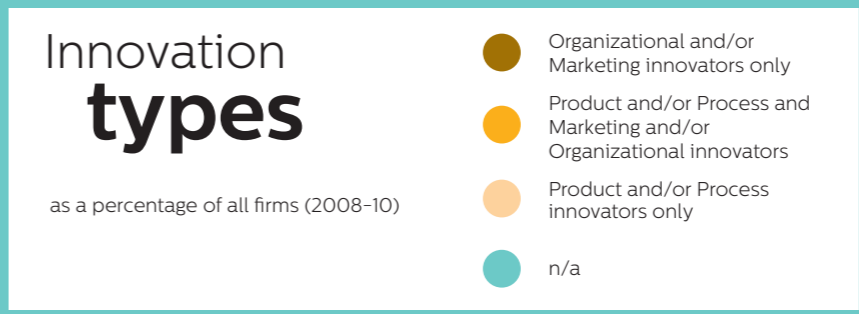
Steve Jobs

This elusive virtue may be easy to spot in talented individuals, but trying to determine the right conditions for an innovation ecosystem on a company let alone a national level is something that scholars across the world have been studying for many years. First, institutions, industry, academia, and government can all contribute by investing in R&D and mentoring. Funding, open academia, and businesses also have a role to play. A second strategy is attracting human capital from other parts of the world with incentives. The US has been particularly successful in doing this, resulting in its status as a global innovation trendsetter. The message here is clear: educate people well, provide them with enough resources and incentives to chase their dreams and innovation will follow.

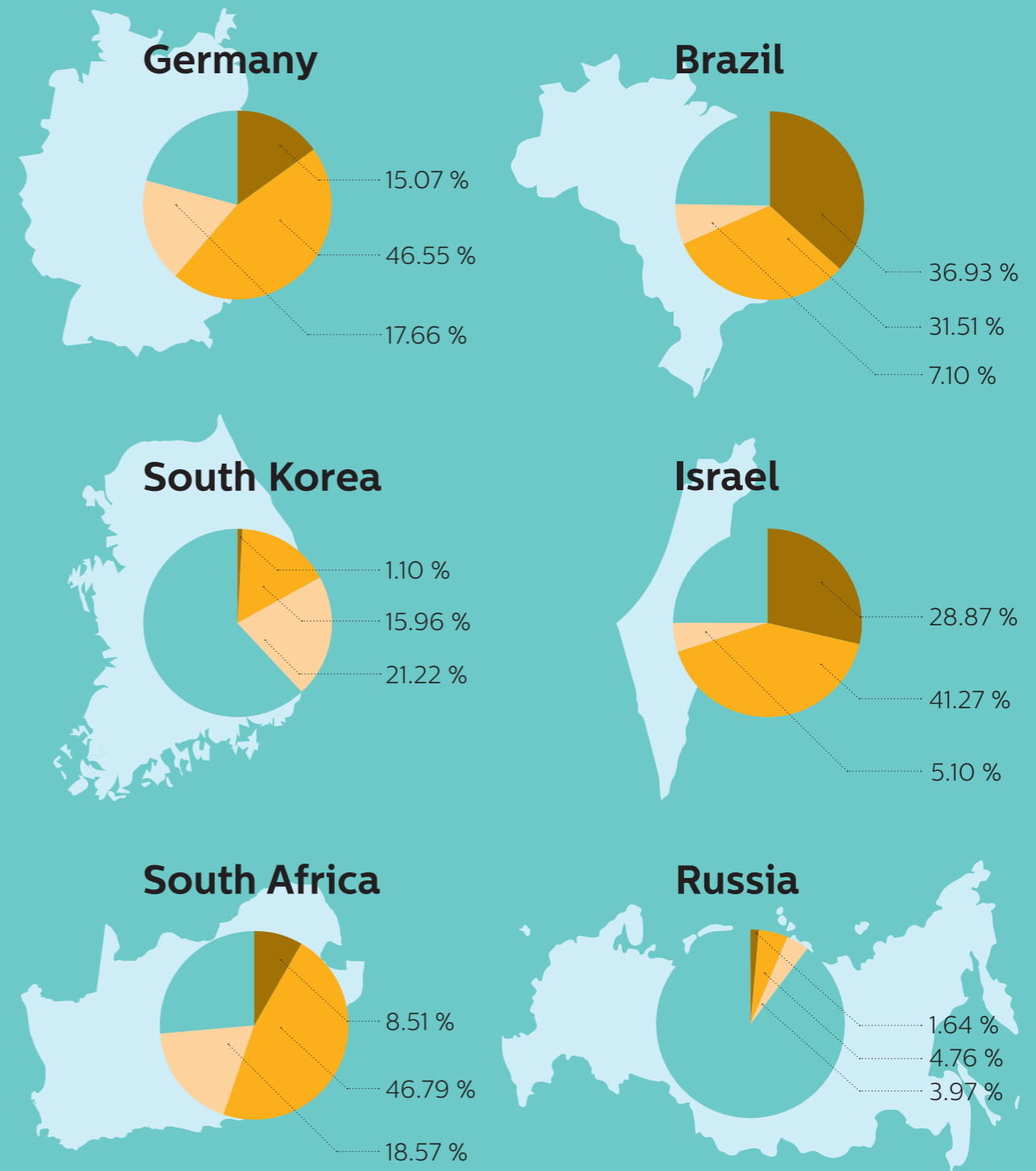
But there is another less obvious aspect that arguably contributes just as much to innovation success, and one that can be actively supported in the existing workforce: trial and error. A working paper published recently by the Radboud University Nijmegen in the Netherlands reveals that while formal, job-related training can compensate for a lack of schooling, the effect of what the authors refer to as ‘slack time’ can also positively influence innovation in employees. Companies such as Google and 3M allow employees to spend as much as

15% of their working time on their own projects and ideas and it is this factor that has been identified as contributing significantly to innovative output. Of course, giving people the freedom to experiment also involves accepting that not every individual creative venture will lead directly to success. This would imply that tolerating the prospect of failure in both company and national culture is the crucial factor in driving innovation.

Piecing together what we have discovered about the secret of innovation success: we can conclude that the nations with a strong knowledge infrastructure at the top of the league table are also those in the best position to absorb the failure that inevitably goes hand-in-hand with innovative endeavours. Alternatively put, we could maybe even speculate that Switzerland is the most innovative of all the listed nations because it leads the world in the art of tolerating failure.



Source: OECD, based on Eurostat (CIS-2010) and national data sources, June 2013.




The market is ready for organic light.

Interview with Thomas Emde, founder of the OMLED brand and CEO of emdedesign GmbH.

Mr. Emde, we already know you as a lighting designer and an inventor. For many years you have been a pioneer, designing luminous furniture and lighting-glass for facades and using these in various projects. Now you are bringing the world's first complete OLED light family to the market. What fascinates you about this light?

I have been working with LEDs for over 16 years. However, the quality of light and the sustainability of OLEDs have been inspiring me for years, so I have had a lot of time to think about possible applications. In 2008 I had the idea of forming a sphere out of the flat OLED and adding a screw base: the OLED bulb.

The OLED brings back what we have lost: pleasant, soft light for the people. Light that doesn't dazzle, lights that don't burn us and technology that can meet today's demands for energy efficiency and sustainability.



A floating light surface in the room: the delicate pendant luminaire from the OMLED series.



The OLED light family brings good, close up light quality back to people – with minimal use of materials.



As an internationally renowned light artist you illuminated architecture before you founded your own lighting brand OMLED and the company emdedesign. What made you change paths?

Over the last 15 years I have realized major international projects and made my contribution to the appearance of cities at night. I often wonder how much light and what kind of light people actually need. It's not about having more and more light to illuminate our planet at night and to turn night into day. It's rather about a measured interaction with light as a valuable and vital resource. And with OLED technology, following the ban of the conventional light bulb, I see the chance to give people good, energy-efficient and measured light once again, without having to rely on optics, diffusers and cooling elements.

In 2013 in Aachen I was able to see the lighting results of the new Brite FL300 OLED panels for myself and I was inspired. My team and I then started to develop an entire light family with the panels and we founded the brand OMLED.

“I often wonder how much light and what kind of light people actually need.”

What is special about your OLED light family?

We reduced all components to an absolute minimum when designing our light family – the most important thing is the light itself. We support the characteristics of the OLEDs by using only satinized and printed glass. This makes the light appear even softer. The OLED as a technical component recedes into the background; what is visible is a gentle and softly glowing glass surface of light.

The sensor-touch function to dim the lights and switch them on and off, and the specifically developed driver electronics are integrated into the glass cover of the lamp. The OLED panels can be effortlessly replaced. This is a huge advantage over most LED lights. Thanks to the quality of light, the minimalist, flat shape and the delicate suspension and fixation system, we created an entirely new and visionary type of light.

Our suspension lamp s5 has been honored with the worldwide most prestigious GOOD DESIGN Award 2014.

Do you see OLEDs and LEDs as competitors?

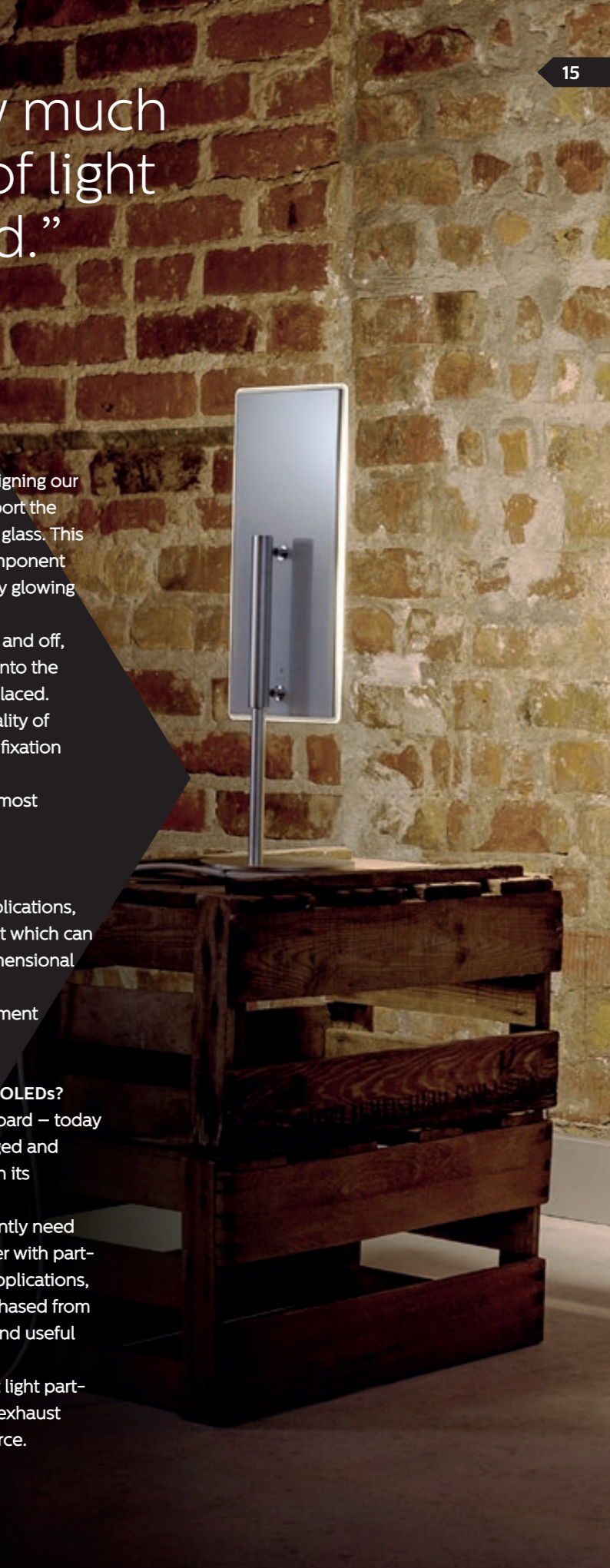
No, on the contrary. Both technologies have their respective applications, they complement each other. The LED is a point source spotlight which can illuminate surfaces over a great distance. The OLED as a two dimensional light source with excellent color rendering can be used close to people and is able to illuminate the immediate environment without glare.

Looking into the crystal ball, what do you see for the future of OLEDs?

Initially the LED was merely a glowing indicator light on a dashboard – today it is a high-beam headlight. Its development has had laws changed and pushed the affordable light bulb out of the market. The LED is on its way to a monopoly.

Not least, given the above I see the future of the OLED. We urgently need a complement to the LED. Based on this conviction, and together with partner companies, we have created an OLED patent portfolio for applications, products and processes, which we developed ourselves or purchased from other German companies. The future of OLED is in meaningful and useful products and applications.

OLED is a sensible, economical, reliable and extremely pleasant light partner. It doesn't dazzle, it warms without being hot and it doesn't exhaust the last of earth's rare minerals. It is a fantastic, present light source.





Thomas Emde

Born in 1959 in Korbach, Thomas Emde studied art at the HbK Kassel and the HdK Berlin. He began his artistic career as a painter. His works have been exhibited in museums and art institutions all over the world. Light soon appeared as an additional element in his work and from 1999 Thomas Emde dedicated himself to artistic architectural illumination and the subject of light as a material. By 2012 he had implemented many large projects in Europe and the Middle East. OMLED is the brand of the emdedesign GmbH, which he founded in 2013. OMLED introduced the world's first OLED light family in 2014 with products for everyday lighting purposes.

*Floating but secure:
the elegant floor lamps
radiate light into the
room horizontally
interpreting this type of
lighting in a new way.*



“The OLED brings back what we have lost: pleasant, soft light for the people.”

A special club for special members

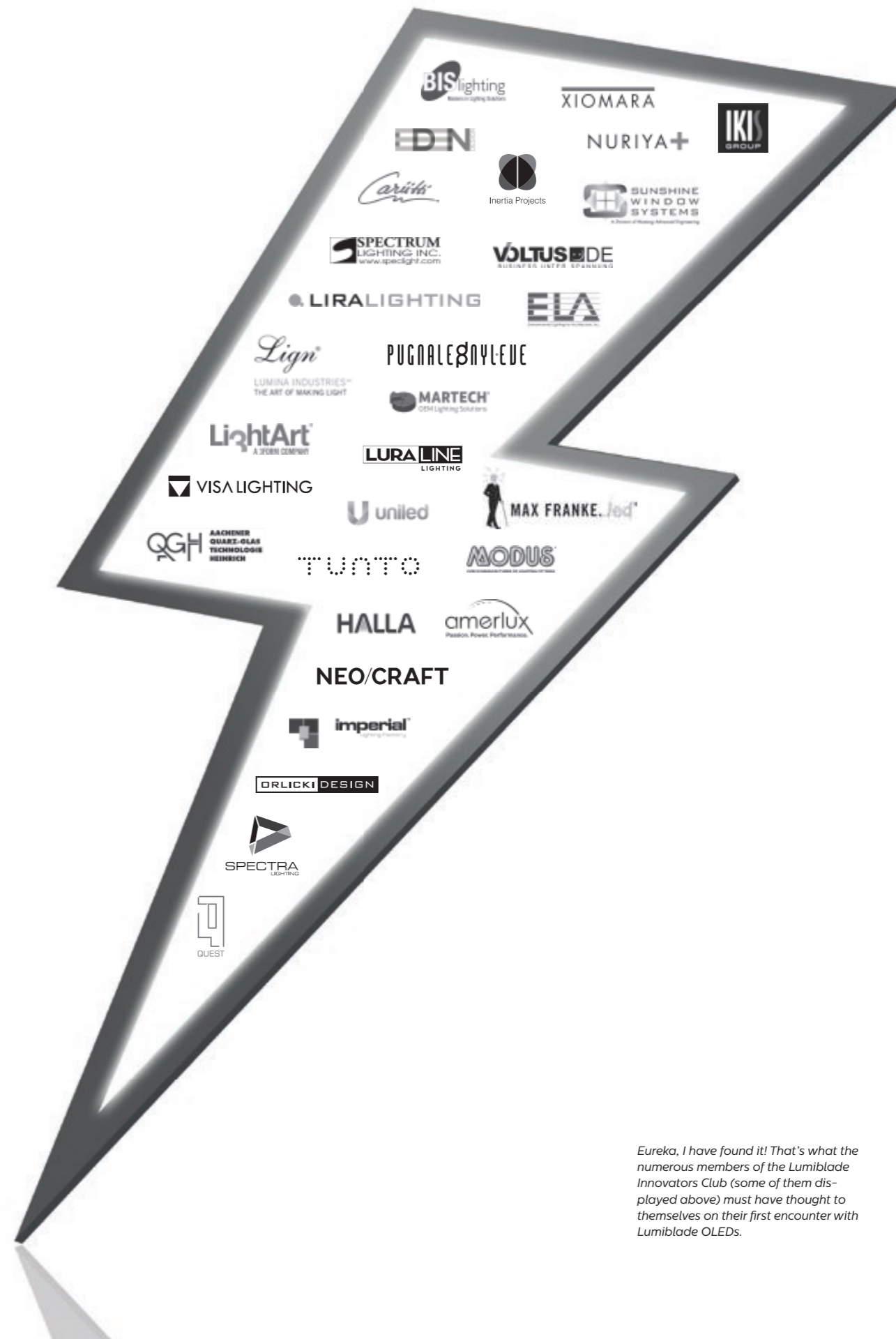
Can a simple idea help to promote OLED light? Yes, it can – if the conditions are right and all those involved want to make it happen.

You can not plan innovation, and you certainly can not force it. But can innovation be infectious, like laughter? Yes, it can – if you get the right people together under one roof.

Great things often start off like this. They germinate in some innocent thought or other, and then grow and take shape with ever-increasing circles of influence. This is certainly true for a very special club that was called into existence by Lumiblade last year. The premise: What if we were to bring together exactly those individuals and companies who have the expertise to elevate OLED lighting applications to a whole new level? And so the Lumiblade Innovators Club was born.

Today, a good year later, this idea has matured into a well-functioning entity. The club boasts members from all over the world. These include individual persons who believe in OLED in lighting applications and companies whose business has always had to do with light. But the club also has newcomers

who, in collaboration with the experts from Lumiblade, are taking their first steps in the field of light. Some of these members are so inspired by the qualities of OLED that, as soon as they received their first OLED delivery, they got straight down to putting their ideas into practice. The upshot: it did not take very long before spectacular designs and applications started emerging – breakthroughs that you can also read about in this magazine. They also show just how strong the potential for innovation is for this new type of area light source. And that is what it is all about: Innovation. Out with the old, and in with the new. Seeing light from a perspective other than merely as illumination. Experimenting, trying out, and going back to the drawing board. The result of this innovation process is a product that, due to its light source, stands out from the crowd. But not only that. Above all, it is tangible proof that innovation can be infectious, in the most positive sense of the word.



Eureka, I have found it! That's what the numerous members of the Lumiblade Innovators Club (some of them displayed above) must have thought to themselves on their first encounter with Lumiblade OLEDs.

What kind of innovator are you?



A recent study looked at the personalities of innovative entrepreneurs in business. After surveying over 1,200 European executives, the results were distilled into 5 personality types.

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Movers & Shakers

Bold and sometimes brash, these innovators were described by Forbes as the visionaries with a noted ability to influence others. Along with their showmen qualities seem to be just enough impatience and arrogance to boot. Executives identified in this category make up 22% of those surveyed.



Experimenters

Perseverance and perfectionism mark this curious innovator. This category is described as less concerned with failure but more concerned with pushing through a new idea or initiative. Coming in at 16% of all executives surveyed, this type seems to be consistent with many of our traditional notions of entrepreneurial innovators.



Hangers-On

Attention to process and comfort in structure seem to be features of this category. Forbes describes a concentration of this type of innovator in roles such as CFO/Treasurer. Executives identified as this type make up 23% of the total surveyed.



Controllers

With characteristics that seem compatible with Hangers-On, Controller innovators are described as markedly risk-averse, and tending find their forte in managing the vision rather than creating it. Innovators of this type made up 15% of all surveyed.



Star Pupils

This category is the undeniable talent. Essential to start-ups and full-blown enterprises, these individuals are likely sought-out for their superstar skills and A+ report cards. And judging by the fact that they make up the largest slice, they may be rewarded grandly for the skills they bring to the table. Star Pupils made up 24% of innovator executives surveyed.

Are you an innovator?

You enjoy working in the evening or even at night.

1 2 3 4

Multi-tasking is your thing.

1 2 3 4

Bizarre thoughts are not unusual for you.

1 2 3 4

Norms and rules are not much more than a proposal for you.

1 2 3 4

While working on something you enjoy, you completely lose yourself in it.

1 2 3 4

13 – 16 points: You probably are an innovator

You belong to the kind of people that see a problem and want to fix it. You enjoy finding new, different, or better ways to do things and you like to screw around with ideas – tinker, modify, morph.

8 – 12 points: You may be an innovator

You are on the right route. Stay curious, keep asking questions and do not care too much about what people think of your ideas.

4 – 7 points: You probably are not an innovator

You are likely a person that is quite content with the status quo. To be more innovative you have to call more things in question and be more curious. But do not be desperate: if you are not born with it, you can cultivate it.

Filling market niches

Club
member
#044

We talked with Uniled Technologies about the flexibility and potential of OLEDs as well as the lighting markets in India and the Middle East.



Kirti Desai is Managing Director of Uniled Technologies, a part of the Universal Lighting Group. The company, which was formed in the USA, offers complete manufacturing and assembly capabilities for innovative, tailor-made LED lighting systems. The business carries out a large number of projects in India and the Middle East. "These are fast-moving markets that are very open to new ideas, concepts, and products," says Desai. "There is a niche segment which expects us to do a lot more with lighting products other than just create functional products," he says.

OLEDs give Uniled Technologies the flexibility to do this. "OLED is the newest technology in the LED spectrum and has many advantages over conventional LED products – mainly in terms of size, aesthetics, and flexibility," says Desai. "We feel there is big potential there."

The company is currently aiming to provide high-end task or point-of-use lighting and to create customized illumination pieces for customers using commercially available OLED products.

Desai is optimistic about the future of OLEDs: "We want to start designing more functional products based on OLED technology as it matures further and delivers more light with improved life."



Innovation with playful ease

Club
member
#001

Designer Sebastian Scherer presented two innovations in one at the IMM 2015 in Cologne: his lamp utilizes a novel coating technology and relies on OLED for an optimal aesthetic experience.

Five large, seemingly floating spheres glow in all the colors of the rainbow before a black background. Their iridescent effect reminiscent of bubbles, with delicate glass bulbs, irresistibly evoke childhood memories. Only a thin cable connects the glass bubbles of the IRIS lamp and their incredibly flat, barely visible light source to the ceiling. The necessary driver is concealed in the flat canopy to save space.

According to Scherer, even lighting insiders were taken completely by surprise by the appearance of the first OLED lamps. "As a designer I have been keeping a close and impatient eye on the development of OLED for many years. It was a long road from the first developer kits to the OLED panels commercially available today. Now people can hardly believe that the OLED is already really here."

However, the OLED found its way into the designer's new lamp rather by coincidence. "My first prototype was a glass bulb without lighting," Scherer explains. "Our priority was to work on the

glass coating to achieve the bubble effect. I wanted the light source to take a back seat and that's why I ordered an OLED kit from Lumiblade online." After that, things moved a little quicker than expected. "The next day the OLEDs arrived and I integrated them into the lamp straight away. It was still somewhat provisional but already looked great. I entered the lamp into the Lexus Design Award 2014 competition only a few days later."

The lamp was presented as the winner of the Award at the furniture fair in Milan and it also won the Interior Innovation Award 2015 in Cologne. The level of international attention offers a valuable opportunity for Scherer's recently founded label NEO/CRAFT and is already paying off with new contacts. The design team would also like to build further on their cooperation with Lumiblade OLED production in Aachen. "Our membership in the Lumiblade Innovators Club is a great way to get support for the implementation of a new series of lamps and buy OLEDs at a good price. I'm excited to see what will happen next!"



*Innovation in a nutshell:
Scherer's IRIS lamp success-
fully unifies clear design,
the latest technology, and
traditional skills.*

“As a designer I have been keeping a close and impatient eye on the development of OLED for many years.”



Combining new technologies with new production processes during product development is what makes Scherer's heart sing. An additional challenge he faces is the consistent downscaling of designs, production stages, and materials used. In order to achieve the optimal result he sometimes has to experiment for a long time, as can be seen quite clearly when looking at how the bubble lamps were created.

First the spheres were manufactured by hand in a 500-year-old traditional glass-blowing factory in the Bavarian forest. Then they were transported to Rhineland-Palatinate. The dichroic finishing of a glass sphere requires a lot of skill and charts new technological territory. After six months and many hundreds of trial runs with an experienced coating company in Stromberg, Scherer developed a process to evenly apply an iridescent coating to the inside of the spheres.

All of the label's products have one thing in common: simplicity. Design is reduced to the most essential features and the production technology is considered in detail. "The majority of our time was spent on perfect execution. It took four years to get from the very first idea to the finished product", explains Scherer. The young label is pleased with the reception its glass bubbles received on the first day of the fair in Cologne; the first lamp was sold within just a few hours. Series production of IRIS begins in spring 2015. The lamp will be available with 30, 40 and 50 cm diameters and in three different color spectra.

Sebastian Scherer was born in Aachen, Germany. He studied product design at the University of Applied Science in Aachen. After his graduation he moved to Berlin and worked as an interior designer. In 2010 his X-Chair won the Special Award of the international Promosedia Design Award. At the same time he founded his own design studio and

developed the Aluminium Series which attracted international attention. In 2012 his Aluminium Table was nominated for the Designpreis der Bundesrepublik Deutschland. In 2014 his OLED lamp IRIS won the Lexus Design Award and in 2015 the Interior Innovation Award in Cologne.



Suspended lightness needs to hold its breath: From idea to market readiness it took four years.

An OLED light installation by Hugo Timmermanns is the centerpiece of the new musical theater.

The Miracle of Hamburg

OLED light art by Lumiblade draws all eyes to the “Theater an der Elbe”

Hamburg is one of Germany’s busiest and most attractive cities. Its port – one of the largest in Europe – sees container ships and cruise ships coming on an hourly basis. But Hamburg is also well known for its night life. Now, the city has a new venue for musical theater: the “Theater an der Elbe” (German for “Theater by the Elbe”, the river that passes through Hamburg).

It has a prime location in the port, directly next to another theater which has attracted millions of viewers over the years to see “The Lion King”. The new building also offers visitors something special including highly modern architecture, a generous foyer with an open gallery, glass facades, and appealing bar areas. The new venue was inaugurated in November last year with the world premiere of the musical “The Miracle of Bern”. The developer and operator of the venue, Stage Entertainment, commissioned Philips with the entire light installation. This means that the visitors’ light experience begins right at the entrance where the lobby leads them over Luminous Carpets, carpets with LED lights woven into them. Here, they are welcomed by the highlight: a light installation by Dutch artist and designer Hugo Timmermanns which covers the entire central wall. His installation, consisting of 500 OLEDs, once again confirms the reputation of this leading light artist. Timmermanns experiments

with dynamic light patterns and seeks to fascinate the visitors with ever new variations on the theme of light in darkness. He creates a feel-good atmosphere with the pleasant light characteristics of the OLEDs which also animates conversation among the guests. The Brite FL300, the latest and brightest OLED produced by Lumiblade, is made use of here. Only these OLEDs, built into lamps in the shape of a pyramid, make the light patterns envisaged by Timmermanns possible. Through an ingenious process, these light patterns were taken from the film “The Miracle of Bern”, which the musical is based on, and transferred onto the 500 OLEDs. Indeed, from a distance you seem to be able to make out the actors’ faces. In addition to the OLEDs, Stage Entertainment makes its audiences’ eyes light up with cutting-edge lighting technology on stage and in the auditorium. All of the LED lights in use are computer programmed and only use a fifth of the energy that was previously needed in such contexts. The interlinked “Power over Ethernet” lighting concept is not only used to control the lighting but also provides the power. Stage Entertainment is delighted with the harmonious overall lighting concept in the “Theater an der Elbe”, and has now contracted Philips to equip the “Lion King” venue with new lighting technology as well.

Revolutionary innovations of humankind

... just a few of them

One man's revolution is another man's banality – historically speaking. While a specially formed stone may well seem to us today to be a laughable trifle in comparison to cloning, the history of humankind would have been completely different without this invention. All these things have one thing in common: they are innovations in the truest sense of the word, for they all established themselves with great success. Here is a small selection of ideas that really changed the world.

at the latest 3650 BC
Wheel

circa 1440
Printing press

1879
Light bulb

1987
OLED

1941
Computer

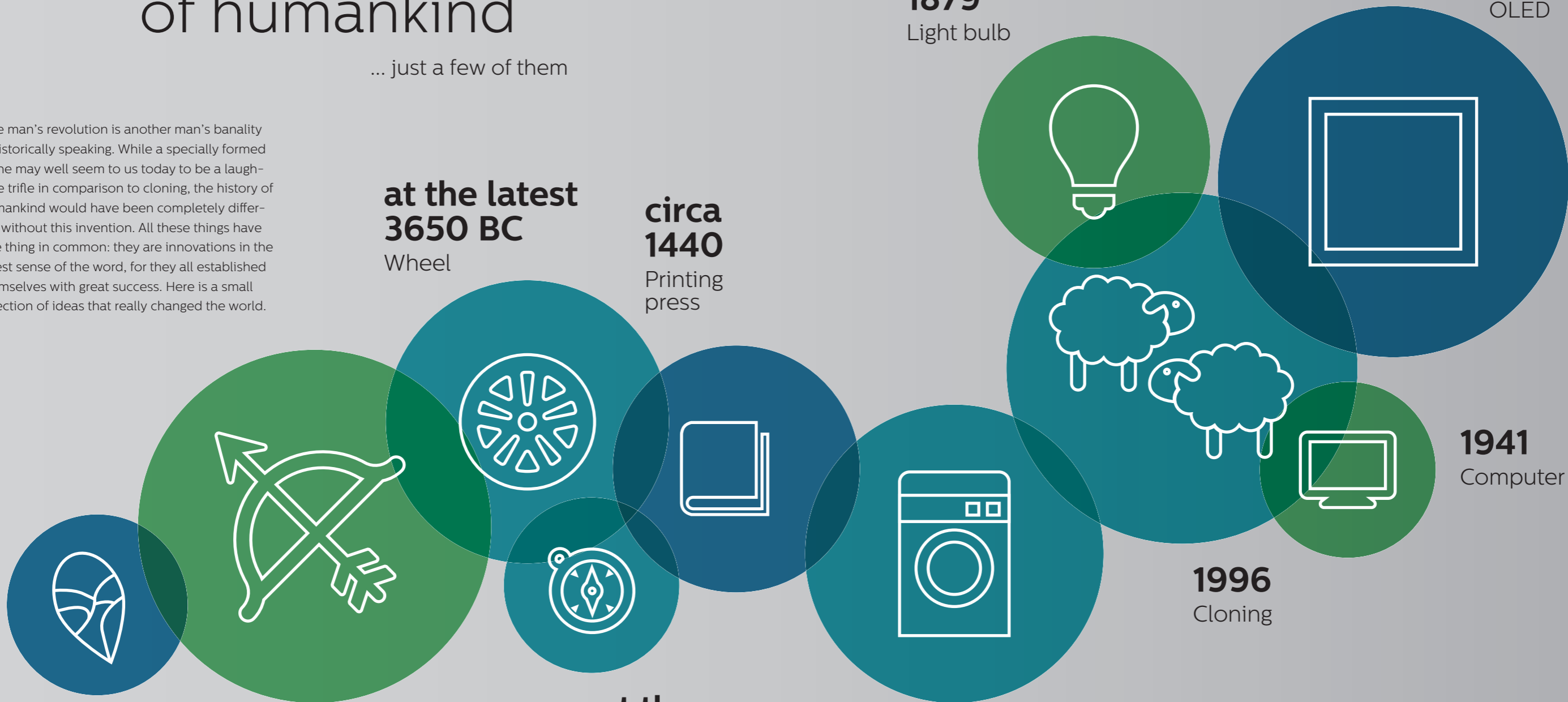
1996
Cloning

1677
Washing machine

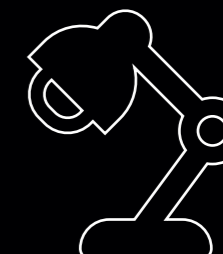
at the earliest 475 BC
Compass

at the latest 20,000 years ago
Bow and arrow

1.5 million years ago
Hand axe



A plea for better quality light in the workplace!



We have always known it: light is of vital importance for our sense of well-being. It is a proven fact that a short walk in the morning sun gets our metabolism going, and that being in light-flooded rooms and getting plenty of movement in the open air ensures a good mood, an alert mind, and better health.

However, the vast majority of the working population spends eight hours or more each day confined to closed rooms and glued to computer screens. Leisurely strolls in the sunshine for the sake of well-being are really not an option. So our workplaces, where we spend so much of our time, need to be designed optimally in terms of lighting. According to a study from 2013 (Lighting Europe "Light and Health", A.T. Kearney) investment in user-focused, biologically effective lighting really pays off. The right kind of lighting increases our cognitive performance, gives our working environment an emotional quality and atmosphere, raises

productivity, and reduces absenteeism. Light quality in the working environment should clearly be viewed as a value-adding factor. But the reality in most offices is completely different: too little daylight, monitors positioned unfavorably in relation to windows, not to mention a complete lack of individually selectable and adjustable light sources. So it is high time that employers address the issue and get together with lighting designers to develop new concepts and ensure optimum light quality at their employees' desks. Otherwise their staff will end up fleeing the coop and heading for the hills – purely for the purpose of a recuperative stroll, of course. This is a fascinating topic – and one of such importance that we are going to explore it in detail in one of our forthcoming issues – especially regarding how OLED lighting will be able to change the way light is used. Not only in workplaces, but in general.

Belgian innovation

with a surprise

Club
member
#003

The Oh!led collection tells the story of a successful collaboration.

Eden Design introduced the Oh!led range to the market in 2014. The name expresses pleasant surprise and this is reflected in the lights' fun yet clean designs. The collection is the result of a collaboration between Eden Design and the designer Bart Lens. He points out that the collection's form was inspired by the OLED technology alluded to in its name: "The nature of OLEDs – wafer-thin, square, and black-edged – called for a specific approach that was different than for light bulbs or halogen lamps. OLEDs are simply a different type of light

source. Oh!led draws attention to the staggering luminous output and the effects that can be achieved with the technology."

Eden Design had heard about the evolution and greatly improved efficiency of OLEDs. Kim Jonkmans, the company's lighting manager and software engineer, asked the design team around Bart Lens to put their creative heads together to develop a body to house the OLEDs. "We soon had five sketches in front of us. From these, we quickly had a preferred choice," Lens recalls.



The "Oh!led" – simple, clean, and fun.

“Oh!led draws attention to the staggering luminous output and the effects that can be achieved with the technology.”



Bart Lens

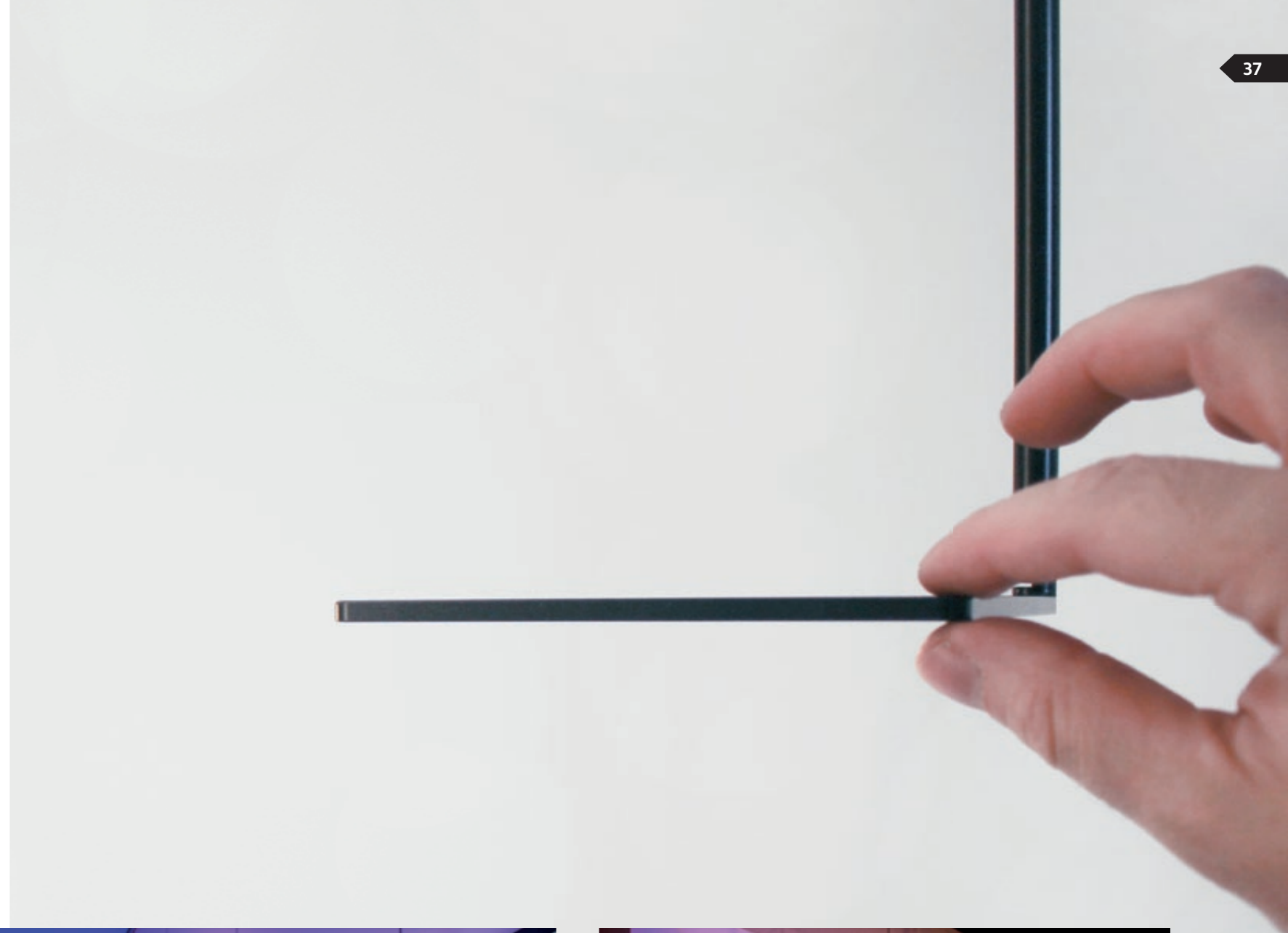
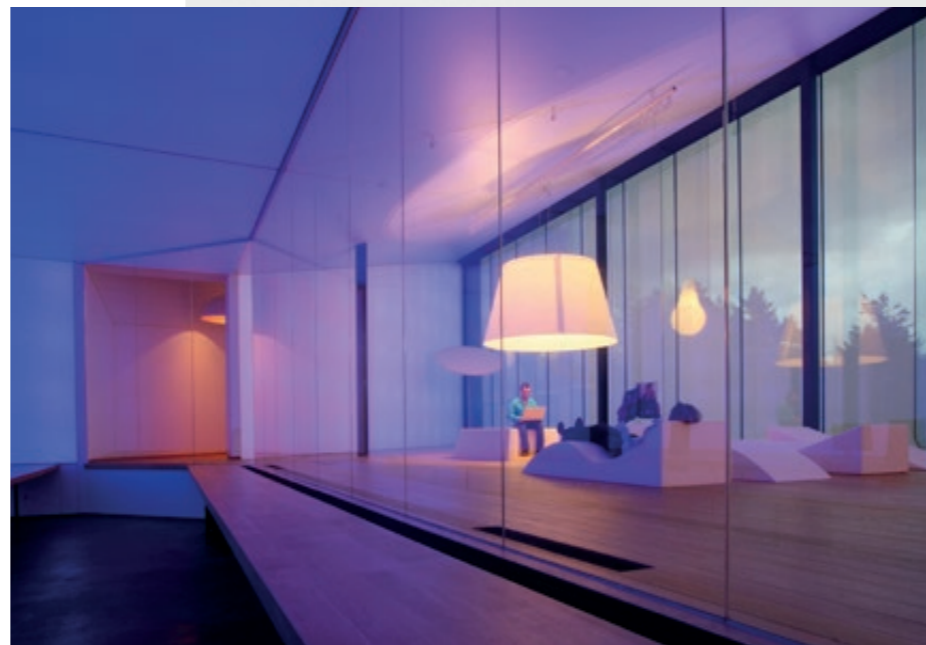
In October 2014, Eden Design unveiled Oh!led at the Interieur Biennale fair in Kortrijk, Belgium. “Oh!led was immediately met with great interest,” says Lens. The slender and minimalist design led to the team fielding inquiries about product illumination, such as for cars and jewelry. “There is also always a clientele that is looking for the very latest features,” says Lens.

It is perhaps no big surprise that Eden Design hails from Belgium. From fashion and art to furniture and architecture, the country clearly has an affinity with design and experimentation. Essence, purpose, utility, relevance, and simplicity are something the Flemish have a good eye for, Lens suggests.

“Belgium is a small country and being the underdog is always good for creative and experimental thinking. For us as a company to prove ourselves at world events, we simply need to be better, think further, and perhaps even be the best.”

And as for future plans? “If we can take full advantage of the efficiency and the manifestation of OLEDs and we can deploy them for socially relevant production, then the OLED dream is fulfilled.”

The company's showroom in Gent: An inviting and creative space.



Creating new markets

– made in Italy

Club
member
#051

The Italian business duo Pugnale&Nyleve create OLED lights that are practical and unbelievably beautiful at the same time. A discussion about experiences, successes, and aims.

A technology enthusiast and an artist. Which side did the idea to work with OLEDs come from? After all, you were working as a successful eyewear designer. Were each of you quickly convinced by the idea?

Well, it's actually difficult to define one side or another. We were inspired both by the artist side as well as the technological one. Having discovered OLED technology for the first time, we were immediately away convinced that this would become the protagonist in lighting in the future. We aim to be pioneers in this new innovative project.

What has your experience in working with OLEDs been?

As always, when you are a pioneer in a new technology in the worldwide landscape, the beginning is never that easy. You need to believe strongly in your project as you need to create a new market for a new product, which means you have to work hard in order to change and establish a new thought and a new love inside the end-customers' minds.

*Poetic and playful:
The model "Ragno".*





Emanuele Pugnale



Evelyn Susan Schmidt

You had used Lumiblade OLEDs before the Lumiblade Innovators Club started. What was your incentive for joining the club?

It's all about joining a family, having the opportunity to share ideas and experiences with people and companies that are living the same experience as you. Of course, for us it's also an important opportunity to increase our exposure and brand awareness.

What projects have you got in the pipeline which are using the Brite FL300 OLEDs?

We will replace the GL350s with FL300s. I'm convinced that this will be an important implementation thanks to the new technical improvements of the OLEDs.

Your understanding of lighting design is remarkably easy-going and sculptural; the lamps look like pieces of jewelry. Did the light of the OLED or their particular nature inspire you here?

Thanks, this means that we succeed in communicating our lighting concept! It's all about the essential design of OLEDs. As you said, we project our lamps as if we were projecting a jewel or a sculpture. In this sense it's fundamental to have lights, that are eclectic, adaptable, and essential. We only found these characteristics in OLEDs.

“It's all about joining a family, having the opportunity to share ideas and experiences.”



The Cherub sits on a small throne of OLED light. It can be placed on shelves, consoles, tables, or wherever you need its significant presence.

Who manufactures your lights for you? How did your manufacturers react to this new means of lighting?

Most of the job is done internally, in our labs. We only have a few suppliers; small artisans that are more focused on doing a perfect job than knowing more about this new technology. But of course they're proud and excited to be part of this innovative new project with us!

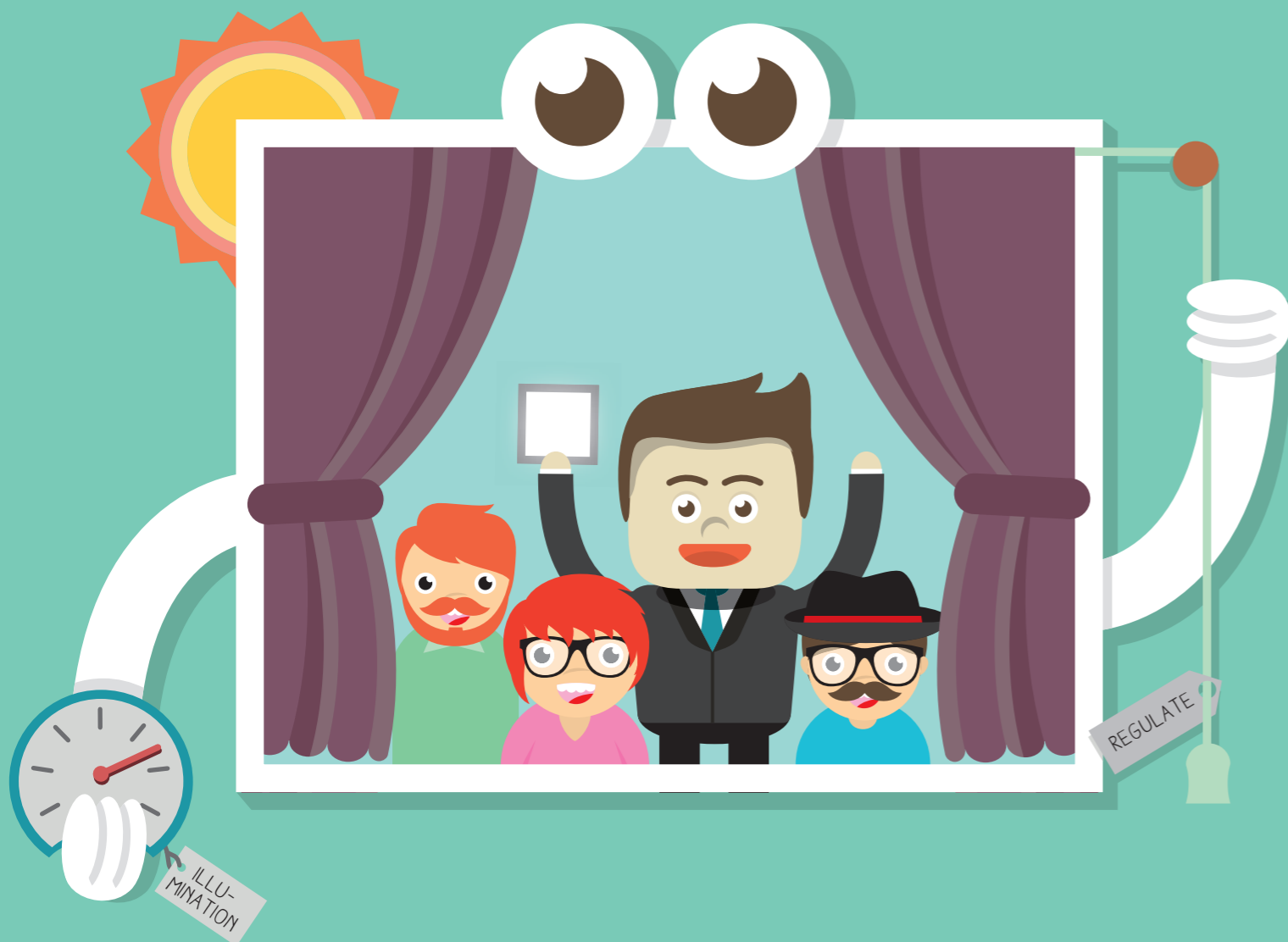
How do you see the future of the OLED?

As I said, the route will be quite long, but we are convinced that everything is moving towards OLEDs completely replacing the “old” and inflated LED market. Week by week, month by month, and year by year, new companies will enrich the OLED market and every company will bring innovation and new features to the market, both in terms of technology and creative applications.



Tomorrow's window made today

Club
member
#039



Wouldn't it be nice to have windows with some kind of integrated light source that regulates itself to maintain the vertical illumination in the room?

Smart windows could spearhead mass market penetration for OLED panels.

Windows are there to look out at the world and to let daylight flood into the room, illuminating it from floor to ceiling. This is called 'vertical illumination' and it goes hand-in-hand with a feeling of indoor comfort and well-being. But too much may cause an uncomfortable glare; too little a gloomy ambience. Then we have to pull curtains or draw blinds, or switch on artificial lights. Now, wouldn't it be nice to have windows with an integrated light source that emits a warm, diffuse light – very close to real daylight – and that regulates itself via sensors to keep the vertical illumination in a room at an optimal feel-good level? That would be a 'smart' window indeed! OLED lighting is the obvious solution. So why are not such smart windows already on the market? Good news: they are on their way!

Twinsburg, Ohio, USA. The latest development of Mustang Advanced Engineering (MAE), an American SME dedicated to developing solutions for a greener world, is their Sunshine Window System Division. Roger Buelow, Vice President of Engineering, explains what he and his team of technical and business partners are up to.

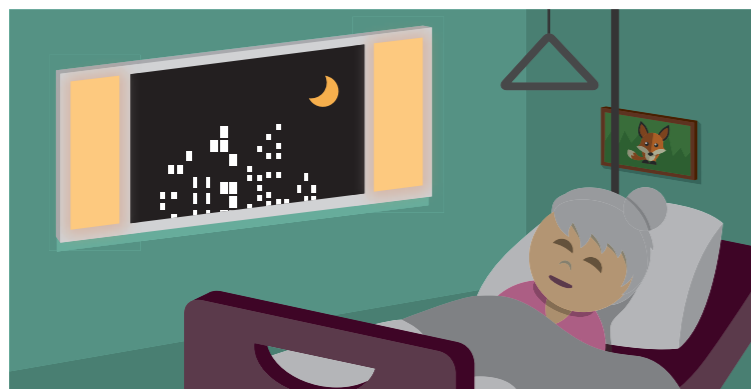
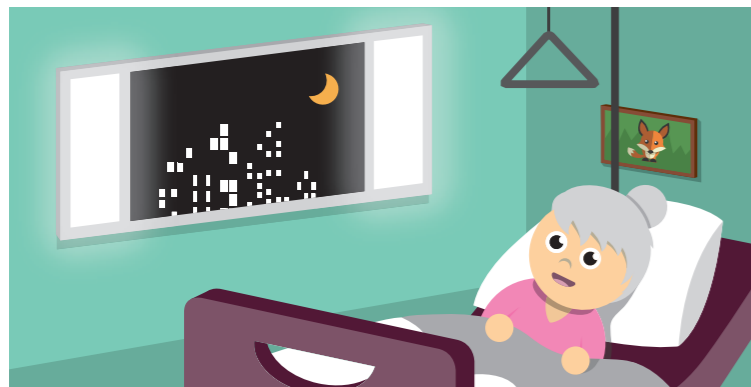
"For us, innovation means taking an invention, like OLED for example, and developing the best way to promote appreciation of its practical value in the wider population through a concerted break into the market with a "must-have" product that can be produced on a large scale, efficiently, and at an attractive price. We're working on two innovative OLED product proposals at the moment that have all the potential to become quick-to-market game-changers. Both of these large-format OLED vertical illumination luminaires promise to delight and amaze end-users through a tangible improvement of life quality. They will generate widespread market demand and accelerate the market adoption of OLED lighting – and thus open the door for more OLED applications."

Sounds like a plan! But what exactly are the products? Let's take a look.



The OLED Spandrel Panel

The 'OLED Spandrel Panel' is envisaged for high-end hospital, institutional, and government buildings. It exploits the 'spandrel area' to the sides of conventional window framing for the installation of OLED panels whose support framing is incorporated into the window. This 'Window with Integrated OLED Spandrel Panels' includes a daylight-harvesting sensor that enables the OLED panels to supplement the ever-changing daylight conditions for optimal energy efficiency of room illumination. It provides eye-pleasing general room illumination, while task lighting can be added where and as required. It has a light sensor and occupancy sensor to allow additional control and energy savings.



Right: daytime use, OLED Spandrel Panel dimmed. Top left: active time after sunset, OLED Spandrel Panel provides general room illumination. Bottom Left: possible further development of OLED Spandrel Panel function for amber room illumination at night, providing sufficient visibility for health care staff without disturbing circadian rhythms of patient.

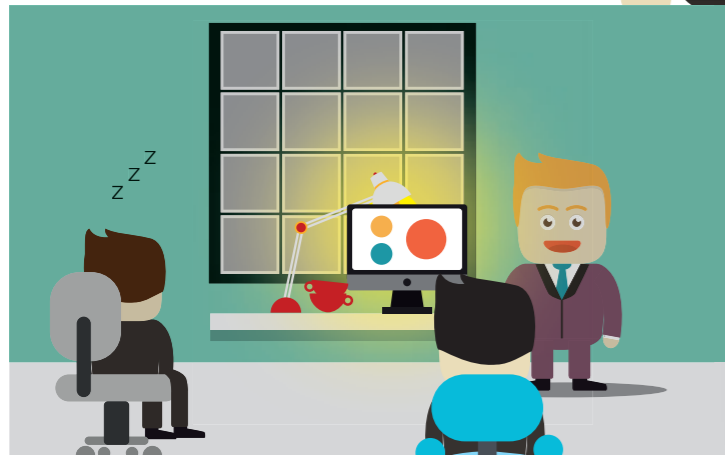
“Studies have shown that high levels of artificial light and natural daylight effectively reduce the length of stays in hospitals.”



Sunshine Window Systems' product performance goals at the end of the development project:
 Efficacy: 85 lm/W
 Life: 50,000 hrs
 Output: 3,000 – 10,000 lm
 Cost: under \$200/klm



Sunshine Window Systems' product performance goals at the end of the development project:
 Efficacy: 80 lm/W
 Life: 30,000 hrs
 Output: 7,000 – 10,000 lm
 Cost: under \$200/klm



OLED Sunshine Window Shade
 Top: open; Bottom-left: off;
 Bottom-right: on.

The Sunshine Window Shade

The 'Sunshine Window Shade' delivers vertical illumination at the right brightness, spectrum, and efficiency for hospital rooms, nursing homes, and private residences. It opens to harvest natural sunlight, and closes to supply full-spectrum, energy-efficient dimmable lighting at other times. It has sensors and control options to interface with room lighting controls and turn off or dim the existing lighting – so-called 'daylight harvesting'. This feature can be extended to other lights, too, and a smart phone app is envisaged for full-range dimming of the shade.

The MAE project team has set its sights on a huge potential market! The current US market for window blinds is \$2 billion, with about 10% being high-end commercial products. And the US commercial building sector that MAE intends to address with its OLED Spandrel Panels represents a total available market of 6 million windows per year! Just a tiny percentage of annual penetration in either of these two markets will be enough to stimulate mass production of OLED panels in a range of form factors and bring prices hurtling down.

So the prospects are good! In just a few years OLED smart windows may well be within the range of the average consumer's pocket. Innovation hits a home run when products become readily available on the mass market at reasonable prices – that's when the market screams a resounding "Yeah!"



The Sunshine Window – it creates a "window" where there is no window! This product will have a choice of frames to match the interior of your home with outputs from 4,000 to 6,000 lumens, which is about the same as natural light coming through a window on a sunny day.

Club
member
#018

Grand designs from small things

Designers Mike Arndt and Dan Schwade created two stunning modular OLED lights for Visa Lighting. We spoke to Kate Carberry – Marketing Manager at Visa Lighting – about their customers and the new light fixtures.

Left and right: the first renderings of the new OLED designs by Visa Lighting.

“Interaction with our customers and our desire to meet their needs as they defined them provided the impetus for these two products,” says Kate Carberry, referring to the long and elegant pieces. “The thinness of the OLED panels supports the flexible design of the luminaires. They can be configured and integrated, which enables professional designers to meet their design requirements.”

Indeed, the luminaires can be hung individually or in a group either at different angles or they can take on a continuous, flowing appearance. This makes the luminaires adaptable and allows designers to make the fixtures their own.

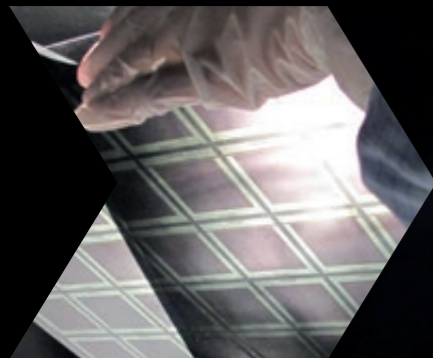
Carberry notes that the light produced by OLEDs also supplied inspiration for the fixtures: “OLEDs provide the quality facial illumination that designers seek by augmenting ambient light levels without overwhelming the eye. This means they provide a very pleasant light.” Visa Lighting will install both of the lights in its showroom where they will make a real statement. Both models will be for sale, however the company catalogs the pieces as individual units rather than according to the specific specifications used in the showroom. “This allows designers to fit them to the requirements they have for a specific space,” she notes.

OLEDs help solve two issues luminaire designers are facing in the solid-state era: size and glare control. “OLEDs’ planar form enables designs that were never possible with traditional lamp-based light sources,” Carberry says. “They give luminaire makers the ability to remove a dimension from a design if they so choose, which opens up new paths and possibilities. Additionally, the homogeneous output of an OLED panel provides diffuse light without secondary optics, as is necessary when using an LED source. This simplifies design and manufacture, while still enabling new form factors and minimizing offensive glare. Until recently this came at the cost of useable light, but the Lumiblade Brite FL300 has a lumen output that pushes the applications for OLED fixtures beyond the purely decorative. The Lumiblade OLED ecosystem further simplifies the design-in process for manufacturers, as the level-2 and level-4 panels are optimized for familiar assembly techniques. The availability of DC and AC power supplies further eases system integration.”

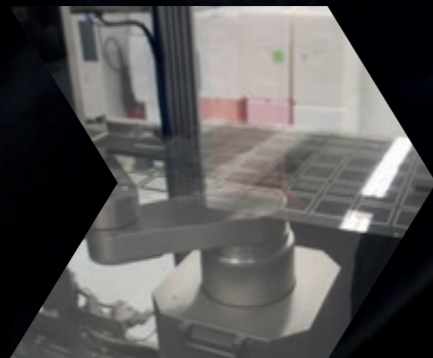
Visa has bold plans for future OLED fixtures, although they are still at an early stage. “They are renderings at this point,” Carberry says. “They represent a number of fixtures combined to create an artistic statement.” Of course, Visa Lighting still has their customers – designers – in mind. “The modular nature of the individual fixtures allows designers to combine them as needed to fit their vision. They can be used in a combination to make a statement, or used in smaller numbers or even individually, depending on the space and the designer’s needs,” Carberry concludes.

Birth of an OLED

The manufacture of OLEDs is real cutting-edge nanotechnology. Engineers have meticulously refined and perfected the production processes in recent years. Thanks to these processes, the OLEDs produced at the Lumiblade factory in Aachen (Germany) boast a very high level of homogeneity and a very uniform color point.



Before the actual production begins in the clean room, the glass plates – the base of each OLED – are tested for contamination or damage. The trained eye of the production staff is superior to any camera system in terms of accuracy and speed.



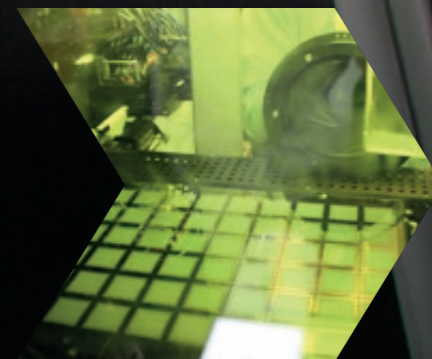
Robots and conveyor belts transport the sensitive glass plates from one production step to the next. The glass starts its run through the production plant with a final washing process. Cleanliness is paramount in the production of OLEDs.



The modern production plant looks like a maze of randomly assembled tubes, hoses, and cables. The processes are coordinated down to the smallest detail at the multi-million-euro plant, which was also designed and built by Lumiblade. The dimensions in which layers are applied are measured not in millimeters but nanometers – an incredibly small size, which stands in the same relation to a meter as a hazelnut to the size of the earth.



The complex production processes are controlled from a console at which engineers oversee and adjust the processes on numerous monitors. Important parameters such as the color point can be adjusted and changed from here at the push of a button.



In the last stages of production, the OLED is coated with a layer of plastic. Experts call this thin-film encapsulation. This new process introduced by Lumiblade seals the OLED on the back and ensures that no water or oxygen can penetrate the light tile and cause damage. This makes thin-film encapsulation significantly better than any other process, and actively ensures the better quality and longer life of the OLED.

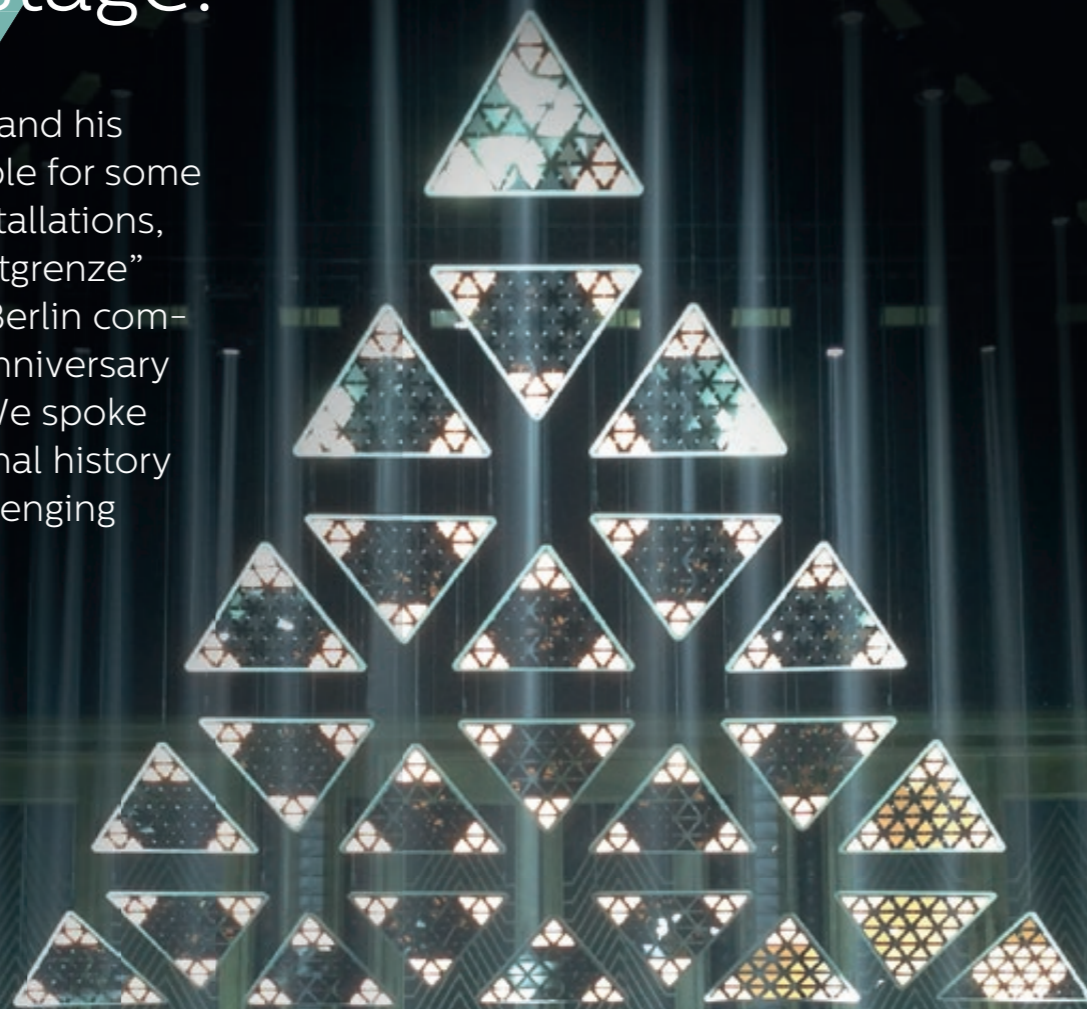


A final processing stage awaits the OLED at the end of the production line. Each light tile is first cut out of the glass and then subjected to numerous tests. Only OLEDs that match up exactly to the given specifications are finally shipped to customers around the world.

Stage light?

Light stage!

Christopher M. Bauder and his company are responsible for some spectacular light art installations, most recently the “Lichtgrenze” (“Border of Lights”) in Berlin commemorating the 25th anniversary of the fall of the Wall. We spoke to him about his personal history with OLEDs and a challenging project in Brazil.



Setting the stage: the OLED installation for the DVD production of Brazilian superstar Luan Santana.

Mister Bauder, you are one of the early pioneers of OLEDs and in recent years have completed numerous projects with this novel light source. What do you think is special about OLEDs and what experiences have you had when using this technology?

The OLED is a very special light source. Thanks to its ultra-thin construction and its consistently homogenous and wide-area light emission, it can be used directly as a design element. Light as material, so to speak. The OLED in its pure mirrored form is also the only light source that continues to look attractive when you switch it off. What I find particularly fascinating is the seamless transition between mirrored and luminant areas. You have total freedom of design for the outer form of the OLED, and the option of selective darkening of some of the luminant areas during the manufacturing process itself, instead of having to use additional filters. These properties make the OLED a perfect design material for visionary integration of light into furniture, rooms, and installations.

One of your latest projects took you to Brazil: a DVD production for the musician Luan Santana. What were the requirements in this project?

The task in this project was to create the visual background for the live DVD production of the singer Luan Santana using variations of several large-scale kinetic light installations that filled the studio. Luan Santana isn't well known here in Germany, but he's a superstar in Brazil. So the DVD production design was correspondingly extravagant. Because not only classical and historical but also modern futuristic settings were required, we used a mixture of OLED and RGB LED technology. Both systems were suspended from the ceiling on DMX controlled dynamic Kinetic Lights cable winches. The OLEDs with their warm-white color were used in scenes that were set in the '20s and '40s. Later on, the moving and animated small-scale OLED elements were combined with and complemented by full-color LED triangles. For the grand finale, both systems were then linked with each other and additionally synchronized with conventional moving head spots. Thanks to a GrandMA lighting console, all the systems followed a uniform timeline and stayed perfectly in time with the music.

Were your project partners and clients already familiar with OLED light?

Yes, the clients running the DVD production already knew about OLED and had in fact specifically requested our design of kinetic OLED lighting elements for this production. The idea of expanding the installation to include LED lighting elements developed at a later point in the conceptualization phase. Our project partners were fascinated by the classic and yet also modern elegance of the mirrored OLED triangles and made a conscious decision to use animated white-only light for this production.

What challenges were you faced with in the staging of such a large-scale lighting design, and what influenced the decision to work with OLEDs in this context?

One major challenge was the spatial coordination of the filigree OLED lighting elements with several large-scale stage elements that were also movable. Our technology, which is high-precision and computer controlled, had to be synchronized with neon signs and other props that were moved manually. At the beginning of the show, the OLEDs are integrated as the luminous ceiling of a reproduction of an old movie-theater entrance. Then, during a song, this porch structure disappears upwards towards the ceiling while the kinetic OLEDs start moving in the opposite direction, and all that in a matter of seconds. This is where the thin character of the OLEDs really came into play as a design asset. All the same, the interplay with the large and heavy stage elements and the demand for precise timing of all movements and animations was still a huge challenge.

“The OLED in its pure mirrored form is also the only light source that continues to look attractive when you switch it off.”

How was the interplay of OLEDs and LEDs organized? What other light sources and technologies were used in addition?

OLED and LED lighting elements were all played via Kinetic Lights Winch LED motorized cable winches. The triangular lighting elements were each attached to three cable winches which enabled them individually to be moved and tilted in all directions. The Kinetic Lights software, KL_Control, handled the control not only of the synchronized movements of over 300 cable winches but also of the OLED and LED light animations. In addition, several hundred moving head spots, LED effect lights, and pixel-mapping LED line lights were installed in the studio. For the show, all the systems were synchronized centrally using a GrandMA lighting control console, so all the switching of lighting effects was exactly on the beat of the music.

The complex three-dimensional installation and kinetic light sculpture must have created outstanding scenographic possibilities and effects for the video recording. Can you tell us something about that?

The combination of dimmable OLEDs and colored LEDs on over 300 cable winch systems provides an almost infinite number of possibilities. So we worked with the clients to develop a dramatic composition designed to reveal the possibilities gradually, track by track, and create a continuous dramatic arc over the full length of the DVD with its 25 tracks. This started with static and non-

animated OLEDs. Then, gradually, these were first moved into other static positions and the individual OLEDs were animated choreographically to the music. This was followed by a phase of more complex moving animations, firstly of individual strips and then of the whole OLED installation, building up to a wave animation with light and motion. In the middle part of the show the LEDs were brought into play as well, at first statically then gradually also with motion, sometimes together with and sometimes independent of the OLEDs. For the grand finale, all the OLED and LED lighting elements were completely synchronized and accompanied by an elaborate external light choreography.

What plans do you have for the future? Are there any new projects with OLEDs that you are currently working on?

Well, we're always working on designs for wall- and ceiling-based OLED lighting systems, sometimes on our own initiative, sometimes under contract. The scale of these lighting systems ranges from small wall or ceiling lights right through to concert hall-filling installations, many of them kinetic or movable via cable winches. We have only just started to scratch the surface of the design potential of OLEDs and the possibilities for their use are endless. With new developments in the size, luminance, and bending properties of OLEDs, our design options are sure to multiply even further in the near future.



Almost infinite possibilities: the combination of dimmable OLEDs and colored LEDs on over 300 cable winch systems provides maximum variation.



Christopher Bauder (second from the right) and his team

Research for Smart Lighting

An unusual quartet of experts in search of the light of the future

In the era of smart technologies, lighting should also have more to offer than simply switching and dimming. The OLED soft surface lighting makes completely new lighting concepts possible, responding to the needs of users in a smart, interactive and highly nuanced way. At the University for Design and Art in Basel, a team of researchers from science and industry is developing the necessary concepts and prototypes for lamps and control systems. We visited the team on site.

In the beginning there was the bright day and the dark night. Then came fire, which made it possible to create islets of light in the darkness of the night. Torches in hand, human beings started to plan

light – a technological revolution to be followed by many more. The next fundamental shift was brought about by electric light. Suddenly it was no longer about making the most efficient use of dim light sources but rather about managing an excess of light. A new technology in the field of light sources provided impetus to light planners who reacted by creating new lighting concepts. Now another revolution is taking place. With ever rising sea-levels and electricity bills, the light bulb has served its time. Energy efficiency has become the defining criterion for lighting technology. The discharge lamp may survive in the lighting catalogues of the past. But the future belongs to LED and OLED lighting.

*A common cause:
The Basel research project
team Ulrich Bachmann,
Ralf Michel, Valentin Spiess
and Cornel Waldvogel (left
to right)*





“In the era of smart technologies, lighting should have more to offer than simply switching and dimming.”

Travelling to the future of lighting

This future is precisely where we are currently going. Specifically to meet a research team in Basel that is systematically researching OLEDs, their effects, and their potential in terms of lighting planning. Our destination is the Dreispitz area, where one of the largest infrastructure projects in Switzerland is currently being carried out. Behind the old factory buildings, which also house the museum of electronic arts, we can see a prestigious residential building by the architects Herzog & de Meuron, and opposite lies the University for Art and Design – a cubist building made of glass and concrete. In a meeting room on the fourth floor sit our four interlocutors while in the room next door graduate students of the masters course for Integrative

Design present their work and discuss questions that nobody could have foreseen previously. For instance, where are the current limits of workmanship and artistic performance? And is it possible for a 3D Printer to legitimately replace the sculptor's hammer and chisel?

Our topic today is a little less hands-on than sculpting. We will be talking about light – a medium that so self-evidently surrounds us in our daily lives although its complexity is only truly understood by a few people. Ralf Michel welcomes us. He is head of the Design Research module at the Institute for Integrative Design. A trial exhibition in the foyer provides him with an opportunity to vividly demonstrate one of the most important



Space for innovation – the building of the Institute for Integrative Design at the University for Art and Design in Basel

categories of light planning – the difference between direct and diffused light. Daylight includes both of these forms: Sunlight is direct, while the light on a cloudy day is diffused. When it comes to artificial lighting, single-point light sources take on the role of the sun. However, for a long time diffused artificial light could only be produced indirectly, by shining light on a reflective or translucent area, since no large-area light sources were available. The development of OLED changed this as illustrated by the small experimental exhibition which directly compares the visual effects of a classic spot LED and a surface-area OLED. Just like sunlight, the light of the LED highlights the plasticity of objects by casting hard shadows. In addition, the surface quality of the objects becomes very clear: distinct light reflections make the differences between shiny and matt materials visible. Even color contrasts are enhanced by the bundled LED light. In contrast to these staged dramatic effects of the spot light, the surface-area light of the OLED offers a completely different, calmer lighting atmosphere. Forms appear softer, surface structures more homogenous.

Transdisciplinary research for results of practical application

The Institute for Integrative Design brings together the academic fields of design, art, and technology to enable innovative design solutions. Thought is put into systems, networks, cycles, and value chains that do justice to future users and take into account societal consequences of the solutions that have been developed. This transdisciplinary way of working is conveyed to a hand-picked group of students with bachelors, masters or technical degrees in a subject related to art and design. The institute's research is directed at areas in which the transformative potential of integrative thought generates new room for maneuver – and this room for maneuver is not only hypothetical but is also put to use for the development of results that can be experienced and deployed in practice.

One of these research projects is the reason for our visit. Bearing the bulky title of “transformative spaces and objects – integrative space and object design through OLED”, this project investigates the changes the introduction of this new form of light could bring about in terms of spaces and objects. The project fits perfectly into the institute's focus. It is innovative, interdisciplinary, and specifically geared towards new products and solutions. Work is therefore dedicated not only to the design aspects of dynamic lighting planning with OLED but also to the development of the necessary hardware to control lights and lamps. The companies Inventron, iart, Philips Lighting Switzerland, and Lumiblade OLED Lighting as well as the Winterthur Museum of Industrial Technology are also on board. Half of the project's budget, totaling about 900,000 Swiss Francs, is provided by the federal commission for technology and innovation (KTI). Lumiblade OLED Lighting provides technical support and the supply of OLEDs.

In addition to the design researcher Ralf Michel, three other specialists coordinate and lead the team, which in total consists of 18 people from the university and participating companies. Professor Ulrich Bachmann brings the in-depth knowledge he has gained through previous research on the topic of color and light to bear on the current project. Valentin Spiess is manager and creative mind at the company iart, which develops and implements projects on interaction in spaces. This rather abstract description refers to multimedia and kinetic installations for high-profile exhibitions or large events, and brings together media, art, and technology. The fourth member of the group is engineer and manager Cornel Waldvogel from the company Inventron, which specializes in lighting control and the development of lamps, in particular LED-based lamps. The team therefore brings together academic, economic, and technological experts united by a common interest in the topic of light.

Smart, interactive, and dynamic

Ralf Michel explains how the project has developed a dynamic of its own from the start: “Our research began with us thinking about the integration of OLEDs into surfaces. However, the thought of OLEDs covering an entire wall is quite counter-productive at the current level of technology, since such a product will only be available and affordable years from now. What’s much more important is finding an innovative way of dealing with the new light source and developing appropriate lighting systems and concepts.” For Michel, one of the most important features of OLEDs is the fact that they can be well-regulated, bringing out fine nuances that can be instantly perceived on the softly glowing surface. However, this quality demands high-performance electronics to control it, ideally as part of the lamp itself. The goal is to make the lighting smarter and more interactive. Smart light is conceived to react to people and changes in the surroundings and in doing so contribute to our well-being.

This is where Ulrich Bachmann comes in. OLEDs make it possible to have light that is “simply there” he explains, pushing an imaginary light switch in the air with his finger. “We are defined by on and off, by actively summoning static lighting. With OLEDs (just as with LEDs) we now have the possibility of deploying control systems to generate a wide range of dynamic lighting scenarios without the user having to activate a switch or use a cell phone. By using sensors which react to heat, movement or sound, the desired lighting scenarios can be controlled interactively on the basis of previously programmed animation concepts and can be tuned to the users and the environment.”

Valentin Spiess highlights the difficulty of describing OLED light accurately: “You simply have to experience this light for yourself but since right now this is not always possible, its market success will be delayed. The closest thing to OLED is the light you get in Japanese houses – dynamic daylight that floods the room via large-surface rice paper walls.” He finds two aspects of OLEDs particularly

important. Firstly, the light glows within the object itself, and these self-glowing objects require innovative interactive concepts. Secondly, the light of the OLED can become an information carrier. This is an effect that he can demonstrate immediately. The rain outside is visible as a gentle pulsation due to an OLED installation in the laboratory. Currently, the effect is generated by a hard drive, but later the OLED control itself will be able to do this.

This is precisely where Cornel Waldvogel’s area of expertise comes in. Like Ralf Michel he does not want to wait for the future generations of OLEDs. “Our aim is to work on solutions that are marketable as quickly as possible. So we base what we do on the current level of technology. If we get even better OLEDs or OLEDs with new features, such as transparency and larger surface areas, then we will of course be delighted – because we will already have gained experience and know how to practically use this light.” Currently the “raw” OLEDs still require additional external devices and each step towards making it smart and interactive requires ever greater effort. Cornel Waldvogel is aiming for a plug-and-play solution that only requires a power source, something like Edison’s ingenious screw base for light bulbs, which has not changed to this very day.

The team has a clear vision. Accentuated light from traditional light sources is set against soft OLED light – the very aesthetic of this light is a rejection of over-dramatic light planning that turns the room into a stage. At the same time, the fact that OLEDs can be controlled in such a nuanced way is being used to make lighting smarter and more dynamic. The light of the future does not force itself into the foreground but still takes on a very active role – be it by creating a pleasant environment in which to live and work or by transmitting information. But what is also essential for the project team is that it does not just remain a mere vision. Lamps and light-controlling electronics at the current level of technology can help speed up the market entrance of OLEDs and allow more practical experience to be gained.



From May 9, 2015 Exhibition at the Winterthur Museum of Industrial Technology

The exhibition will offer specific insight into the results of the research project. Anyone interested in OLEDs and their effect within a space will have the possibility to experience the bright future of lighting today during the four months of the exhibition. Opening: May 9, 2015

Ready

to explore the
possibilities

The flowing lines of the Birot Pixelate collection are inspired by the movement of a manta ray. The striking OLED luminaires were the first to be designed and produced in Latin America. Now the company behind the pioneering collection is developing a new range based on Lumiblade Brite OLEDs.



Pablo Alvarez is the founder and co-owner of Birot and a pioneer in OLED design in South America. However, it was not until 2010 that he experienced OLED technology first-hand at the Light + Building trade fair in Frankfurt. "I had been working with decorative LED luminaires and contending with the limitations of the technology for ten years. Heat sinks, physical and optical aspects were restrictive factors" he recalls. "Seeing the first OLED luminaires opened up a whole new way to designing lighting for me. The new technology made so many new design variables possible. I was simply fascinated."

A year later, Alvarez was at the Lighting Show in Mexico. He was approached by the sales team from Lumiblade who had noticed that Birot was showcasing some early OLED pieces from Europe. The two companies soon joined forces to organize the first presentation of OLED technology in Mexico. "After this, we were given quick access to the first OLED panels," recalls Alvarez. In 2012, Birot unveiled the prototype for the first luminaire with integrated OLED panels to have been designed and produced in Latin America – Pixelate. "It was the start of a rapid and exciting journey that we are still on today."

PIXELATE
designed by Philips Lumiblade



Two pioneers among themselves: Pablo Alvarez and his OLED design Pixelate.

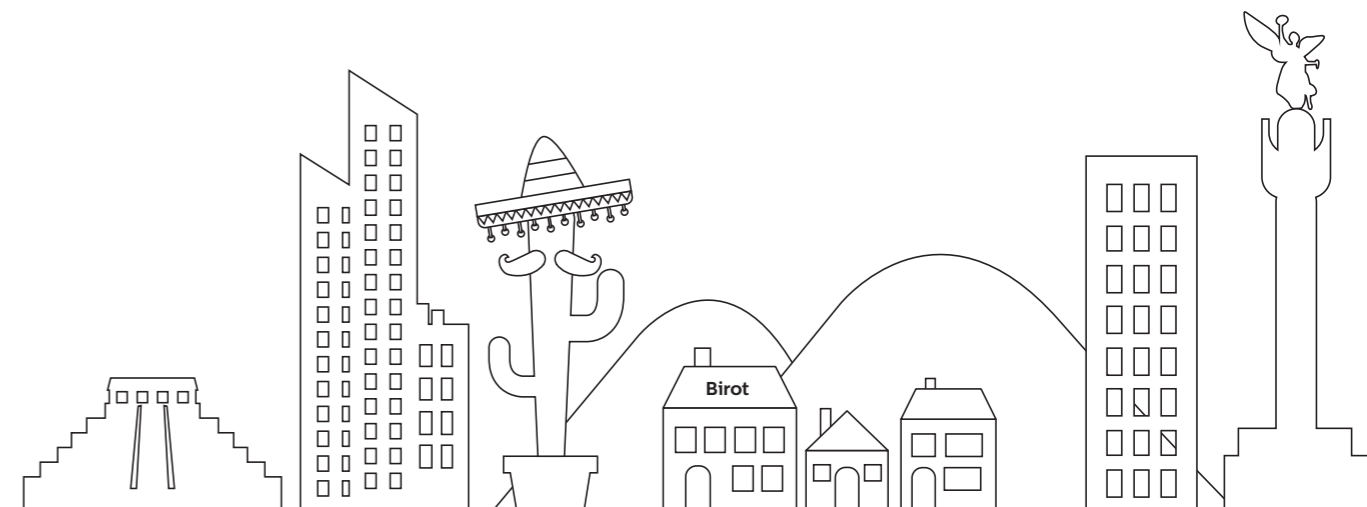


“My experience of designing with OLED panels is one of total freedom.”

Birot presented Pixelate at trade fairs in Europe, Latin America, and Asia between 2013 and 2014. “The German public in particular was surprised by the originality of the design and the fact that it came from Latin America,” notes Alvarez. “But all three markets showed a strong interest in the luminous efficiency of the light source and the fact that it is ready to be used in residential and hospitality locations.” The design was met with a positive reception and received good online coverage, which led to rapid global success. Today, the company is making an impression with its boutiques in Mexico City, Monterrey, and Merida, having installed LivingShapes interactive walls on some of the busiest streets in Mexico. The displays transform the sound of hundreds of car horns and people passing by into light and shapes on the OLED wall. The boutiques also allow the public to access a WiFi network from the street to control more than 30 Philips Hue lights inside the store. “Our boutiques aim to show visitors the many possibilities that a lighting installation can achieve,” says Alvarez. “Our products explore what is possible with each new technology and our showrooms present this in a unique way.” Birot plans to open new stores in Bogota and Miami in the near future.

The boutiques are far from the only innovative way the company is demonstrating OLED technology. “Open the Box” is an imposing 80-square-meter (860 sq ft) and five-meter-high cube. Visitors enter a completely dark room and discover different OLED products in succession, such as the LivingShapes interactive mirror, LivingSculpture, and finally Pixelate. The firm is also developing an OLED version of a Mexican multinational’s logo. Today, Alvarez and Birot are working on plans for the new Brite range of Lumiblade OLEDs. The company has developed a new collection based on simple geometric shapes derived from the square form of the Brite panels. “All of our designs highlight the slenderness of the lighting surfaces and exploit the high lumen potential,” says Alvarez. “The panels produce light of a very high quality.” The new collection will be presented at the Hong Kong Lighting Fair this fall. Alvarez predicts a bright future for OLED lighting: “My experience of designing with OLED panels is one of total freedom. I only need to think of the object and the light and what I want to express with my design. There is just so much potential,” he says. “Birot is ready to explore the possibilities.”

Rather a stage for lights than a common store: The Birot Lighting stores in Mexico.



Lighting up the future with young talent

Club
member
#026

The multi-award-winning lighting systems manufacturer HALLA is based in Prague, a city with a rich cultural history and a deep sense of tradition. The company's FLOU luminaire, in contrast, is a true statement of clear, contemporary design.

HALLA has changed a lot over the past five years. The company has changed its image, services, and products to become one of the leaders in its branch in Europe. "Our people became a modern, thinking team. We wanted to explore new possibilities in technology and design," recalls Jan Petrášek, Technical Director at HALLA. "We aim to give our new luminaires a special meaning although our priority is to provide high-quality lighting."

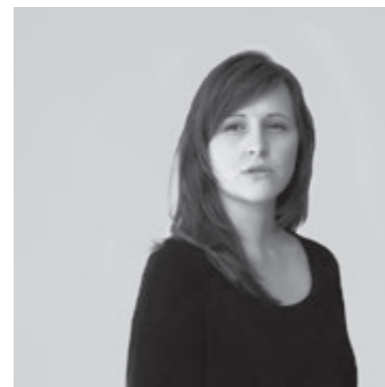
OLED technology opened up new possibilities for the company in this respect. "For me, good design not only leads to aesthetically pleasing products, but products that bring everything together. OLED technology enabled our designers to develop a table lamp with a very slim design," says Petrášek. The lamp was developed by the young designer Martina Doležalová. "Martina approached our company as part of her bachelor's degree," says Petrášek. "She was looking for a quality Czech manufacturer with a flair for the use of new technologies. Her ambition was to develop something new, something for the future." It was a meeting that was to lead to an exciting new product – FLOU. "We really hit it off at the very first meeting and started development straight away. Martina came with different ideas and together we chose the most playful – a slim design for a slim OLED," says Petrášek. HALLA and Doležalová then spent time finishing the luminaire. In the end, FLOU was not only Doležalová's degree project but also her first

design for a manufacturer. FLOU is a clever lamp with two fixing systems and can be personalized with different colors. The team presented the new luminaire at the 2014 Light + Building trade fair in Frankfurt, although it was redesigned this year to take advantage of new solutions from Lumiblade. HALLA works with professional designers such as Rob van Beek, an architect and lighting designer from the Netherlands. However, the company is also keen to help young local designers develop their talents and succeed. "We have cooperated with Ivan Dlabáč and the Product Design Atelier at the Prague Academy of Arts, Architecture & Design (UMPRUM) since 2013. We developed the OLED project FLOU with Martina Doležalová and the INDI project with Matúš Opálka, a student at the University in Bratislava in Slovakia. He worked with us on a student internship in 2014 and is now a student at the UMPRUM in Prague. The first project we developed with him was a high-quality concept design which went on to receive the 2014 Red Dot design award."

The company now aims to develop the FLOU project beyond marketing purposes and to put the table lamp on the market as a smart and affordable product. HALLA also plans to continue the cooperation with Doležalová by developing a pendant or ceiling mounted luminaire to round off the FLOU family. "We will be introducing the new product at Light + Building in Frankfurt in 2016. It would be great to see you there," concludes Petrášek.



"Martina Doležalová's ambition was to develop something new, something for the future."



A degree project for the market: Martina Doležalová and her design "FLOU".



Preview

Lumiblade Insider #02



DESIGN GROUP ITALIA

Design Group Italia recently joined the Lumiblade Innovators Club, and their teams are developing a light-“Internet of Things”-solution to be presented soon in a one-of-a-kind operation. Leveraging creative thinking between offices in Milan and New York, their designers are pushing the boundaries to anticipate change in people’s lifestyles and showing that OLEDs are much more than just another light source. Stay tuned for more!

INERTIA PROJECTS

The new design by Inertia Projects is a luminaire consisting of two opposing machined aluminium plates, held in position by a stainless steel tube and tensioned with a steel wire.



T°RED

T°RED is “design magic made real”. Their C7OLED is a revolution: a beautiful object made possible by contemporary design, which frees itself from the ostentation of technology while encompassing it in its pure and functional line.

Imprint

Lumiblade Insider
Issue 1/2015

Published by

Lumiblade OLED Lighting
Philipsstr. 8
52068 Aachen
Germany

Publishing house

wesentlich. verlag GbR
Alfonsstraße 44
52070 Aachen
Germany

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Art direction / layout

wesentlich. visuelle Kommunikation,
www.wesentlich.com

Print

Druckerei Ralf Küster
Im Erdbeerfeld 20
52078 Aachen
Germany
www.druckerei-rk.de

ISSN

2364-5695

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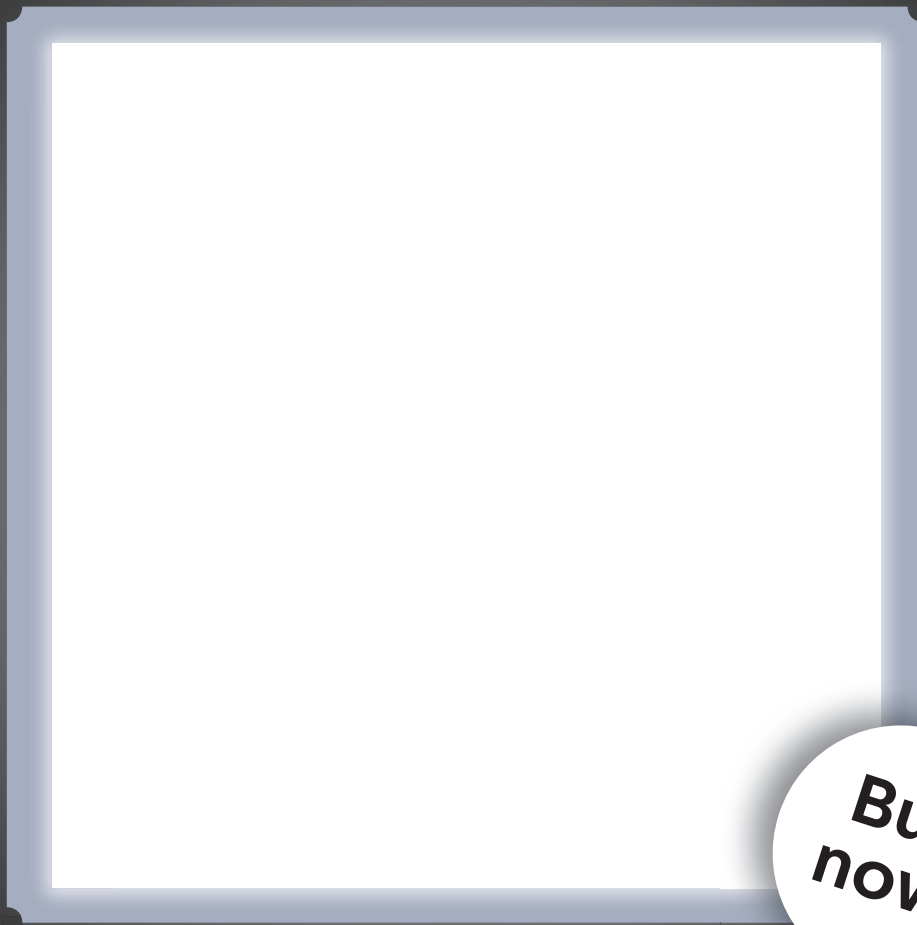
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creative
life

we must
lose our fear
of being
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