Project Spiritus

Final report
Market Study

27 April 2021

Prepared for

Profoto

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Reliance restricted
Any person intending to read this report should first read this letter

Profoto Invest AB
Attention: Tobias Lindbäck

Project Spiritus

27 April 2021

Dear Tobias,

In accordance with your instructions set out in our engagement agreement dated 8 March 2021 (the “Engagement Agreement”) in connection with the contemplated IPO concerning Profoto Invest AB (the “Transaction”), EY-Parthenon has prepared a market study with the purpose to develop an independent view of the relevant markets for Profoto in a form that may be useful for potential investors in their assessment of the Transaction.

Purpose of our report and restrictions on its use

This report was prepared on the specific instructions of the directors of Profoto Invest AB solely for the purpose of the Transaction and should not be used or relied upon for any other purpose.

This report and its contents may not be quoted, referred to or shown to any other parties except as provided in the Engagement Agreement.

We accept no responsibility or liability to any person other than to Profoto Invest AB, or to such party to whom we have agreed in writing to accept our responsibility in respect of this report, and accordingly if such other persons choose to rely upon any of the contents of this report they do so at their own risk.

Nature and scope of the services and limitations

The nature and scope of the services, including the basis and limitations, are detailed in the Engagement Agreement.

Our work commenced on 8 March 2021 and was completed on 27 April 2021. Therefore, our report does not take account of events or circumstances arising after 27 April 2021 and we have no responsibility to update the report for such events or circumstances.

(continued overleaf…)

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Prospective financial information (‘PFI’)

We have made factual findings and recommendations about specific assumptions and components of the PFI herein, where EY-Parthenon had sufficient evidence to provide a reasonable basis for them. Except as otherwise noted, we have not analyzed or commented on macroeconomic or geopolitical conditions that could impact the PFI. We have not provided any opinion, conclusion or any type of assurance about specific assumptions or components of the PFI or on the PFI as a whole.

There will usually be differences between estimated and actual results, because events and circumstances frequently do not occur as expected, and those differences may be material. We take no responsibility for the achievement of projected results.

We appreciate the opportunity to provide our services to Profoto Invest AB. Please do not hesitate to contact us if you have any questions about this engagement or if we may be of any further assistance.

Yours faithfully,

Henrik Eriksson	Andreas Gjelstrup	Gunnar Albemark
Partner	Associate Partner	Partner
Ernst & Young AB	Ernst & Young AB	Ernst & Young AB

Content

Glossary

Abbreviation and long form

AC	Alternating current (power source)
Approx.	Approximately
avg.	Average
B&H	B&H Foto & Electronics Corp. (e-commerce website)
bn	Billion
CAGR	Compound annual growth rate
CIPA	Camera & Imaging Products Association
Continuous lighting	Lighting solutions which emit light for an extended period; include video light
CPO	Chief Procurement Officer
DACH	Austria, Germany, and Switzerland
Dealer	Retailers who sell or rent products to end-users through either online, brick-and-mortar, or a mix of both
Distributor	Distributers of products - main customers are dealers and rental shops
DSLR	Digital single-lens reflex camera
e.g.	Exempli gratia ("for example")
e-com	e-commerce
EMEA	Europe, Middle East, and Africa
etc.	Et cetera ("and others")
EU32	European countries: Austria, Belgium, Bulgaria, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Liechtenstein, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, Switzerland, and UK
GB	Gigabyte of data
GDP	Gross domestic product
ICC	Independent content creator
IDC	International Data Corporation
LED	Light Emitting Diode (LED lights)

LFL	Like-for-like
m	Million
N =	Number of respondents/interviewees
N/A	Not available
NPS	Net Promoter Score
OCF	Off-Camera flash that can be battery powered or AC-powered. Alternate terms include strobes/studio flash/monolight
OEM	Original Equipment Manufacturer
p.a.	Per annum
PB	Petabyte of data, equivalent to one million GB
Profoto	Profoto
Prof., semi-prof.	Professional and semi-professional
RoW	Rest of world
SEK	Swedish Krona
Smart-phonography	Photography using smartphones
Speedlight	Flash equipment that can be mounted on a camera. Alternate terms include flash gun/on-camera flash
TTL	Through-the-lens measuring; a feature of cameras where intensity of light reflected from scene is measured through the lens
UK	United Kingdom
US	United States of America
USD	United States Dollar
Q	Question
w/	With
w/o	without
Y, yr, or yrs	Year(s)

Visual glossary of flags

Flags

🇪🇺	EU32[1]
🇨🇭🇦🇹🇩🇪	DACH; Germany, Austria & Switzerland
🇺🇸	United States of America
🇨🇳	People's Republic of China
🇯🇵	Japan
🇩🇪	Germany
🇬🇧	United Kingdom
🇫🇷	France
🇨🇭	Switzerland
🇸🇪	Sweden
🇪🇸	Spain

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1. The EU32 group of countries includes Austria, Belgium, Bulgaria, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Liechtenstein, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, Switzerland, and UK
2. DACH: Germany, Austria, Switzerland

The market study will assess the lighting solutions market at large including but not limited to Profoto's key customer, geography and product segments

Scope of work

Approach

The market study will describe the lighting solutions market

Geographic focus: Global scope according to the following breakdown: EU32, USA, China, Japan and Others

Segment focus:

Level 1: Image and content creation market

Level 2: Lighting solutions market

Level 3: Off-camera flash (full analysis), Speedlight (full analysis), Continuous lighting (light analysis)

Period: The market report focuses on recent market development from 2019 and 2020, as well as the 2021-2025 forecast period

SOURCES OF INFORMATION

- Publicly available information (e.g. research reports, statistics from associations)
- Profoto management and company information
- Interview with market participants (as detailed on subsequent slides)
- End customer web panel survey

Scope areas

Market attractiveness

- Overview of the market by segment; definition and introduction to addressable markets and end customers including description
- Assess market size and growth of markets for each segment and geographical market
  - Historical development and future outlook & key industry drivers and trends by segment
  - Evaluate COVID-impact on demand and impact on future market development
- Assess market size and growth of adjacent markets i.e. segments that could potentially be added to a market participants current offering as well as new geographies that can be entered
- Describe existing and emerging technologies for each segment and comment on how Spiritus is positioned in each section of the value chain where they operate
- Overview of key market regulations including timetables and descriptions of expected regulation changes

Competitive landscape

- Competitive landscape by segment across geographies
  - Key competitors and their respective market position / share, offering and distribution channels
  - Summary of relative strengths and weakness of key competitors
  - Brand perception, net promoter scores (NPS), customer stickiness (EL addendum)

Growth opportunities

- Evaluate growth opportunities for light shaping solutions market participants
- Market profile from an M&A perspective and recent M&A activity

The findings in this report are based on interviews with market participants, end-user survey, management information as well as other secondary sources

Sources used for this report

Primary research sources

Market participant interviews (N = 46) *conducted March-April 2021*

- Internal Profoto distributors[1]
- Profoto dealers and distribution partners[1]
- Other market participants

End-user web survey ('End-user web survey') (N = 636) *conducted March-April 2021*

- China
- USA
- UK
- China
- Japan
- DACH region[2]

Secondary research and sources

Data and information provided by Profoto

- Interviews and workshops with Profoto management
- Company financial data
- Company presentation
- Other company reports and documents

Market and statistics data

- Camera & Imaging Products Association (CIPA)
- Statista
- IDC
- Competitor websites
- Camera equipment and lighting solution dealer websites

1. See glossary for definition
2. Germany, Switzerland and Austria

The market study has incorporated 46 interviews with camera OEMs, lighting solutions manufacturers and distributors, camera equipment dealers & users across geographies

Customer and market participant interviews

Completed interviews[1]

Market participant interviews (n=9)

1. Executive at camera equipment manufacturer (US)
2. Former executive at camera manufacturer (UK)
3. Former executive at lighting manufacturer (US)
4. Former EMEA director at camera manufacturer (UK)
5. Sales executive at camera manufacturer (Japan)
6. Sales Manager at camera manufacturer (Germany)
7. Former CPO at lighting manufacturer (US)
8. Sales executive at camera manufacturer (US)
9. Director at lighting manufacturer (France)

Distributors (n=13)[2]

1. Graphic Cart (Switzerland)
2. Innova Foto (Iberia)
3. Grange SRL (Italy)
4. T.Tanaka (Brazil)
5. ShriShti (South East Asia)
6. Avras (Russia)
7. C.R. Kennedy (Australia)
8. International VH (Korea)
9. Profoto distribution (Japan)
10. Profoto distribution (Germany)
11. Profoto distribution (USA)
12. Profoto distribution (China)
13. Profoto.com (Sweden)

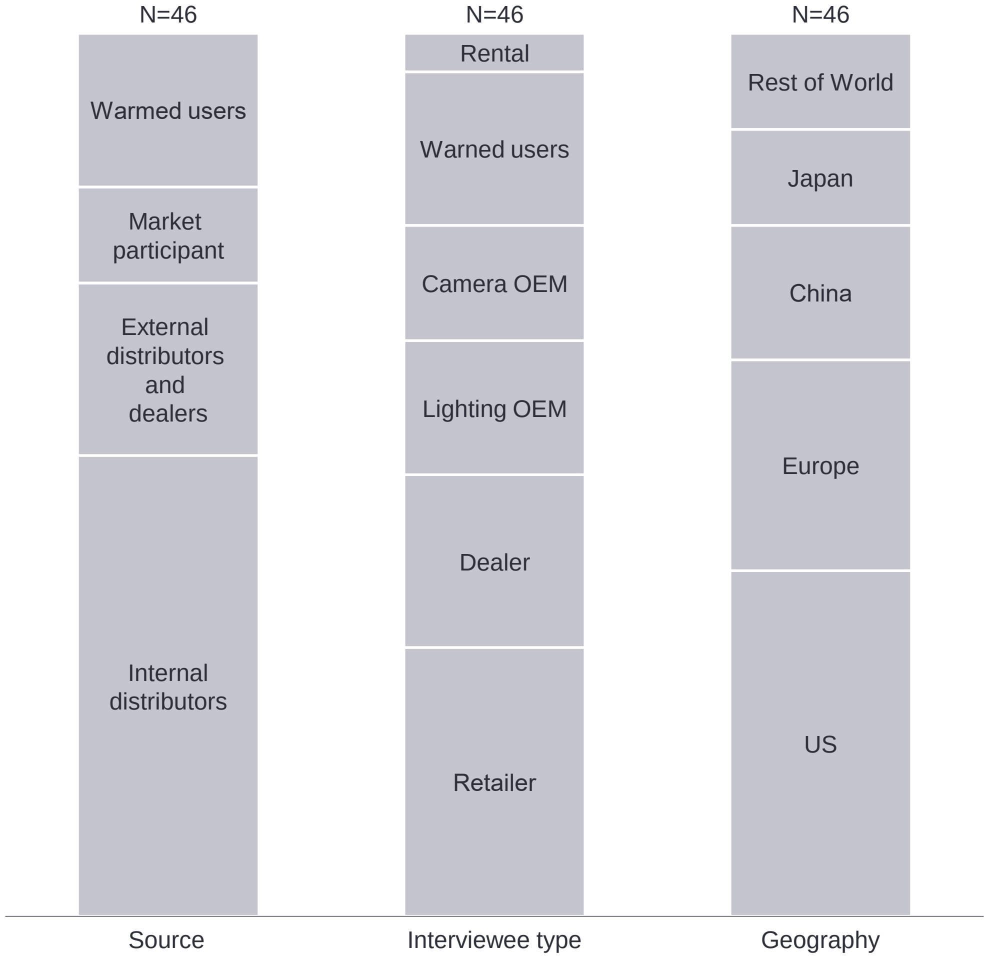
Dealers (n=16)[2]

1. B&H retail (USA)
2. B&H online (USA)
3. Adorama (USA)
4. Samy's (USA)
5. Photo Care (USA)
6. Pictureline (USA)
7. Calumet (Germany)
8. WEX (UK)
9. Syuppin (Japan)
10. Gearhouse Rental (Japan)
11. Ruifan (China)
12. Maichaji Shenzhen (China)
13. Maichaji Guagzhou (China)
14. Kada Beijing (China)
15. Flashcamp (China)
16. Nanjing Shengdi (China)

Warmed end-user interviews (n=8)[3]

1. 8 Profoto end-users

Overview of interviewee profiles



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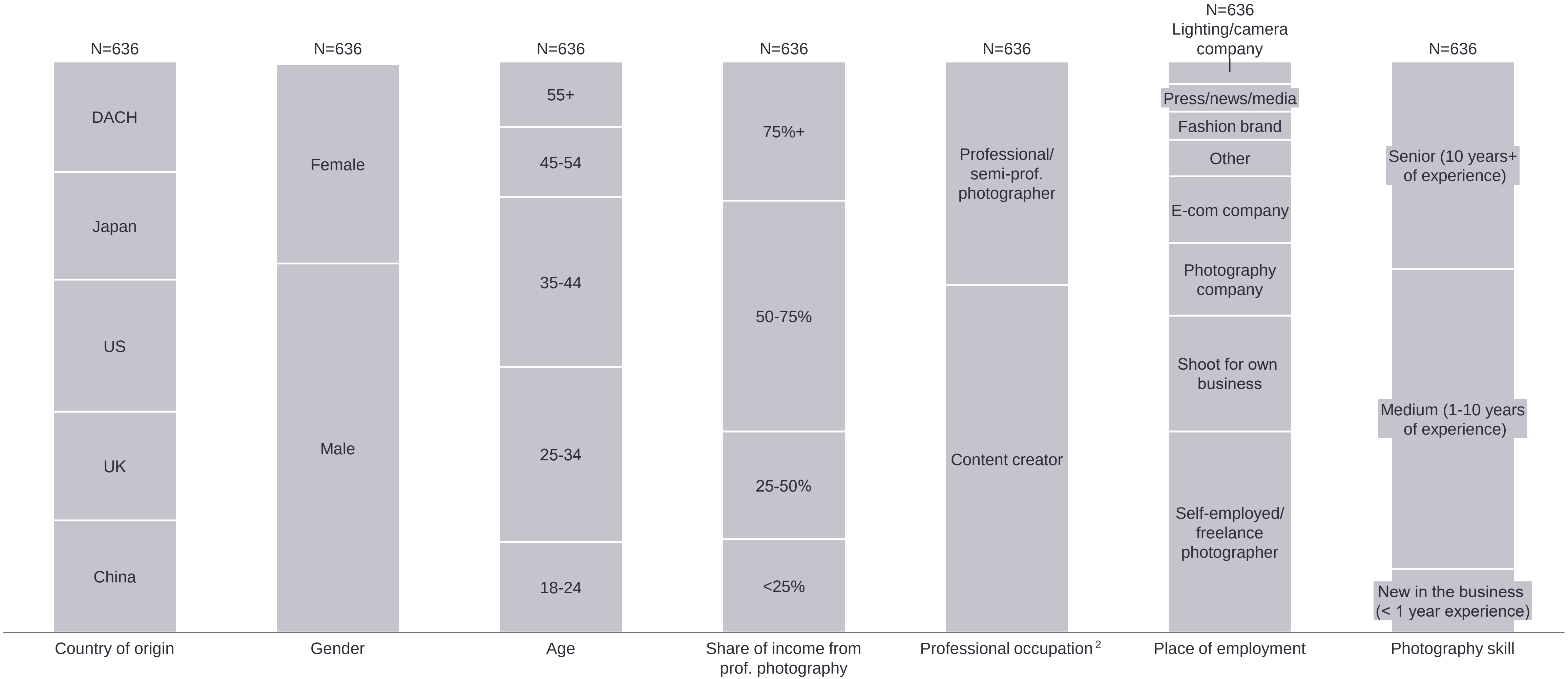
1. Market participant interviews (9 in total) were sourced externally, while the remainder (distributors, dealers and user) were sourced via Profoto management
2. See glossary for distributor and dealer definition
3. Selection of high-end Profoto end-users provided as warmed contacts via Profoto management

The end-user survey targeted a selection of geographies and reached a total of 636 respondents with broad demographic distribution

End-user web survey respondent demographics[1]



1. Geographic scope includes largest end-markets for lighting-equipment, together accounting for c. 75% of the global market. UK and DACH region countries were used as proxies for the EU32.
2. Participation in the survey was limited to individuals who have some income from photography and identify themselves as a professional/semi-professional photographers or content creators. Therefore, amateur photographers are not represented

Content

Profoto operates within the lightning solutions market, a subsegment of the broader image and content creation market

Market attractiveness – Market structure

Key findings

Image and content creation market Context

- The broader **image & content creation market** encompasses a number of areas including film, cinema, broadcasting, video, and still photography
- The market **has been growing** in recent years fueled by favorable macroeconomic, social, and tech-related trends/digitalization, such as:
  - Increasing disposable income and an expanding middle class in developed markets as well as emerging markets such as China, have resulted in **increased spend** on **travel, events, camera equipment and smartphones,** driving both demand for and creation of image and video content.
  - The **demand for, and production of, digital content** has been **increasing exponentially in recent years** and is **expected to continue doing so**. This is particularly driven by the increase in **smartphone use**, which provides users with access to cameras and further opportunities for content creation and sharing
  - Growing **e-commerce and new ways of shopping** have **increased the demand for digital images and video**
  - Though **COVID-19-related restrictions** have resulted in a **decrease in travel and events, limiting on-location work** for photographers, **recovery is expected by 2023.** Events are expected to recover faster than travel

Lighting solutions market overview

- Photographers and content creators use a wide range of solutions; **lighting is a key component to enhance image quality** and consists of flashes and other lights, light shaping tools & accessories as well as software
- **Average spend per user on camera equipment is ~30 SEKk per year**, however this varies by user and increases with share of income from photography and experience. Lighting solutions constitute approx. **25% of camera equipment spend.**
- Choice of main lighting solution varies by market and type of user – the US shows higher share of continuous, while Japan and China exhibit tendency toward speedlight
- Various technological advancements have been emerging in the lighting solutions space likely to create new growth opportunities, such as more powerful LED technology, 3D imaging and wireless connectivity and software solutions
- Lighting equipment OEMs have traditionally reached end-users through indirect sales channels, with dealers and rental shops acting as the primary user touchpoint. Supply chain participants all play a key role of influencing the purchase decision making process of the end user and positioning the product in the market

The global lighting solutions market had an estimated value of 8.2bn SEK in 2019, with the EU32, the US, China and Japan are the largest end markets

Market attractiveness – Market size, drivers and trends

Key findings

Market size, drivers and trends

- **The EU32, US, China and Japan account for ~75% of the global lighting solutions market**
- **Continuous lighting solutions constitute the largest share of total lighting solutions market value** across geographies. The remaining value is composed of OCF and speedlights, but respective shares vary by country
  - Characterized by a high purchasing power and premium camera and lighting manufacturers, the EU-32 markets demand high-end and innovative products such as battery powered OCF
  - With a high influence from the cinematographic industry and large scale events, the US is the market with the highest demand for continuous lighting products. Continuous lighting also plays an important role in China due to the interconnection between social medial and ecommerce, driven by players such as Taobao Alibaba, WeChat and Tiktok.
  - Home of the largest camera manufacturers in the world, the Japanese lighting market is influenced by its local brands (Canon, Nikon, Sony) driving demand for its traditional speedlights
- The **lighting equipment market** has **been steadily growing** despite a **decline of sales and value in the overall camera market**
- **Tailwinds for growth include an increase in the addressable user base, driven by the expansion of ecommerce and the adoption of smartphones with high quality cameras**
  - Increases in **smartphone adoption** and **the number of content creators** are expected to expand the **addressable user base** for lighting solutions, offsetting the impact of shrinkage in digital camera sales
  - The rapid growth in e-commerce has led to increased demand for digital content production
- **Penetration of lighting solutions is also expected to increase**
  - The majority of professional photographers and content creators already use lighting solutions, **~70% of those who don’t indicate that they are open to use external lighting in the future**
  - Penetration of **continuous lighting** increases with the photographers’ **share of video work**, and is **higher amongst content creators** compared to professional photographers - Spend outlook for continuous lighting is positive as end-users migrate toward becoming “hybrid users”, creating both still images and video content
- Polarization of the market due to the ongoing price war in the low-end segment and price increases in the premium segment is creating **an opportunity for premium brands to capture market share**

The market has been impacted by COVID-19, however demand is expected to recover by 2023 with 3-5% growth p.a. expected thereafter

Market attractiveness – Outlook

Key findings

Market outlook

- The lighting solutions market **contracted by ~30% in 2020 as a result of COVID-19**, with speedlight estimated to have been most impacted and self-employed photographers decreasing their spending most
  - **Speedlight** was disproportionately affected because **demand** has contracted in general recent years due to the **displacement of lower-end cameras by smartphones** and **substitution by low-cost off-camera flash,** and is expected to continue contracting by 2-4% p.a. in 2023-2025
- However, the lighting solutions market is expected to **return to 2019 levels by 2023** and to **continue growing by 3-5% p.a. through 2025**
  - Spend on lighting equipment is expected to **return to pre COVID-19 levels by the end of 2023**, with a large share of survey respondents expecting normalization as soon as 2021 and 2022
  - **Asian markets are expected to recover faster**, driven by underlying growth in the Chinese market along with relatively unrestricted populations in other APAC countries such as Australia and South Korea, when compared to other regions globally
  - **More than two out of three market participants expect positive long-term growth** for the lighting solutions market with average growth expectations of **~4% p.a.**
- **Spend on lighting solutions** is **expected to increase from 2020 levels**, due in part to a **COVID-19 rebound**, with **spend on off-camera flash and continuous lighting** expected to reach pre-COVID-19 levels in 2023
  - The **continuous lighting** segment is expected to recover faster, at a rate of **6-8% p.a.**
  - A majority of end-users expect their **long-term spend on lighting solutions to increase**, with spend in **China** expected to increase the most
  - **continuous lighting and battery-operated OCF spend** are expected to increase more than other lighting solutions. Strongest growth is expected within the **continuous lighting segment,** driven in part by a migration towards becoming **"hybrid users" creating both still images and video content**

The lighting solutions market is consolidated – a handful of key players dominate with few competing in both the flash and continuous lighting spaces

Competitive landscape

Key findings

Competitive landscape

- Lighting end-users can be segmented into high-end image creators, mainstream professionals and prosumers, and amateurs / general hobbyists, with high-end image creators demanding the most in terms of quality, consistency and productivity while having the highest spend per customer
  - **High spending users value quality, durability and innovation above all**, while value for money is more important for mainstream users
  - Corporate accounts are becoming increasingly significant due to the rise of e-commerce and in-house studios with high demands on quality and productivity
  - **Rental shops are important for end-users whose work vary by type of event and those who travel** – ease of integration, logistics and user friendly gear are key criteria
- **The flash lighting market is consolidated** and characterized by **a few leading premium and value brands and global speedlight providers** catering for different end-user needs, with the premium segment dominating amongst high-end image creators
  - **Profoto and Godox are the largest players in the market** with ~20% and ~25% market share respectively while addressing different end-users
  - The leading flash players have a long heritage of providing solutions for professional photographers – Godox has become a key player on the market over the last decade
  - Legacy camera manufacturers still have a strong footprint within speedlight, while a long-tail of flash providers address various end-user needs
  - **Profoto is the most recognized among premium brands as well as the general market** – with all top brands well known among users
  - **Profoto has the highest NPS of the premium brands** targeting the most demanding users, while Godox rates lowest of the top players
  - With a high level of innovation across key flash brands, **Profoto differentiates as innovation leader**, having been first to market on major new product launches
  - The premium brands have successfully captured higher pricing for similar product segments relative to competitors
  - **Profoto has a leading position in the rental shops and the dealer channel** with a broad footprint and geo coverage supported by incentives designed to drive rental and sales
- The continuous lighting solutions consists of premium brands for high-end filmmaking, multipurpose lighting providers, and brands who focus on still photography/video gear – several flash players compete within the latter category
  - **A majority of the key continuous flash competitors offer multi-purpose solutions**, while Godox and Westcott focus on still photography and video-oriented end-users
  - **Brand awareness is generally high for key continuous lighting brands**, and Westcott has the highest brand awareness
  - Westcott, Hive, and Rotolight have the highest NPS, while Nanlite and Light & Motion trail behind

Several avenues for growth exist in the broader lighting solutions market

Market growth opportunities

Key findings

Market growth opportunities

- There is a **growing demand for continuous lighting driven by content creators active in social media and live streaming platforms** as well as by traditional photographers extending their services beyond still picture and into film making.
  - **Nearly 90% of photographers plan to use continuous lighting** in the upcoming years. Furthermore its application seems not limited to video making, as ~80% of survey participants plan to use continuous lighting for content creation work that includes still picture.
- Lighting for smartphones is expected to become increasingly relevant as a **growing share of content creators use smartphones** in their professional work
  - More than **one in three photographers report using their smartphone camera in their work** and ~75% plan to do so in the future, **most of whom intend to use an external flash**
  - Whilst some early adopters have already caught the trend, smartphone lighting is still early in the adoption curve and there is large untapped potential when adoption increases within the mass market
- Workflow solutions and industrial applications are **set for high growth and have high demands for lighting and other equipment**
  - **Demands for new and/or improved types of lighting solutions are increasing** amongst industries such as e-commerce, cinematography and gaming, product design, navigation and others
  - **E-commerce and fashion brands are a key near term growth area** that are more mature than other industrial applications, while **large potential exists within 3D imaging and spatial mapping** in the medium to long term

Content

Profoto operates within the lighting solutions market, a component of the wider image & content creation space, which has favorable tail winds from long term macro trends

Chapter summary – overview of key findings

Key findings

Image and content creation market context

- The broader **image & content creation market** encompasses a number of areas including film, cinema, broadcasting, video, and still photography
- The market **has been growing** in recent years fueled by favorable macroeconomic, social, and tech-related trends/digitalization, such as:
  - Increasing disposable income and an expanding middle class in developed markets as well as emerging markets such as China, have resulted in **increased spend** on **travel, events, camera equipment and smartphones,** driving both demand for and creation of image and video content.
  - The **demand for, and production of, digital content** has been **increasing exponentially in recent years** and is **expected to continue doing so**. This is particularly driven by the increase in **smartphone use**, which provides users with access to cameras and further opportunities for content creation and sharing
  - Growing **e-commerce and new ways of shopping** have **increased the demand for digital images and video**
  - Though **COVID-19-related restrictions** have resulted in a **decrease in travel and events, limiting on-location work** for photographers, **recovery is expected by 2023.** Events are expected to recover faster than travel

The image and content creation market can be segmented into imaging, production and creative solutions which are used to produce a range of content types

Market definition

Primary content types

Still photo | **Video** | **Broadcasting** | **Film** | **Cinema**

Image and content creation market

Imaging solutions
Solutions for photography, video cameras and smartphones for image makers, ICCs, influencers, vloggers and studios

- **Lighting solutions**
  Lighting solutions for still photography and video
- **Cameras, bags and accessories**
  Solutions to capture still images and video
- **Motion control and stabilizers**
  Tripods and other stabilizing equipment for cameras
- **Audio solutions**
  Microphones and other equipment to capture audio

Production solutions
Advanced production technology solutions for broadcasters, cinematographers and content creators

- **Prompters**
  Prompting solutions for broadcasting and video
- **Production lighting solutions**
  Advanced lighting solutions for cinema/video
- **Mobile power**
  Portable battery and charging solutions
- **Camera systems**
  Advanced camera/video solutions for production

Creative solutions
Products, solutions and software for film, scripted television series, independent video and enterprise video production

- **Video transmission systems**
  Advanced video solutions for broadcast/cinema
- **Monitors**
  Monitor solutions for video and production
- **Lens control systems**
  Systems and motors to control camera lenses
- **Live streaming**
  Solutions for video and live streaming production

🟦 *Key segment assessed in this report*

Growth is supported by several favorable mid to long-term macro trends

Macro trends affecting the image and content creation market

↗ Positive impact … → … ↘ Negative impact

Macro trend	Description	Impact on image and content creation market	
1 **Economic growth**	▸ Favorable GDP outlook post-COVID and a continued rise of the middle class in China with higher disposable incomes, expected to drive increased spend on events such as weddings, as well as on camera equipment	↗ *Long-term*	“There is an emerging middle class that is increasingly demanding professional photography services” Lighting distributor
2 **Increasing demand for digital content**	▸ Increasing digital consumption and content creation, hours of YouTube videos uploaded per minute grew from 35 to 500 2010-2019, and number of still images captured per year increased from 380bn to 1,200 bn 2010-2020	↗ *Long-term*	“Professional photographers are turning into content creators who do both still picture and video production” Photography equipment dealer
3 **Adoption of smartphones**	▸ Number of sold smartphones, which has been increasing over recent years, is expected to grow by 4% p.a. between 2020 and 2025, which may drive an increase in image and content creation amongst both amateurs and professionals	↗ *Mid-term*	“Smartphone use for photography has increased. Today phones have up to 4-5 lens cameras.” Photography equipment dealer
4 **Growth of e-commerce**	▸ E-commerce share of total retail sales is increasing, with global e-commerce sales forecast to grow 11% p.a. through 2025, in turn driving demand for professional product photography and content creation	↗ *Long-term*	“With COVID-19 there is an increased demand of catalogue shooting for e-commerce use” Photography equipment distributor
5 **Changing travel patterns**	▸ International leisure travel grew by 5% p.a. 2015-2019, and is expected to recover from the COVID dip by 2023 and to continue growing throughout 2025, enabling international work opportunities for professional photographers	→ *Mid-term*	“Currently it is impossible to travel, and the industry is dependent on social gatherings” Former executive at lighting OEM

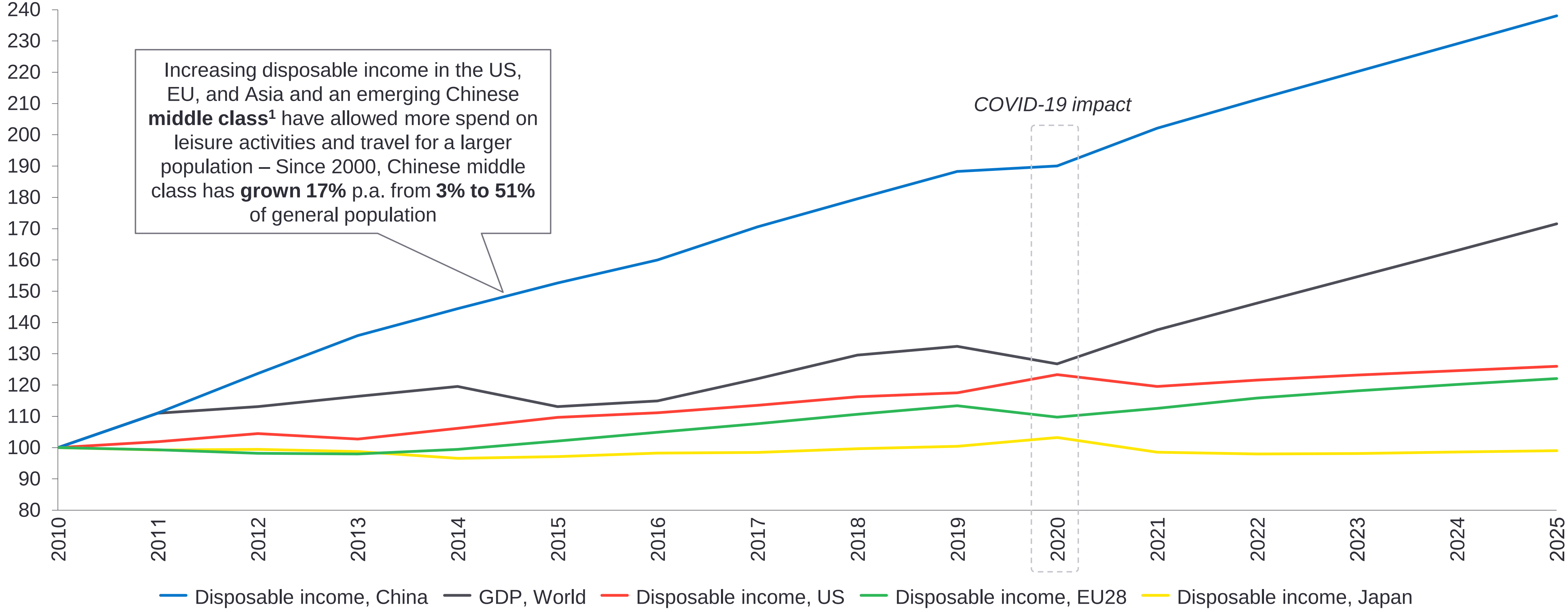
\# Indicates connection to analysis presented on following slides

Source: Market participant interviews

Rising disposable incomes and emerging middle classes are driving increased spend on camera equipment and demand for event photography

1 Disposable income and middle class on the rise

GDP and disposable household income^2 forecast (indexed)



Increasing disposable income in the US, EU, and Asia and an emerging Chinese **middle class**[1] have allowed more spend on leisure activities and travel for a larger population – Since 2000, Chinese middle class has **grown 17%** p.a. from **3% to 51%** of general population

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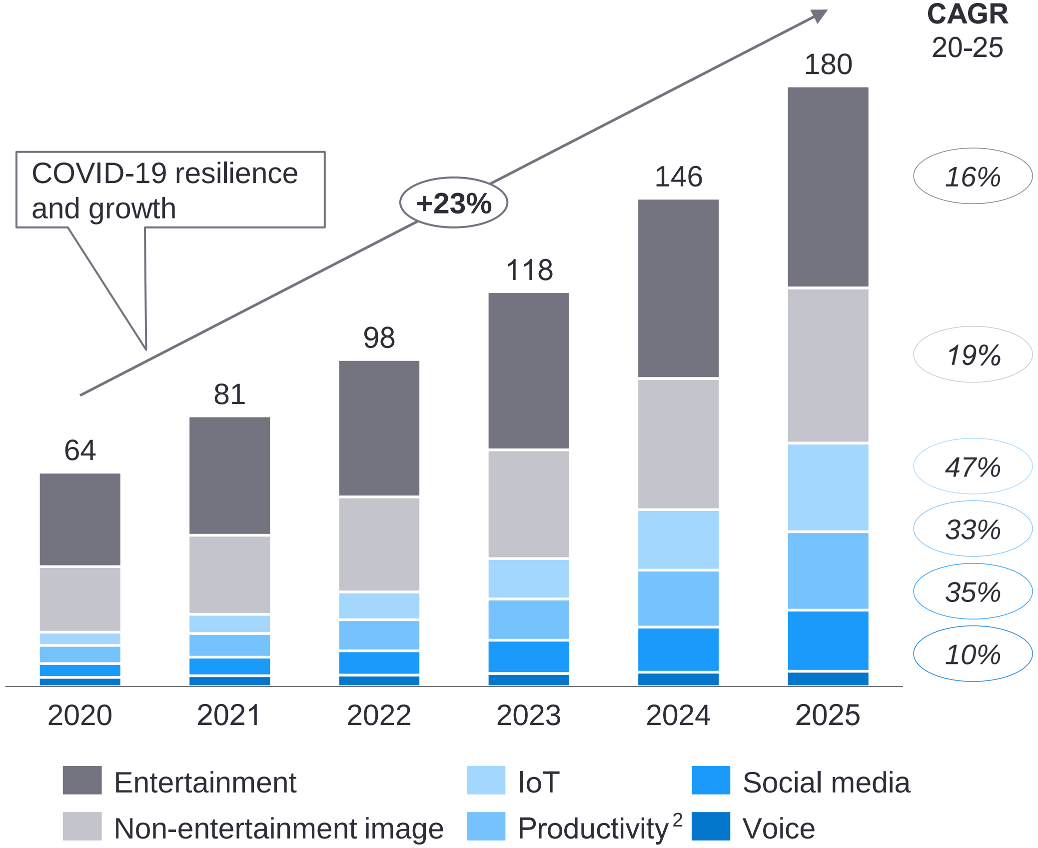
1. Middle class defined as having a daily income between USD10-50 or an annual income of USD3 650-USD18 250
2. Constant currency, USD 2015 level

Source: Oxford Economics; World Bank; IMF, Updated Oct 2020

Demand for, and production of, digital content has been growing, and is expected to continue doing so (video content for social media in particular)

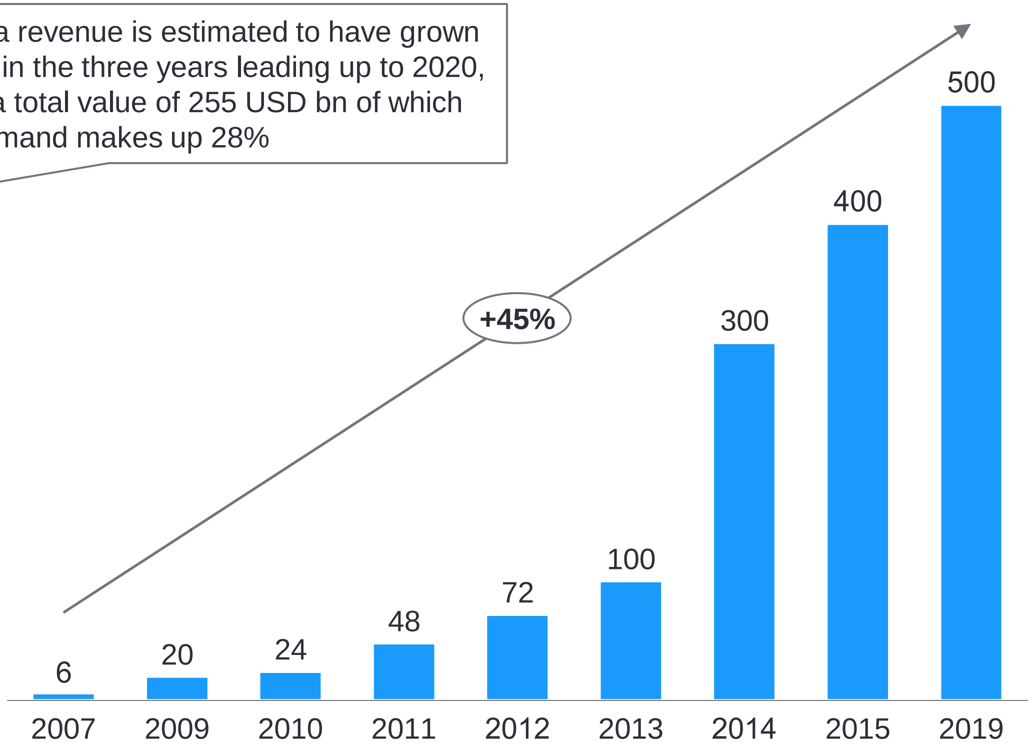
2 Digital content and digital media

Data generated, globally (m PB[1])



Digital media revenue is estimated to have grown by 17% p.a. in the three years leading up to 2020, resulting in a total value of 255 USD bn of which video-on-demand makes up 28%

Hours of video uploaded to YouTube per minute



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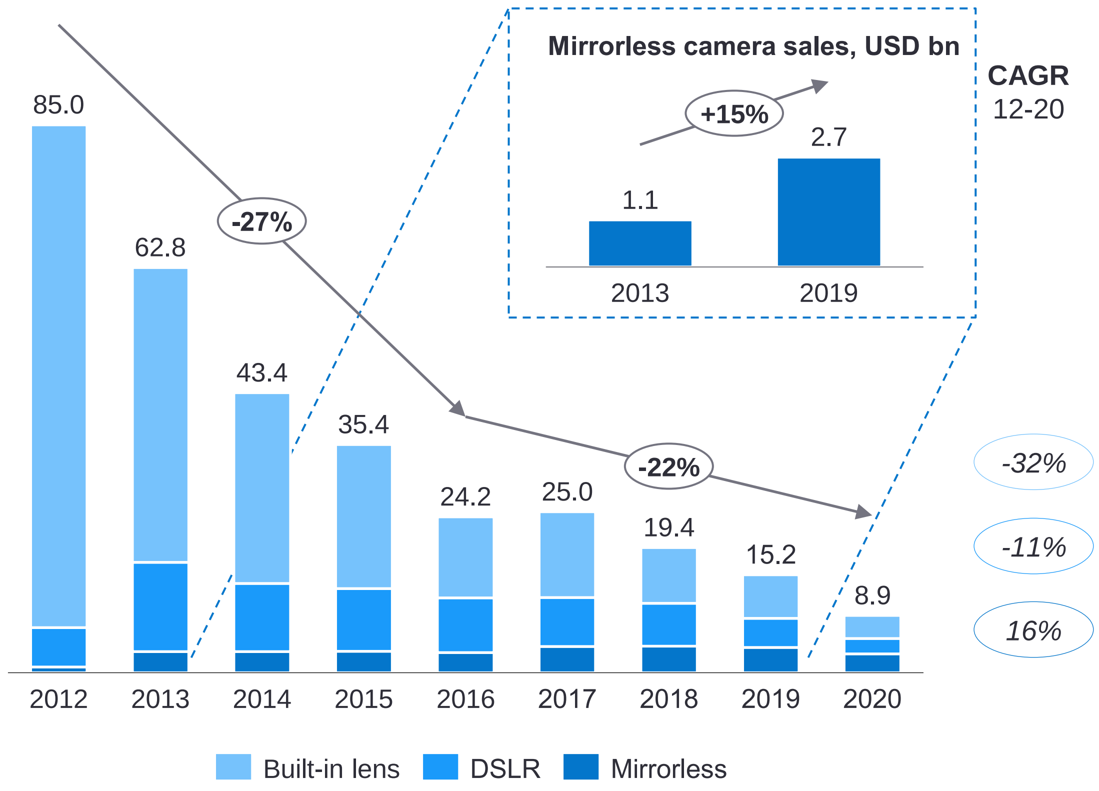
1. One PB equals one million GB
2. Productivity data refers to operational data generated by e.g., users, customers or processes

Source: Statista, updated July 2020 and May 2019; IDC, updated March 2021

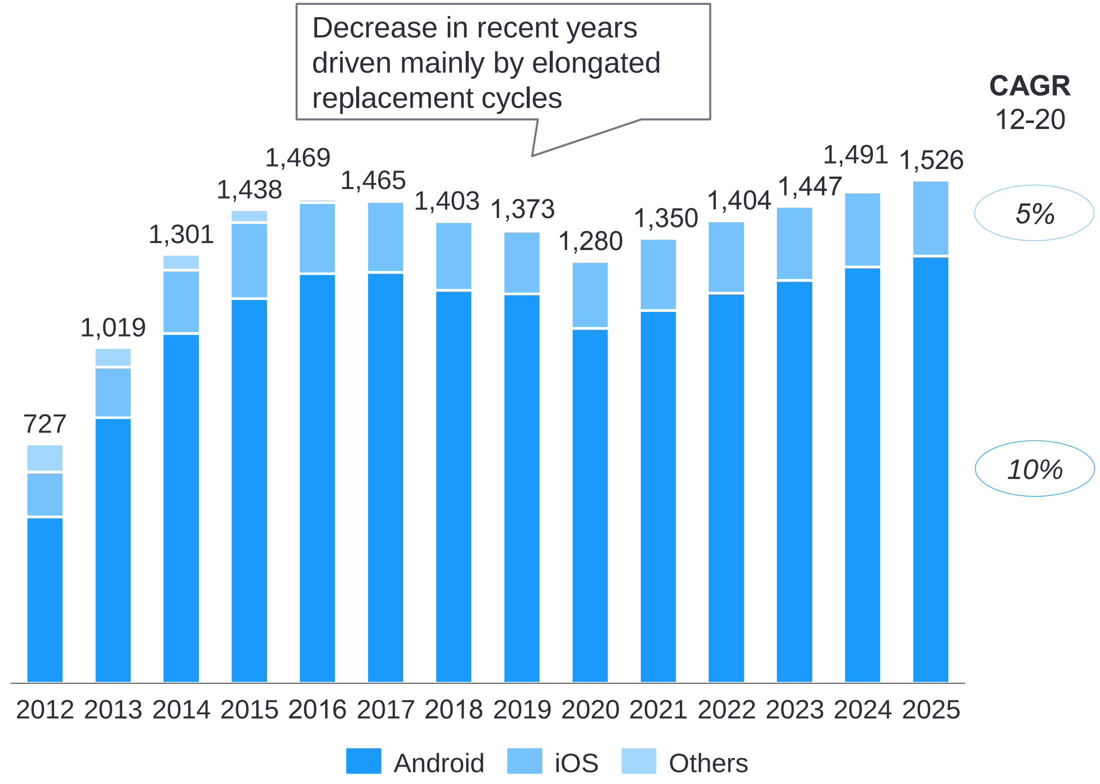
While sales of digital cameras have decreased due to the use of built-in smartphone cameras, sales of more sophisticated cameras (e.g. mirrorless) have been resilient

3 Smartphone adoption

Global digital camera sales (m units)



Global smartphones sales (m units)



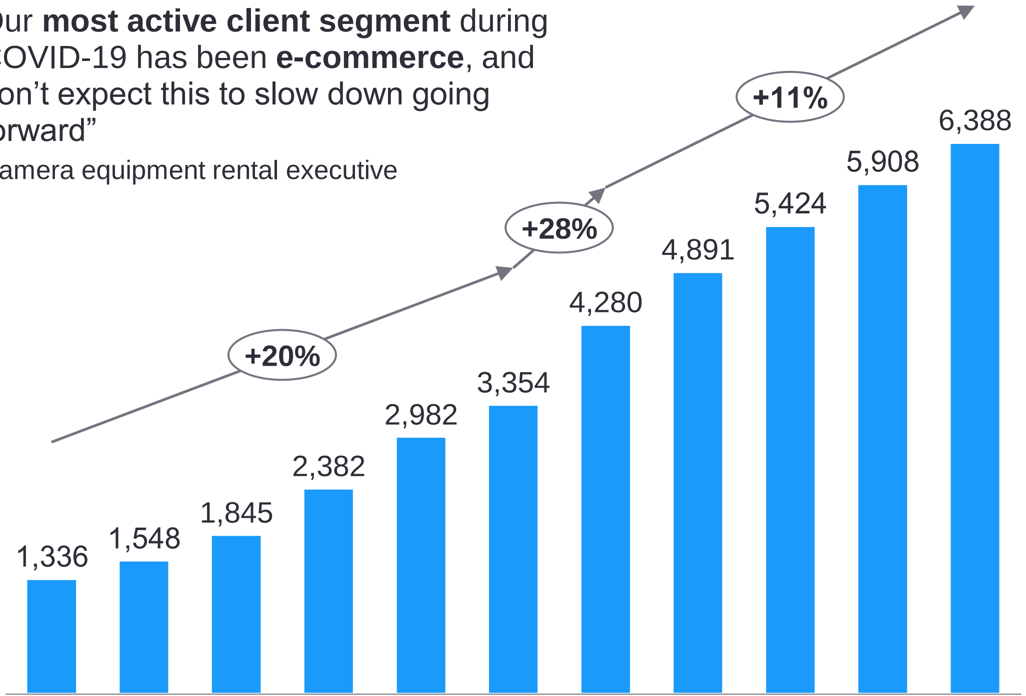
Source: CIPA; IDC, updated March 2021

Global e-commerce is growing both in volume and as share of total retail sales, driving demand for digital images and video

4 Growth of e-commerce

Global e-commerce sales (USD bn)

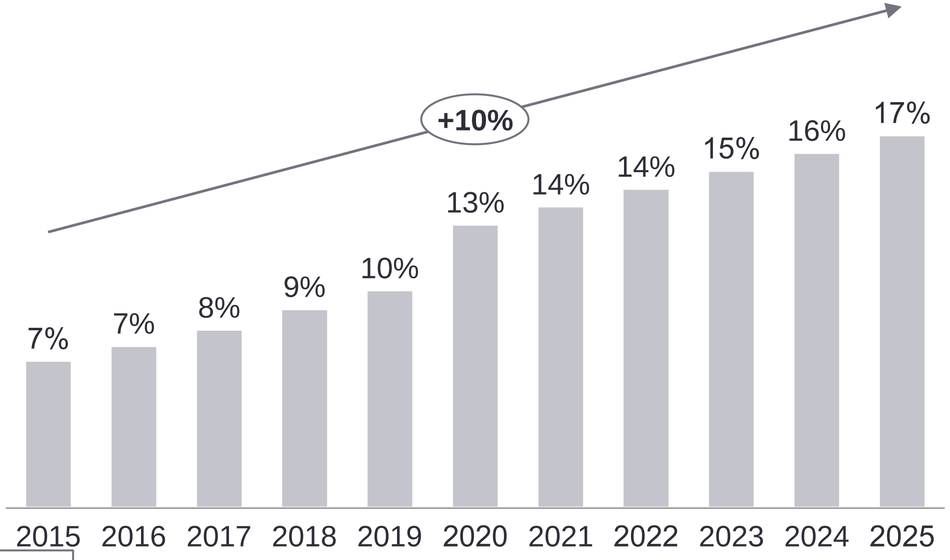
> “Our **most active client segment** during COVID-19 has been **e-commerce**, and don’t expect this to slow down going forward”
> Camera equipment rental executive



According to the EY Future Consumer Index, reduction in physical store visits is the #1 change in consumer behavior due to COVID-19

E-com share of retail sales, EU-32 (%)

> “E-commerce is very developed in terms of using camera equipment – there is an growing need for companies to do so, and looking forward I expect this to drive an increase in demand”
> Photography equipment dealership owner

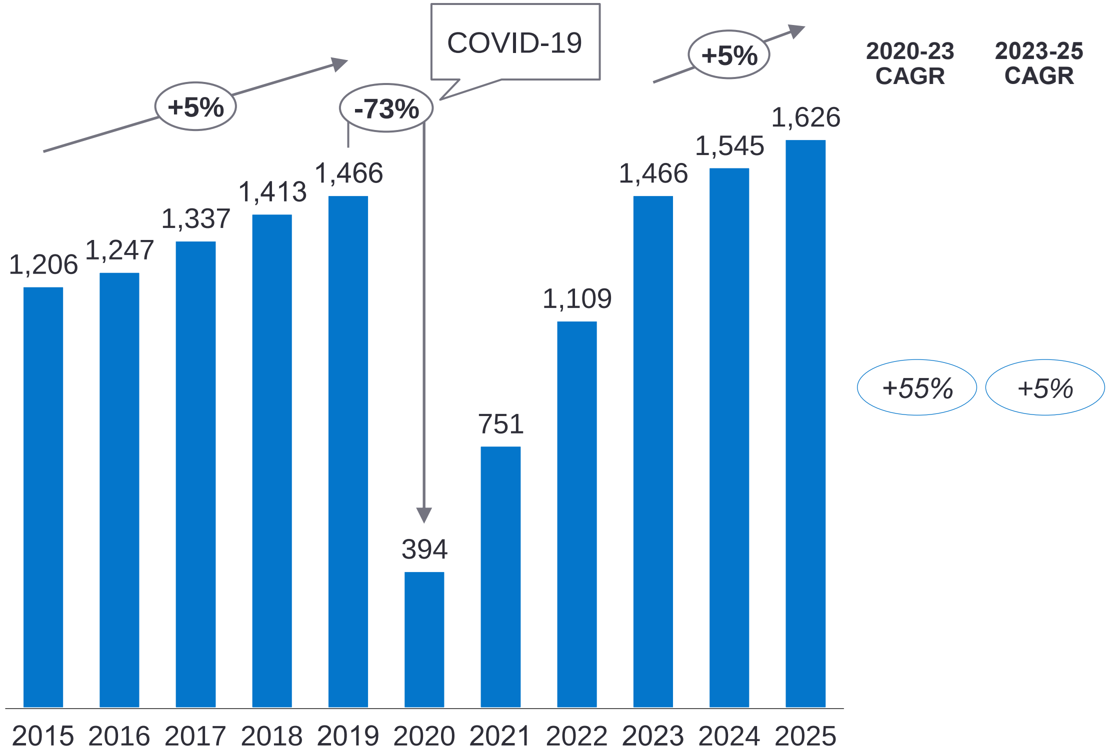


Source: Statista, updated Dec 2020; Euromonitor; Market participant interviews

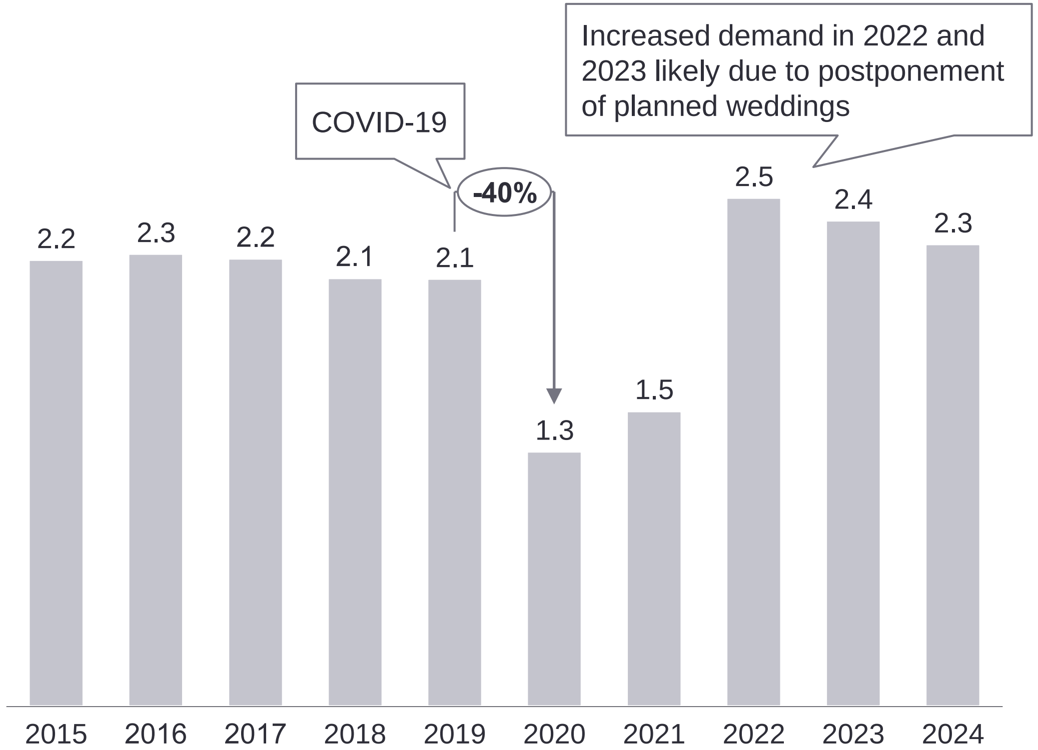
Long-term growth of leisure travel and events, such as weddings, expected to rebound from the COVID-19 dip by 2023

5 Ongoing travel and social restrictions

Travel development, globally (m international arrivals)



Number of weddings, US (m)



> “During the pandemic there has been a negative effect in sales since less travel means less shooting events, hence less investment in equipment”
> Top-tier Camera OEM executive

> “There might be a behavioral change in the event industry, with more selected get-togethers”
> Top-tier lighting OEM sales executive

> “The wedding portrait segment is highly affected. COVID shut down the industry for 1.5 years”
> Mid-tier lighting OEM former executive

> “Post COVID-19, the events will come back. People will get married and demand photographic services”
> Camera equipment rental executive

Source: World Tourism Organization, latest data update Jan 2021; The Wedding Report, latest data update 2021; Market participant interviews

Content

Lighting solutions is a key component of the image & content creation market, covering a number of solutions used to shape light

Chapter summary – overview of key findings

Key findings

Lighting solutions market overview

- Photographers and content creators use a wide range of solutions; **lighting is a key component to enhance image quality** and consists of flashes and other lights, light shaping tools & accessories as well as software
- Lighting solutions constitute approx. **25% of camera equipment spend.** Spend tends to increase with a photographer's **experience and share of income from photography**, and provides opportunities for photographers to enhance the quality of, and differentiate, their work
  - Spend on lighting equipment varies significantly between end-users, depending on level of seniority, work performed and client expectations
- Choice of main lighting solution varies by market and type of user – the US shows higher share of continuous, while Japan and China exhibit tendency toward speedlight
- **Average spend per user on camera equipment is ~30 SEKk per year**, however this varies by user and increases with share of income from photography and experience
- **On average, lighting equipment is replaced every 3-4 years**, but replacement rates can vary depending on the type of end-user
- Various technological advancements have been emerging in the lighting solutions space likely to create new growth opportunities, such as more powerful LED technology, 3D imaging and wireless connectivity and software solutions
- Lighting equipment OEMs have traditionally reached end-users through indirect sales channels, with dealers and rental shops acting as the primary user touchpoint. Supply chain participants all play a key role of influencing the purchase decision making process of the end user and positioning the product in the market

Photographers and content creators use a wide range of solutions; lighting is often a key component, with varying needs depending on the requirements of their work

Photography solutions landscape

Digital cameras

Capture and store photo and video digitally


Compact system cameras


DSLRs


Mirrorless cameras

Interchangeable lenses

Lenses for digital cameras


Fixed focal/special purpose


Zoom lenses

Tripods

Devices used to position cameras


Lightweight/portable


Medium duty tripods


Heavy duty/studio tripods

Lighting solutions

Additional source of light used when capturing content


Off-camera flash


Speedlights


Continuous lights

Kitbags

Bags for carrying cameras and associated equipment


Pouches/holsters


Shoulder bags/backpacks


Cases

Other

Other equipment used when capturing images including e.g.,


Memory cards


Grips

Software

Integrated software solutions

Lighting solutions is a key component to enhance image quality for most photographers

Source: CIPA, Market participant interviews

The lighting solutions landscape consists of a range of lighting, shaping tools & accessories as well as software – all of which are used to create and shape light

Lighting solutions landscape

● High ··· ○ Low ✓ Fit ~ Partial fit ✗ Not a fit ILLUSTRATIVE

Solution	Description	Use cases		End-user group		Pricing[1] (SEKk)	Purchase frequency[2]
		Still photo	Video	Freelance	Studio		
Off-camera flash 	- A flash which is operated separately from the camera and is powered through battery or AC - Includes battery-operated portable monolight/strobe and AC-operated flash/strobe (sometimes referred to as studio lights)	✓	~	◐	◐	- High-end: 15-25 - Low-end: 2-6	3-4 years
Speedlight 	- A flash which is attached on top the camera, also referred to as an on-camera flash or flash gun	✓	✗	◕	◔	- High-end: 7-11 - Low-end: 2-5	3-4 years
Continuous lighting 	- Lighting solutions which emit light for an extended period, in comparison to a flash which emits light when a photo is taken - Continuous lighting is sometimes referred to as video light	✓	✓	◐	◐	- High-end: 7-12 - Low-end: 2-5	3-4 years
Shaping tools and accessories 	- Umbrellas, reflectors, air remotes and other accessories are sometimes referred to as “softboxes” and are used to support the actual lighting gear	✓	✓	◐	◐	- *N/A*	- *N/A*
Control solutions 	- Control solutions and underlying software solutions such as control systems, trigger solutions and wireless connectivity between devices developed to enhance the user experience	*N/A*	*N/A*	*N/A*	*N/A*	- *N/A*	- *N/A*

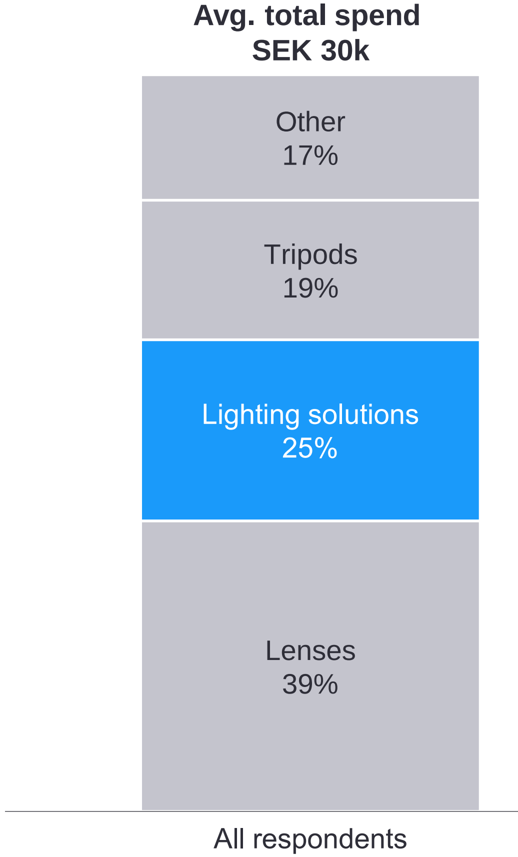
1. Based on prices on selected products sourced from B&H website, high-end continuous lighting pricing does not account for high-end cinema/film solutions
2. Based on weighted averages per solution from End-user web survey

Source: B&H, Market participant interviews, End-user web survey

Users devote ~25% of their yearly photography equipment spend to lighting solutions, and usually purchase new lighting solutions every 3-4 years

End-user camera equipment spend and lighting purchase frequency

Annual spend on camera equipment



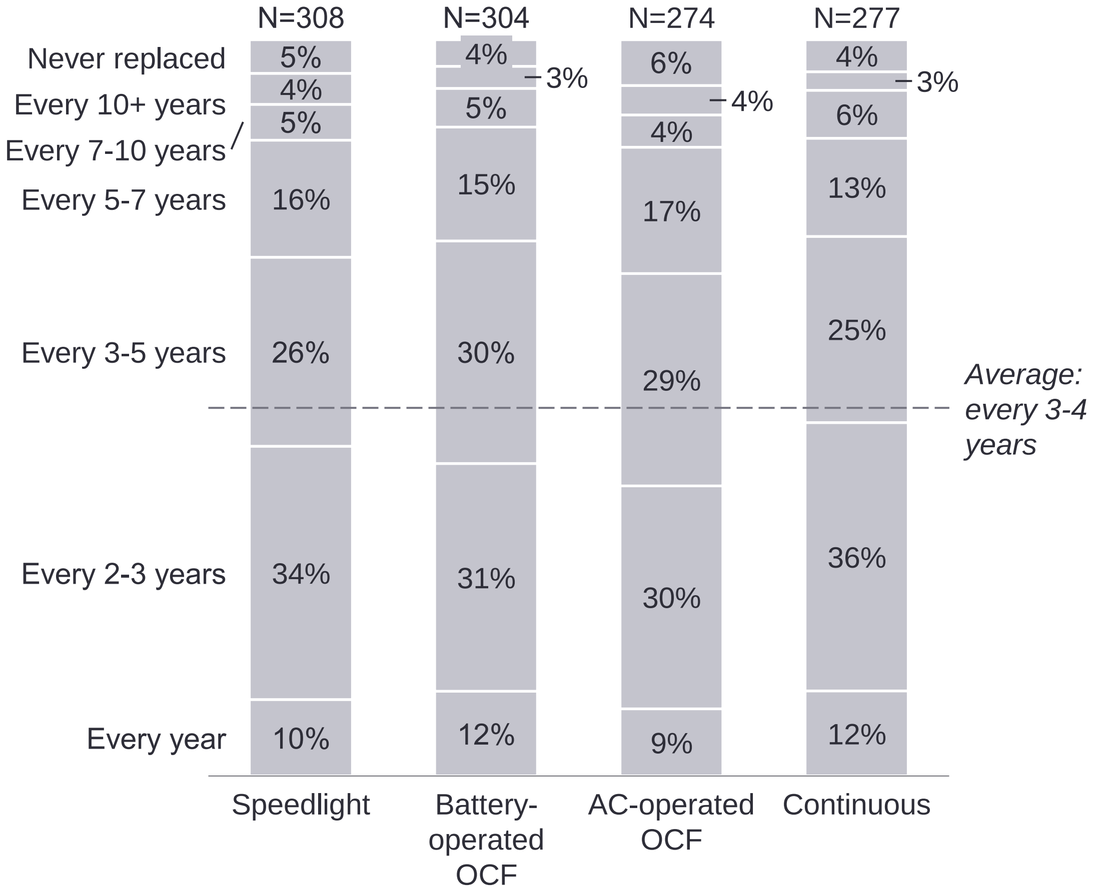
> “Customers typically spend on lighting 50% their spend in cameras”
> Photography equipment distributor (DACH) (1)

> “Amateurs typically spend ~500 USD in lighting solutions, whereas prosumers spend 1-2k USD per occasion.”
> Executive at premium camera OEM

> “Prosumers have an annual spending of up to 2k USD in lighting equipment, much of which is in portable OCF”
> Executive at camera equipment rental

> “In the rental industry we see spending on lighting to be 2-3x larger than on cameras”
> Executive at camera equipment rental

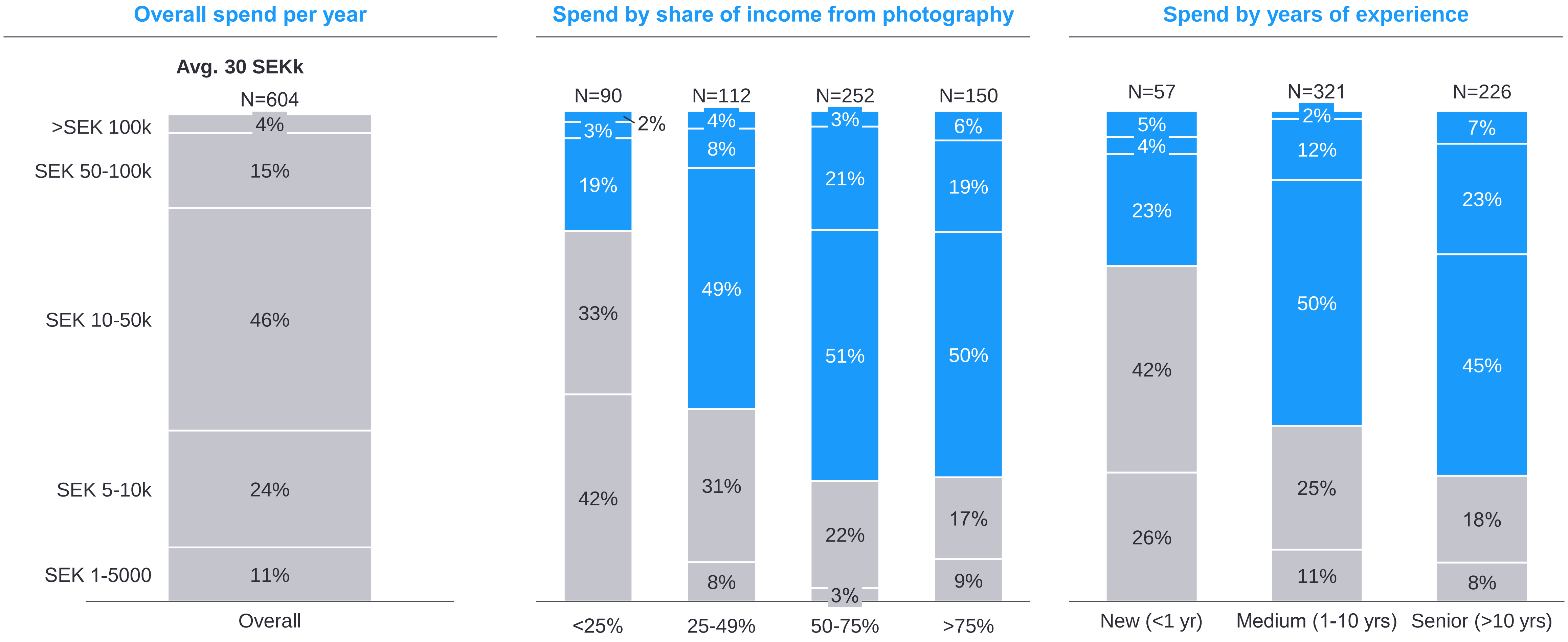
Purchase frequency for lighting solutions



Source: Market participant interviews, End-user web survey

Average spend per user on camera equipment is ~30 SEKk per year, however this varies by user and increases with share of income from photography and experience

End-user spend on camera equipment by share of income and experience



Source: End-user web survey

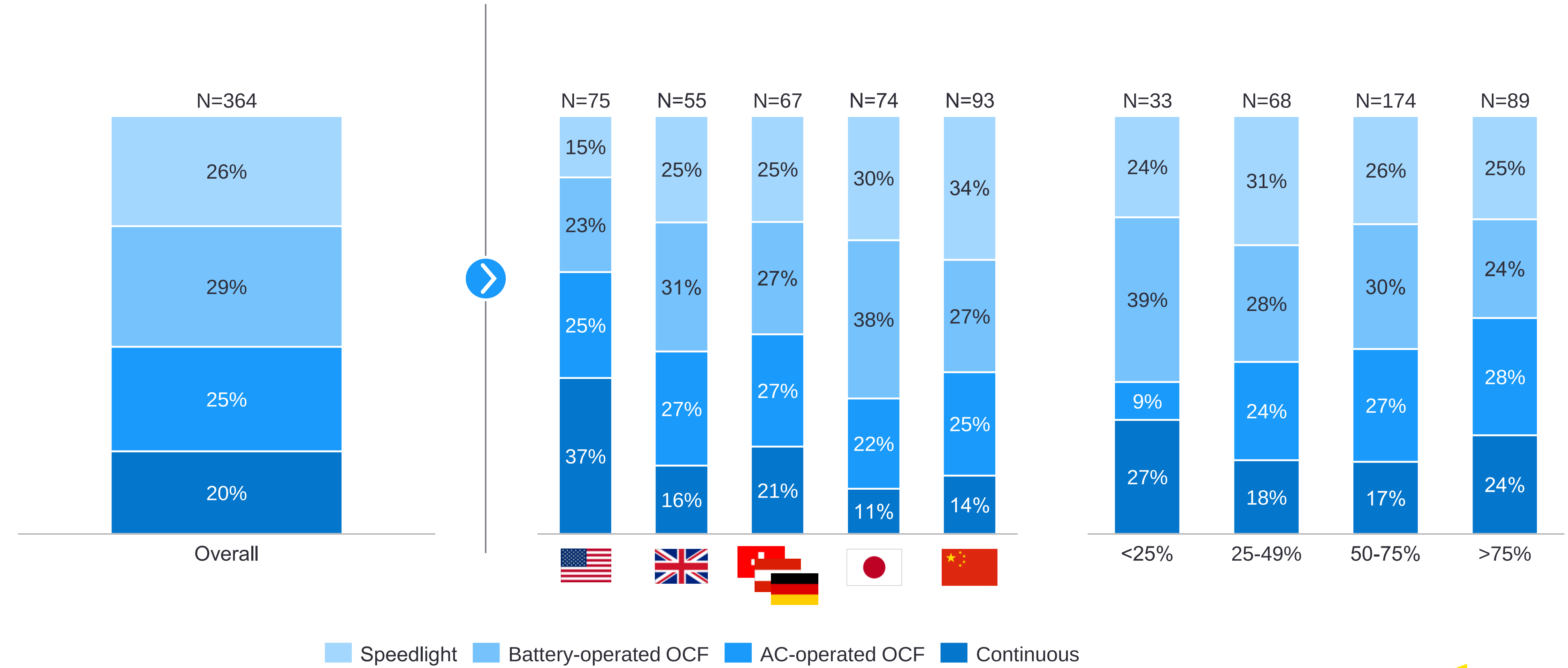
Choice of main lighting solution varies by market and type of user – US shows higher share of continuous, while Japan and China exhibit tendency toward speedlight

Survey respondents use of external lighting solutions[1]

Type of lighting used most often

Breakdown by geography

Breakdown by share of income from photography

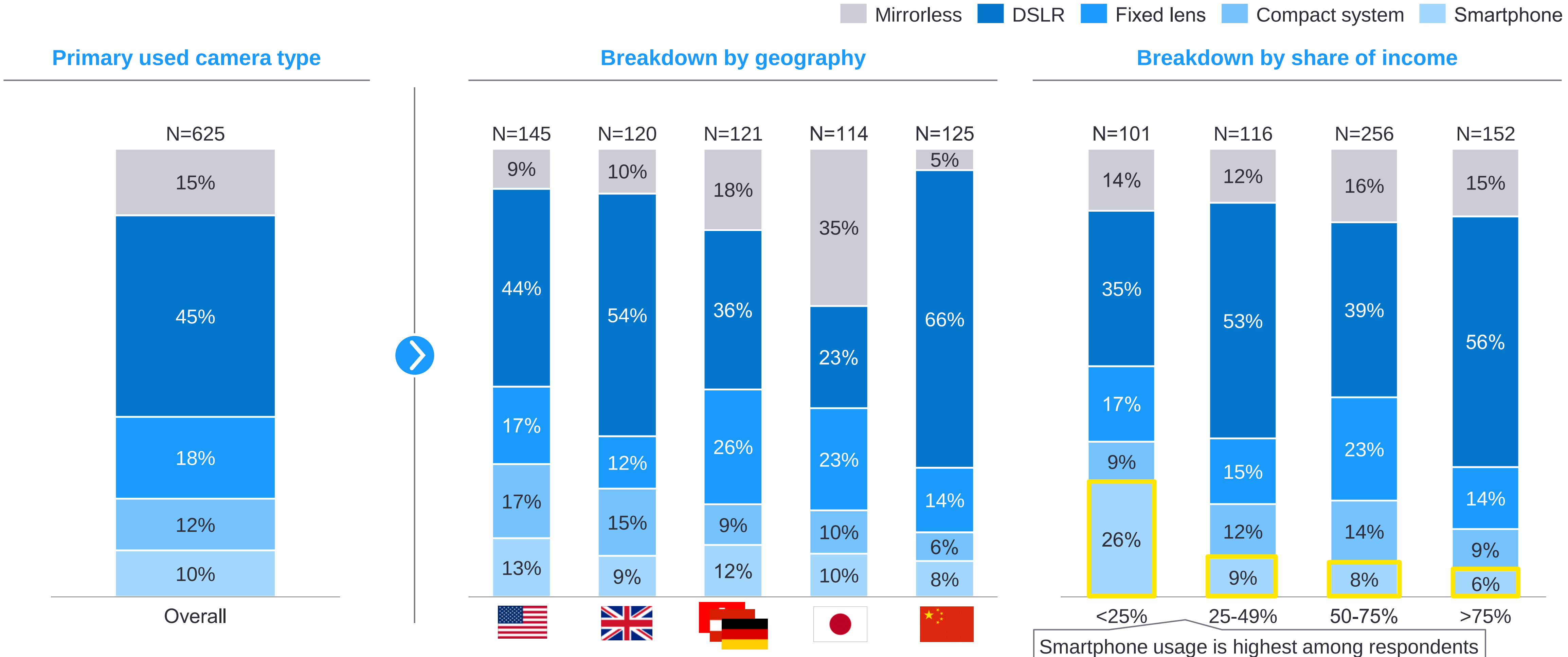


1. Respondents who primarily uses ambient light are excluded

Source: End-user web survey

DSLRs and fixed lens are the camera types most often used; smartphones are more common amongst part-time photographers

Primary camera types used by survey respondents



Smartphone usage is highest among respondents with limited income from photography

Source: End-user web survey

Various technological advancements have been emerging in the lighting solutions space, with OEMs of both flash and continuous lighting leading development

Emerging technologies and solutions

Improving LED technology

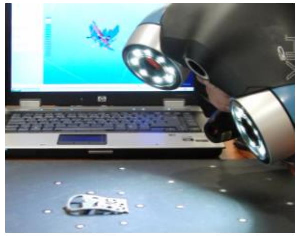
Improving LED technology

- Increasingly powerful LED technology competes with traditional flash solutions
- LED solutions offering both continuous and flash lighting, reducing the need for multiple solutions for users doing both still and video content
- Improving possibility of direct controlling settings such as diffusion or focus

Key players include:

ROTOLIGHT
ARRI
Aputure
HIVE

3D imaging



3D imaging

- Lighting solutions that enable captured images to be converted into 3D via software on computer or smartphone
- Use cases enabled by 3D scanning includes design of prototypes, 3D printing of objects, improved surveillance etc.

Key players include:

STEMMER IMAGING
Profoto
ams

Wireless connectivity & software solutions

Wireless connectivity and software solutions

- Utilizing wireless connectivity such as Bluetooth to connect lighting solutions with other devices
- Combined with smart software solutions, users may operate and adjust their lighting through e.g., smartphones

Key players include:

Profoto
ROTOLIGHT
broncolor
Godox

Source: Market participant interviews, desktop research

Lighting equipment OEMs have traditionally reached end-users through indirect sales channels, with dealers and rental shops acting as the primary user touchpoint

Lighting solutions value chain

Description

Example players

Supply chain participants	Description	Examples
Lighting solution OEMs	▸ Manufacturers of flash and continuous lighting solutions ▸ Typically sells at discount to major distributors ▸ Can have sales to end customers via own e-commerce channel	*Flash focus*: Profoto, broncolor, elinchrom, Godox, westcott *Continuous focus*: ROTOLIGHT, Aputure, NANLITE
Distribution channels	▸ Distributes photography products to dealers and rental shops ▸ Can be vertically integrated with the lighting manufacturer ▸ Often provides direct sales to professional studios	PHOTOQUIP, SRISHTI, GraphicArt, innovafoto, macgroup, Gentec INTERNATIONAL
Resell and rental Brick & mortar Ecommerce	▸ Sales or rent lighting solutions to end users ▸ Use of brick & mortar and e-commerce sales channels ▸ Might sale its own white-label products (i.e. Flashpoint by Adorama)	B&H PHOTO - VIDEO - PRO AUDIO, foto care, GIN-ICHI, Vistek, Adorama, CALUMET PHOTOGRAPHIC, SYUPPIN
End-users	▸ Professional photographers, skilled enthusiast or studio companies ▸ Typically buy or rent lighting products from photography dealers, electronics stores or wholesalers, as well as from e-commerce sites	*Individual photographers, freelancers* ZARA, UNIQLO, zalando, amazon, DDB

Source: Market participant interviews

Rental shops is an important channel affording end-users flexibility to adapt to client requirements and reduce the need to purchase expensive equipment

Rental channel overview

Key end-user needs catered by rentals

One-off events

“Typically users rent equipment for one-off jobs that require additional equipment and accessories”
Executive at lighting distributor

Workload peaks

“Studios tend to rent extra camera equipment to cope with peaks in their workload while avoiding the capital expenditure”
Owner at camera equipment distributor

Travel-based projects

“High profile photographers travel to shooting places all over the world, requiring on-location delivery of equipment or rental of studios abroad”
Executive at camera equipment rental

Key rental criteria

Ease of integration

“Most of the rental users need to compliment their equipment. They rent products easy to integrate into their ecosystem”
Executive at lighting distributor

Logistics

“Renting solves logistical issues from the transportation of heavy studio equipment to delivery of portable equipment at the shooting site”
Executive at camera equipment rental

User friendly

“Mainstream rental users have only a few days or hours to maximize the use the equipment. They want products easy to use”
Executive at lighting distributor

Source: Market participant interviews

Supply chain participants all play a key role of influencing the purchase decision making process of the end-user and positioning the product in the market

Purchasing process influencing roles

Lighting solution manufacturing and marketing → Distribution → Dealers → End-user

Purchasing influencing factors

Distributors manage the relationship with large accounts	▸ Distribution partners are key in holding the relationship with the local country top dealers. In addition they often manage direct sales to large professional photography studios
Dealers act as purchasing advisors	▸ In brick & mortal sales channels, dealers advice the end customers on the photographic equipment, hence influencing the end-user purchasing decision making
Marketing, social media and product events	▸ New product launches, marketing and educational campaigns, photography blogs / word of mouth and social media influencers play a key role in the positioning of lighting brands

Market participant comments

“ We distribute photographic products to specialty stores. Still, 50% of our income is from reselling directly to the main professional studios since we sell higher margin premium product and volume”
Owner of lighting distribution

“ We have strong relationships with the country’s largest dealers as they do with the professional photographer base. 100% of the sales to end-users are done through our dealers”
Executive at photographic equipment distribution

“ The dealers play the role of education the end customers. The dealer in the photography industry is about the advisory service and trust, playing a big part when choosing brands and solutions”
Owner of photographic dealer business

“ Dealers in China are often not professionalized, and tend to influence customers to buy products that generate higher margins”
Executive at lighting distribution

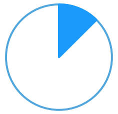
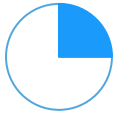
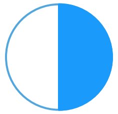
“ Building close-knit brand communities as well as social media interaction is key to knowing your customer base. This enables producers to meet the market needs and create loyalty to the brand”
Executive at photography dealer

“ Frequency of product launches accompanied with trade shows are key: people want to see, touch try-out and learn to use the product”
Executive at premium camera manufacturer

Source: Market participant interviews

There are several market regulations and trade risks affecting lighting solution OEMs

Market risk and regulations

Risk	Description	Indicative risk assessment	Assessment
Market regulation	- Risk of increased **radio standards and directives** established to ensure health and safety, and electromagnetic combability - Risk of introduction of new **electronic hardware certifications**		- While **increased radio compliance and electronic certifications could imply additional costs** for lighting OEMs, the impact would likely be marginal
Trade risk	- Risk of increased import **tariffs and duties of electronic components** and material from emerging markets - Risk of expansion of the ongoing **trade wars** between the US and China		- Increased import tariffs and duties could have an **impact on lighting OEM margins** depending on the source of material and where the manufacturing facilities are located, **forcing them to re-evaluate their supplier base**
Technological advancements	- Risk of external lighting **end-users converting to substitutes such as improved built-in lighting on smartphones and digital cameras** - Apple's launch of the iPhone 12 with two 12-megapixel sensors and an ƒ/1.6 aperture is a great advancement compared to previous models		- **Existing users** of lighting solutions are aware of the **image quality improvements of external lighting** and are thus likely to be resilient to the advancements - **New users** of lighting solutions are at risk – lighting OEMs and **equipment dealers have a joint responsibility to educate this segment**

Source: Market participant interviews, desktop research

Content

The global lighting solutions market had an estimated value of SEK 8.2bn in 2019, with the EU32, the US, China and Japan are the largest end markets

Chapter summary – overview of key findings

Key findings

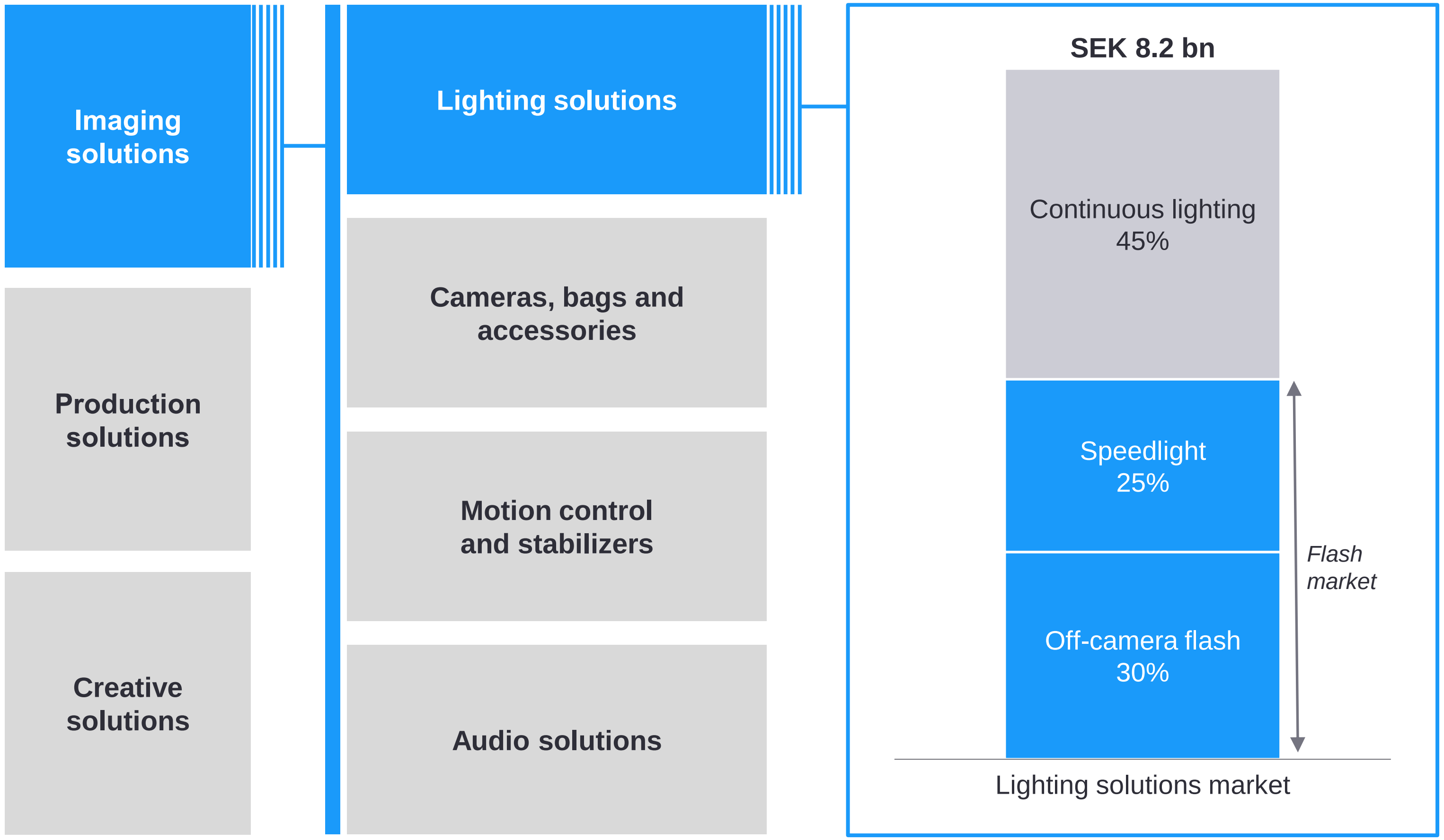
Market size, drivers and trends

- **The EU32, US, China and Japan account for ~75% of the global lighting solutions market**
- **Continuous lighting solutions constitute the largest share of total lighting solutions market value** across geographies. The remaining value is composed of OCF and speedlights, but respective shares vary by country
  - Characterized by a high purchasing power and premium camera and lighting manufacturers, the EU-32 markets demand high-end and innovative products such as battery powered OCF
  - With a high influence from the cinematographic industry and large scale events, the US is the market with the highest demand for continuous lighting products. Continuous lighting also plays an important role in China due to the interconnection between social medial and ecommerce, driven by players such as Taobao Alibaba, WeChat and Tiktok.
  - Home of the largest camera manufacturers in the world, the Japanese lighting market is influenced by its local brands (Canon, Nikon, Sony) driving demand for its traditional speedlights
- The **lighting equipment market** has **been steadily growing** despite a **decline of sales and value in the overall camera market**
- **Tailwinds for growth include an increase in the addressable user base, driven by the expansion of ecommerce and the adoption of smartphones with high quality cameras**
  - Increases in **smartphone adoption** and **the number of content creators** are expected to expand the **addressable user base** for lighting solutions, offsetting the impact of shrinkage in digital camera sales
  - The rapid growth in e-commerce has led to increased demand for digital content production
- **Penetration of lighting solutions is also expected to increase**
  - The majority of professional photographers and content creators already use lighting solutions, **~70% of those who don’t indicate that they are open to use external lighting in the future**
  - Penetration of **continuous lighting** increases with the photographers’ **share of video work**, and is **higher amongst content creators** compared to professional photographers - Spend outlook for continuous lighting is positive as end-users migrate toward becoming “hybrid users”, creating both still images and video content
- Polarization of the market due to the ongoing price war in the low-end segment and price increases in the premium segment is creating **an opportunity for premium brands to capture market share**

The photography lighting solutions market is estimated to be valued at SEK 8.2bn in 2019, and is a component of the larger image and content creation market

Global photography lighting solutions market, 2019

Market size and segmentation[1]



🟦 *Currently addressed by Profoto*

Definition of lighting solutions

Continuous lighting

- Continuous lighting solutions are lights which stay on for extended periods of time used for both still photography and videography (sometimes referred to as video light)
- High-tech continuous lighting solutions used for cinema and broadcasting provided by e.g. Arri are not included in this analysis

Speedlight

- Speedlights are camera-mounted intermittent lights (flashes), sometimes referred to as on-camera flashes or flash guns

Off-camera flash

- Includes battery-operated and AC-operated portable intermittent lights (monolight/strobe, flash/strobe, and studio lights), ranging from low-end to premium brands

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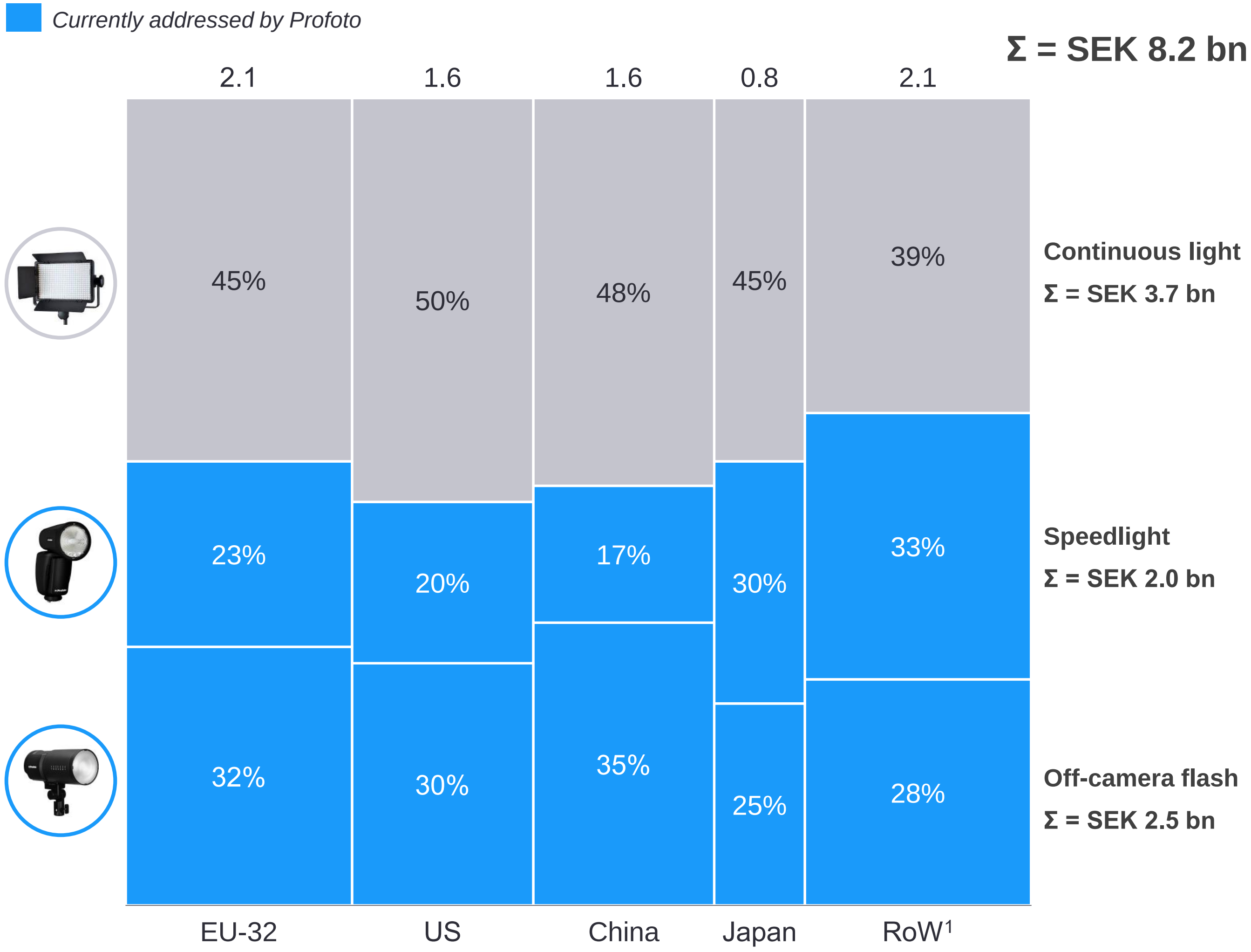
1. Market size is based on distributor sales value, as dealer mark-up on lighting solutions largely fluctuate depending on brand, product, and geography

Source: Market participant interviews

The largest end-markets are EU-32, US, China, and Japan, together accounting for ~75% of the global lighting solutions market

Market split by solution and region, 2019



EU-32	Characterized by a high purchasing power, the EU-32 markets are driving demand for high-end and innovative products, as well as smaller and portable OCF solutions which better cater to their needs
🇺🇸	With a high influence from the cinematography industry and large-scale events, the US market has the highest demand for continuous lighting products
🇨🇳	The interconnection between social platforms and e-commerce (Taobao Alibaba, WeChat, Tiktok) play an important role in driving the high demand for OCF and continuous lighting in China
🇯🇵	Home to some of the largest camera manufacturers in the world, the Japanese lighting market has high demand for traditional speedlights produced by these brands (Canon, Nikon, Sony)
Rest of world	The remaining geographies include LATAM, Eastern Europe, MENA and other Asian Pacific markets. These have a lower purchasing power and advanced use of lighting solutions, relying more on speedlights

1. Rest of World estimated as the residual of the global total market and the four largest geographies

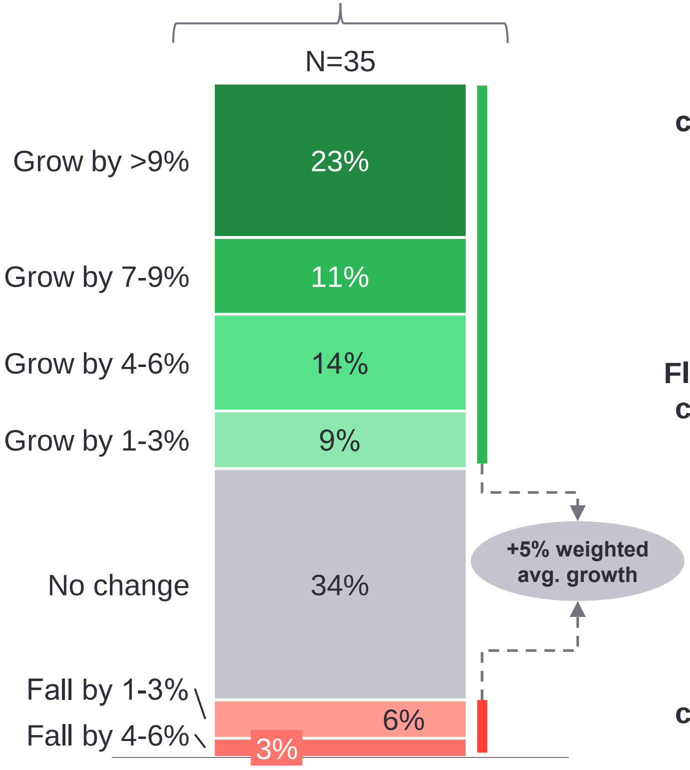
Source: Market participant interviews

The lighting equipment market has shown stable historical development – market participants indicate ~5% growth p.a. 2015-2019

Market participant estimated historical development[1]

PRE-COVID-19

32 out of 35 interviewees cited that sales were stable or growing between 2015 and 2019



Growth comments

> “The contraction in the camera market occurred in the low-end segment which was not purchasing lighting. The premium segment is increasing its use of lighting”
>
> Distributor for lighting OEM

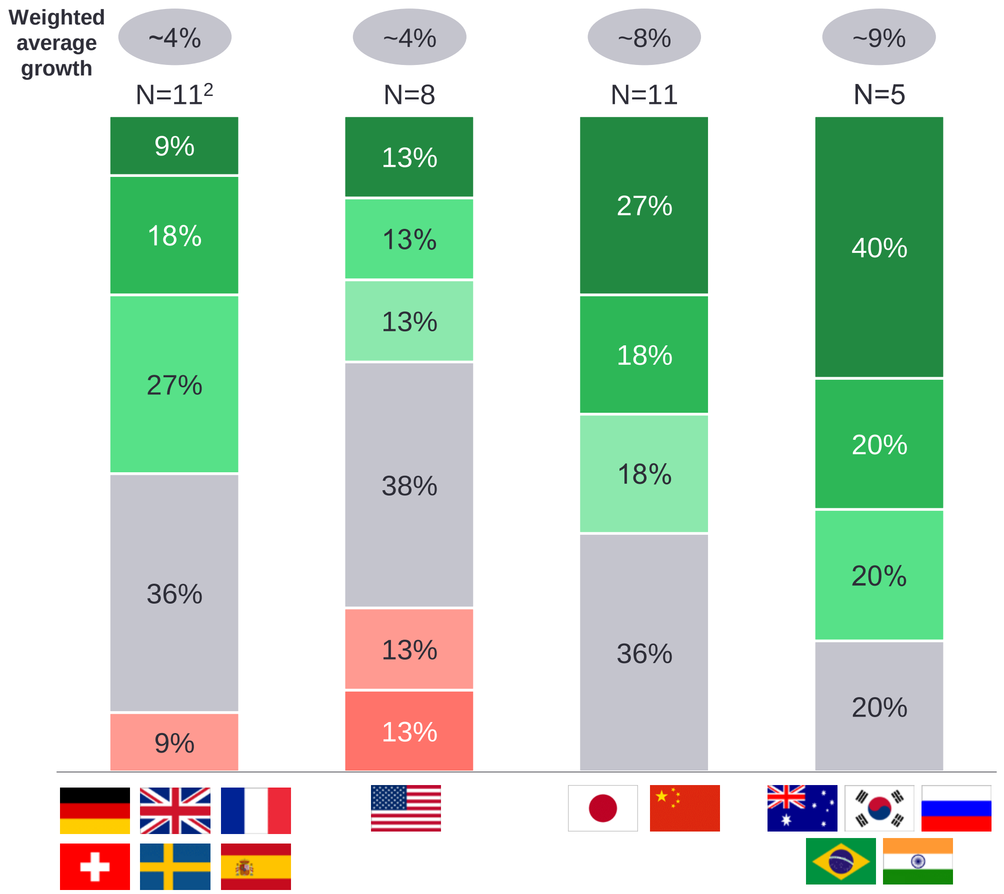
Flat growth comments

> “Lighting sales have been stable since polarization of the market has reduced the mid-tier segment”
>
> Former director of top-tier lighting OEM

Negative growth comments

> “Despite increase in volume sales, downward price pressure has resulted in a 1-3% decrease in value”
>
> Sales executive at specialized camera dealer

Breakdown per region, 2015-2019



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1. Market participants were asked “How did the lighting solutions market develop during 2015-2019 (p.a.)?”
2. Based on interviews in 6 geographies within EU-32

Source: Market participant interviews

Growing addressable user base, and increasing lighting penetration and spend are expected to be key areas driving the lighting solutions market going forward

Key lighting solutions market trends

↗ Positive impact … → … ↘ Negative impact

Areas	Key market trends	Expected impact	Description
Addressable users of lighting solutions	**1** **Resilience in high-end digital camera sales**	→	▸ Sales of digital cameras have declined in recent years, however, due to the resilience of premium camera sales this is expected to have marginal impact on lighting solutions
	2 **Increasing smartphone adoption**	↗	▸ Smartphone use has led to an increase in the number of content creators, broadening the addressable user base for lighting solutions compatible with/created for smartphones
	3 **Growth in e-commerce**	↗	▸ The rapid growth in e-com has led to an increase in demand for digital images, which is expected to further drive demand for lighting solutions and studio gear in particular
Penetration of lighting solutions	**4** **Increase in penetration of lighting solutions**	↗	▸ The majority of professional photographers and content creators already use lighting solutions, and ~70% of those who don't indicate high likelihood of using it in the future
	5 **Decline in use of speedlights**	→	▸ While the total number of speedlights sold is expected to decline through 2025, sales of premium speedlight products are expected to be resilient
	6 **Growth in use of continuous light**	↗	▸ End-user migration towards becoming "hybrid users" (creating both still images and video content), driving demand for and spend on continuous lighting solutions
Spend on lighting solutions	**7** **Increase in spend**	↗	▸ A majority of end-users expect their spend on lighting solutions to increase over the next five years, with highest expectations on spend increase in China
	8 **Polarization of pricing**	→	▸ Opportunity for premium brands to capture a larger share of the market as mid-tier competitors drop out of the market due to price decrease in the low-end segment
	9 **Upgrading of solutions**	↗	▸ ~25% of end-users expect to increase spend on lighting solutions in order to upgrade to a better brand and to improve functionality and durability

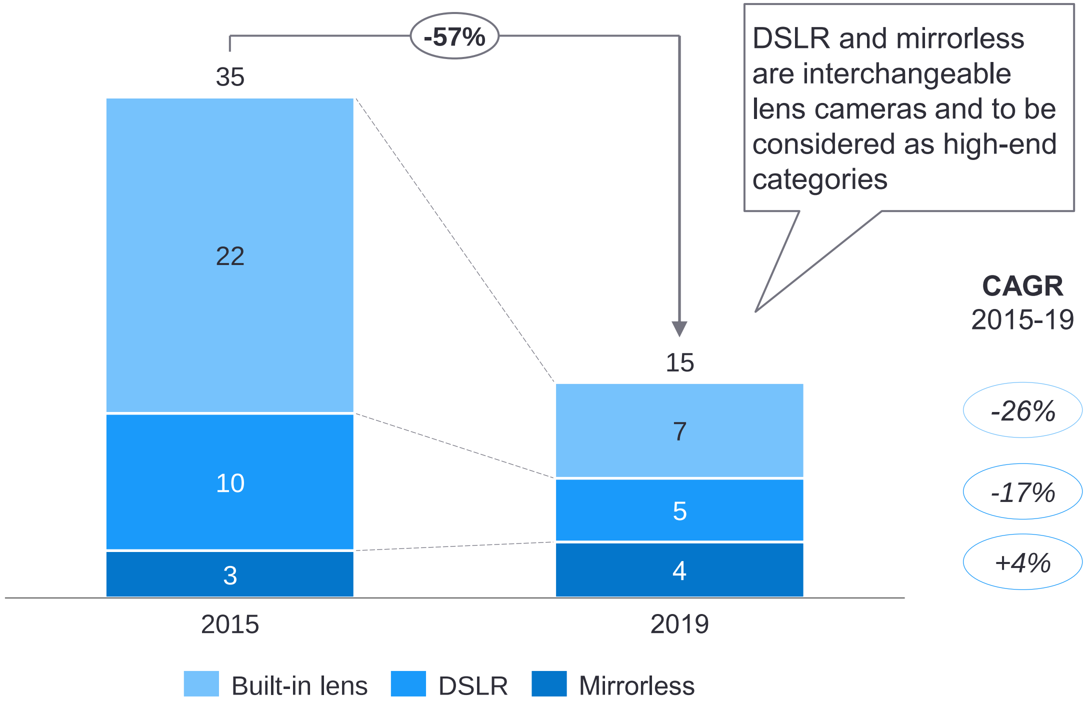
# Indicates connection to analysis presented on following slides

Source: CIPA, IDC, Statista, B&H, Market participant interviews, End-user web survey

Sales of digital cameras have declined in recent years, however, due to the resilience of premium camera sales this is expected to have marginal impact on lighting solutions

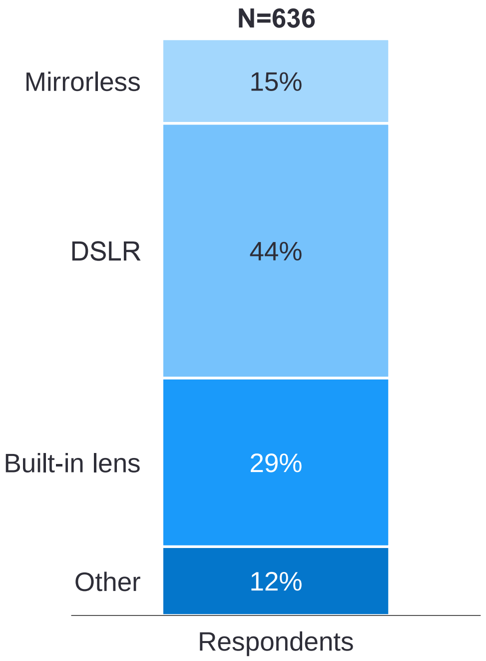
1 Resilience in high-end digital camera sales

Global digital camera sales, 2015-19 (m units)



DSLR and mirrorless are interchangeable lens cameras and to be considered as high-end categories

Most used camera type by end-user survey respondents



> “**Camera sales have been continuously dropping,** especially in the cheaper **low-end segments**. The **high-end segment is quite stable**. Professional equipment sales have been flat for the last years. Players like Canon and Sony have come back with new **mirrorless solutions** taking over a large share. Dealers have been saved by the **new releases and technological improvements** over the past years”
>
> Top-tier lighting OEM distributor

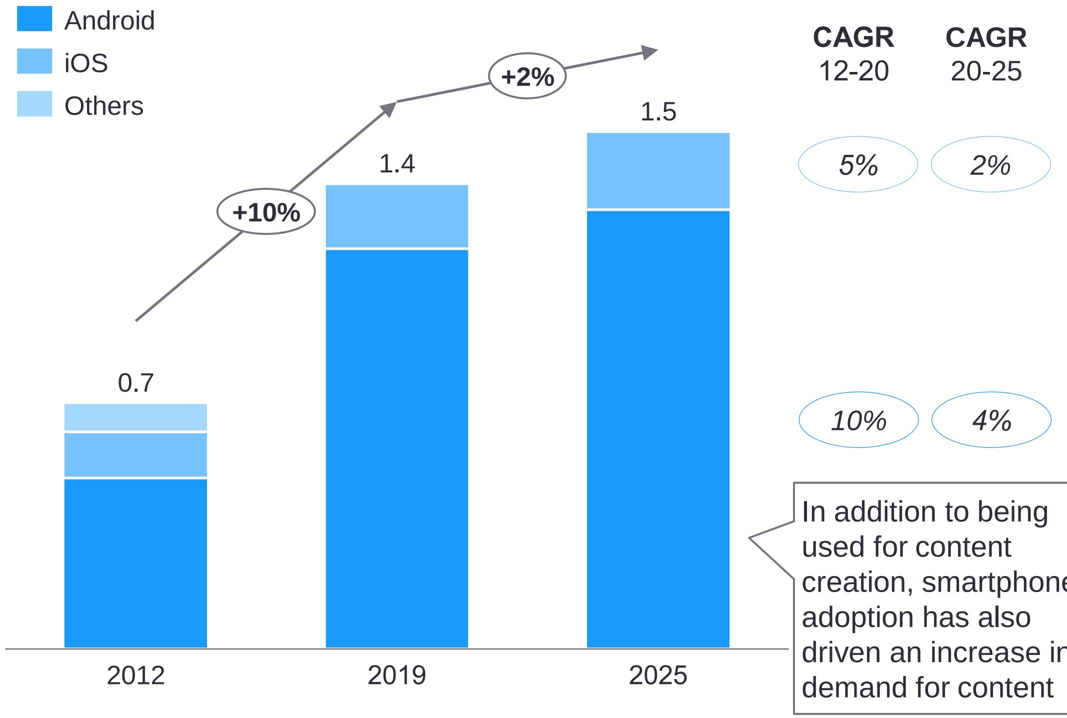
While the overall end-user base for digital cameras has declined in recent years, sales of higher-end cameras used by professionals have been more resilient

Source: CIPA, End-user web survey

The adoption of smartphones and resulting increase in the number of content creators drives demand for and presents new opportunities within smartphone lighting

2 Increasing smartphone adoption

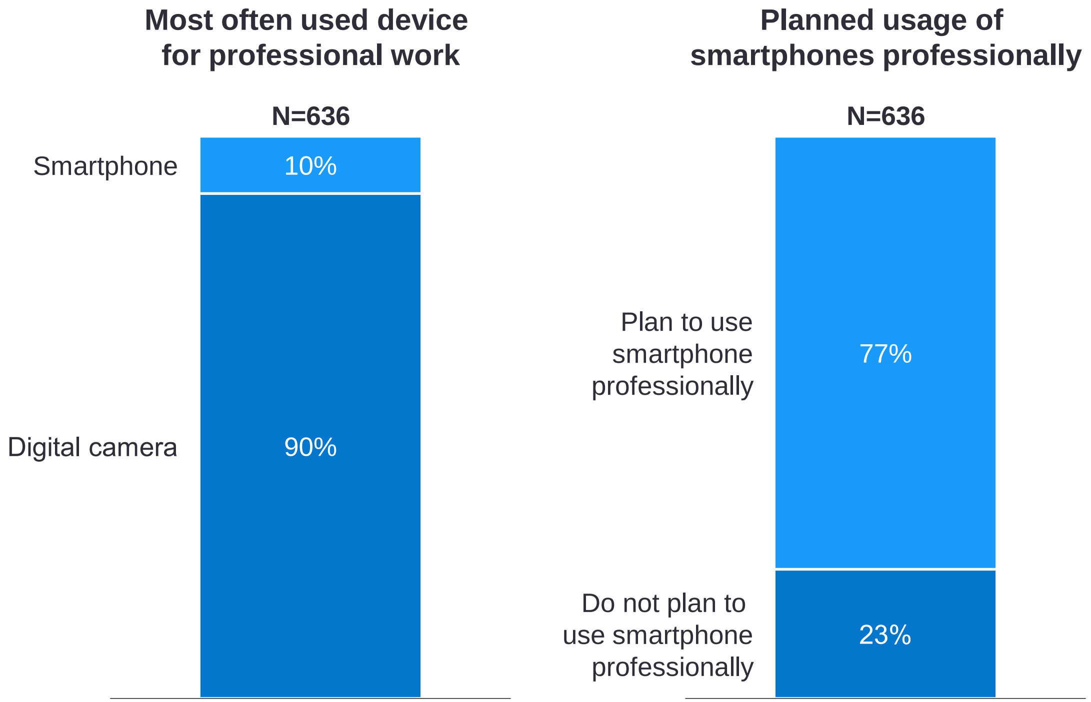
Global smartphones sales, 2012-25 (bn units)



In addition to being used for content creation, smartphone adoption has also driven an increase in demand for content

> **“** I expect that emerging smaller e-com businesses will **increasingly use phones with lighting** for their **in-house production**”
> Top-tier lighting OEM sales executive

Current and planned use of smartphones professionally



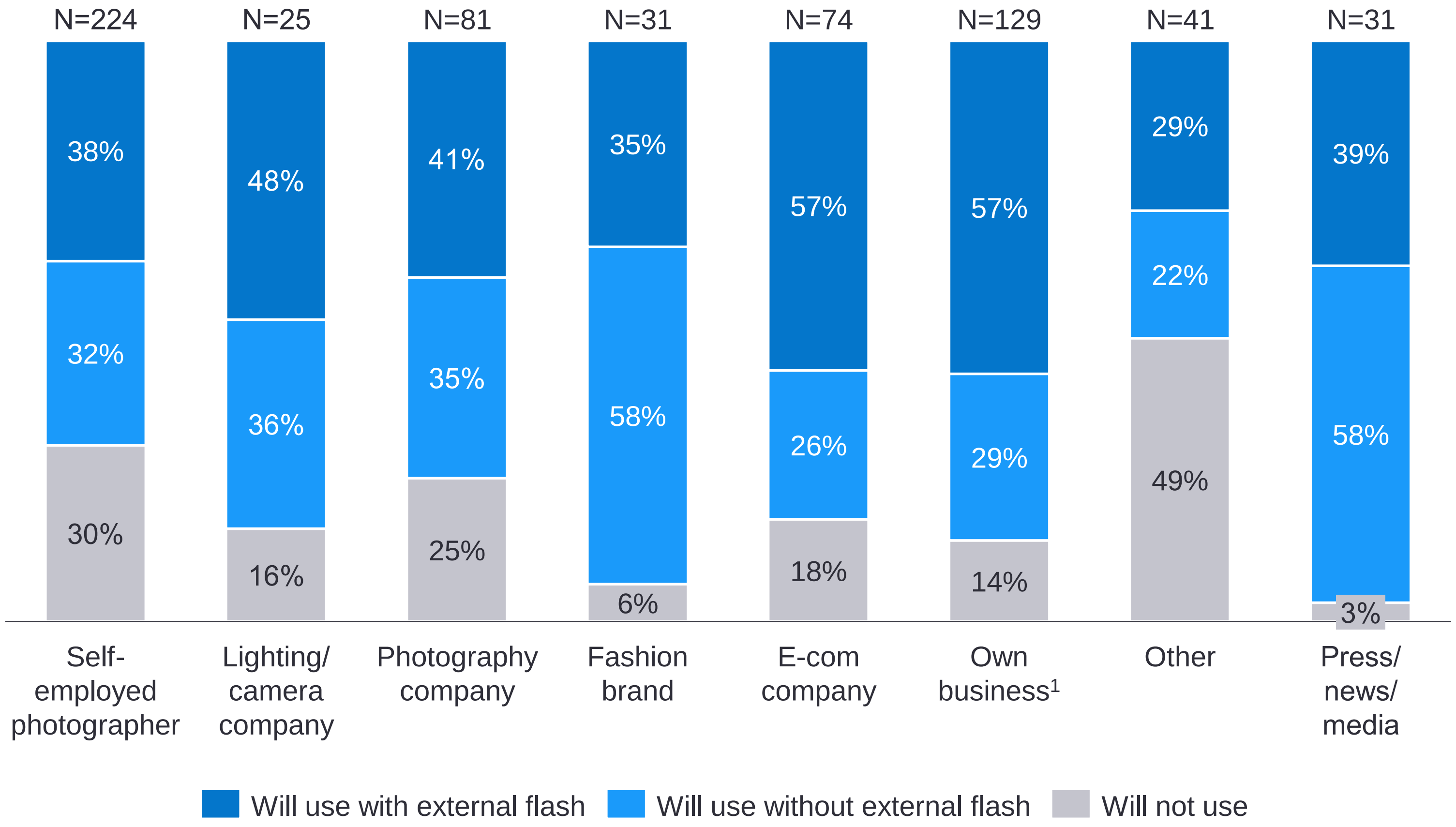
- Increasing use of smartphones by semi-professional/professional photographers and content creators is both a threat and an opportunity for lighting solution OEMs
- Smartphone cameras reduce the time from idea to publishing, further increasing their adoption for content creation as a means to improve workflow
- **Profoto has already launched dedicated smartphone lighting solutions to capture the growing end-user demand**

Source: IDC, Market participant interviews, End-user web survey

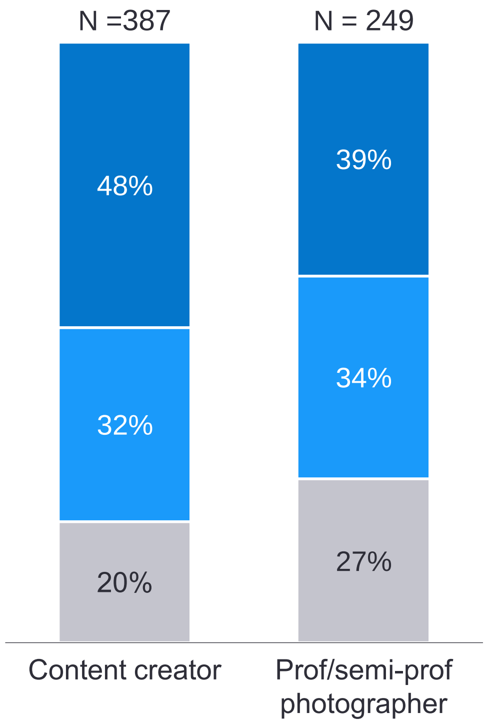
A large share of end-users expect professional use of smartphones to increase going forward

2 Increasing smartphone adoption

Planned use of smartphones for professional photography, by employment type



Planned use of smartphones for professional photography, by occupation



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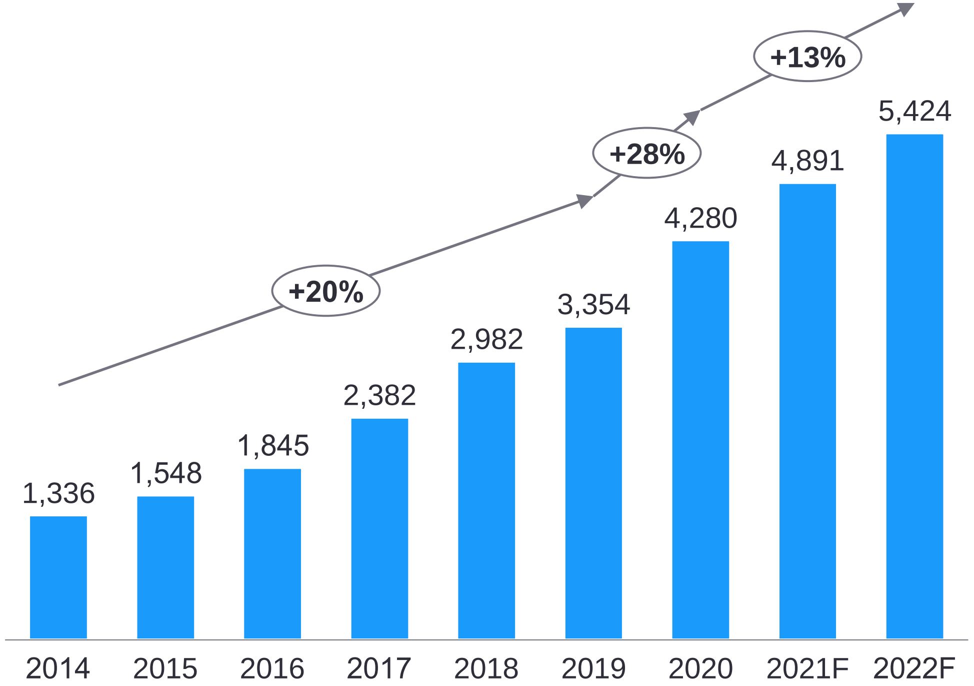
1. Own business including end-users such as influencers and restaurants

Source: End-user web survey

The rapid growth in e-commerce has increased demand for digital images, and is expected to continue driving demand for lighting solutions and studio gear in particular

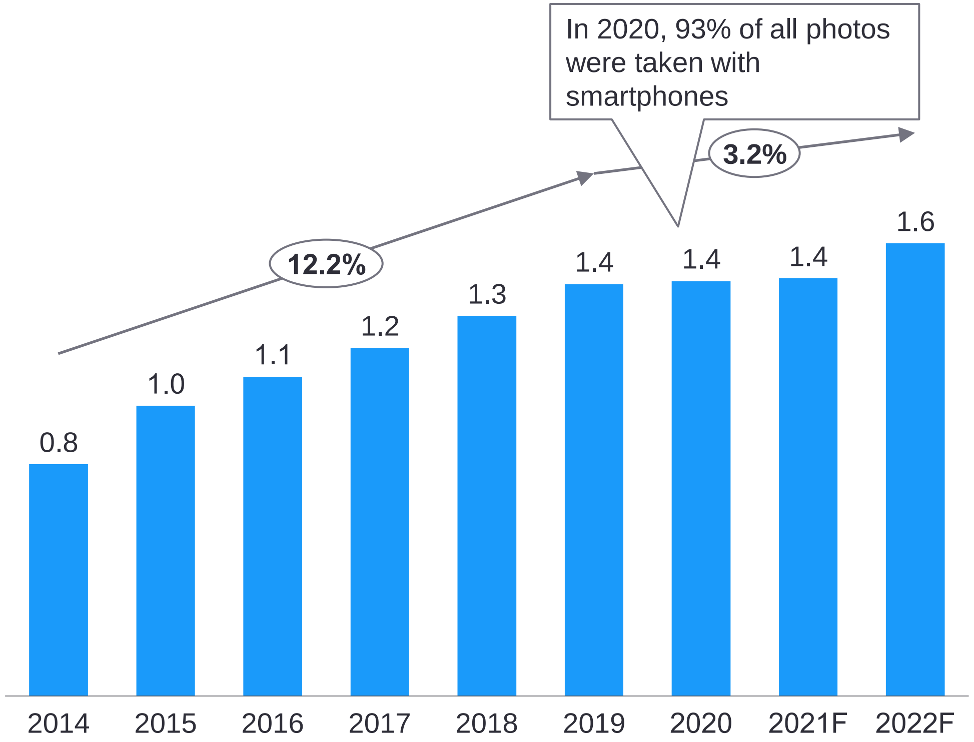
3 Growing e-commerce

Global e-commerce sales, 2014-22F (USD bn)



Contributing to demand for…

Number of digital images taken globally, 2014-22F (trillion pictures)



In 2020, 93% of all photos were taken with smartphones

> “Our most active client segment during COVID-19 has been e-commerce – I don’t expect this to slow down going forward.”
> Executive at camera equipment rental company

> “I expect that the ongoing shift towards a wider market of content creators will be a driving force for lighting equipment in the upcoming years.”
> Top-tier lighting OEM sales executive

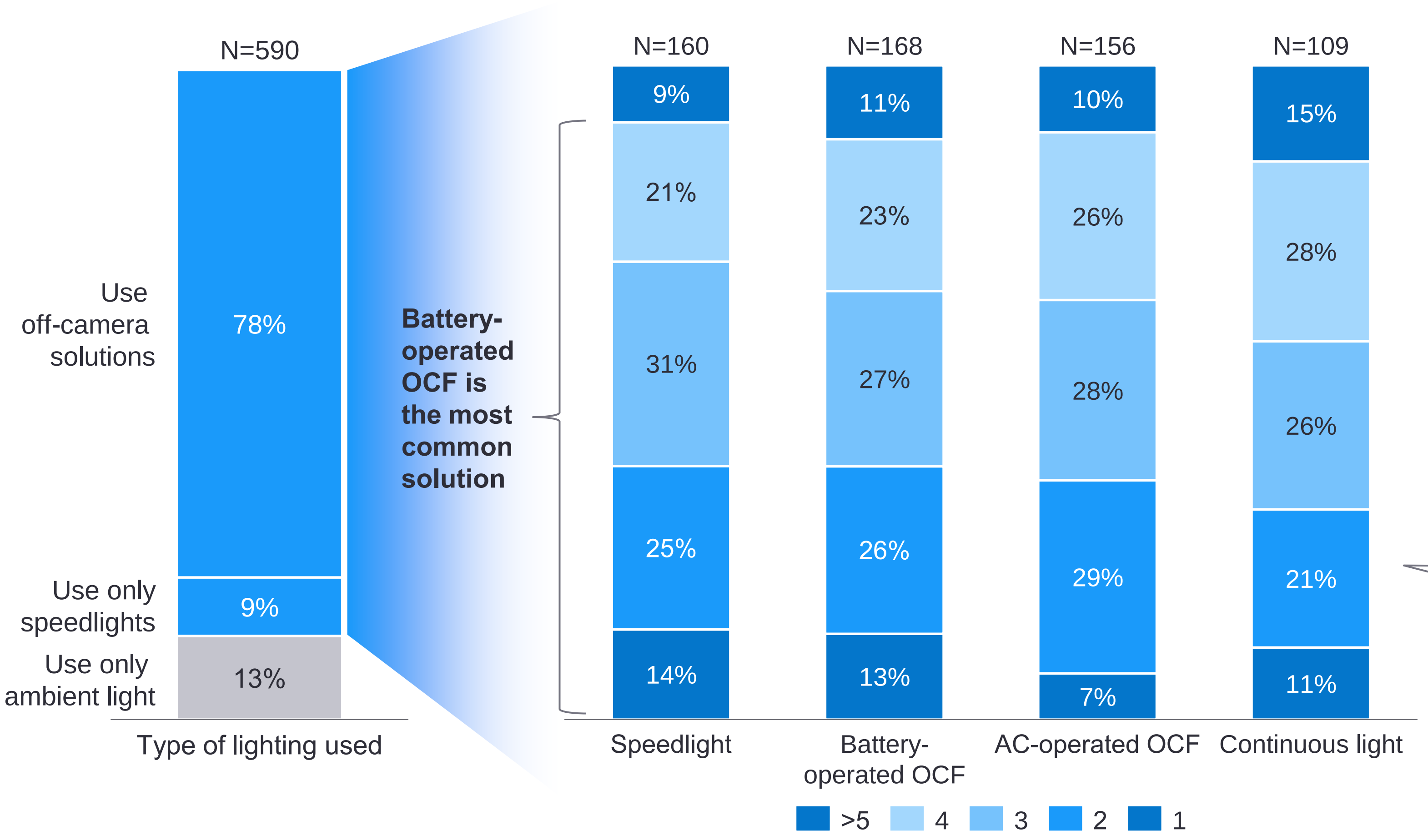
Source: Statista, data updated Dec 2020, Business insider, Market participant interviews

Penetration of lighting solutions is high, with 78% of equipment users using (primarily battery-operated) OCF…

4 Increasing penetration of lighting solutions

Share of lighting equipment users

Number of lights owned by lighting solution type



Battery-operated OCF is the most common solution

Over 60% of users across all lighting solution types own more than 2 products per category

Market participant comments

> “The average professional photographer has **three different lights**”
> Top-tier lighting OEM distributor

> “While I believe that only one or two out of ten photographers has any external lighting equipment, I do think that **professionals have one or even more flashes for each camera owned**”
> Executive at top-tier camera OEM

Source: End-user web survey, Market participant interviews

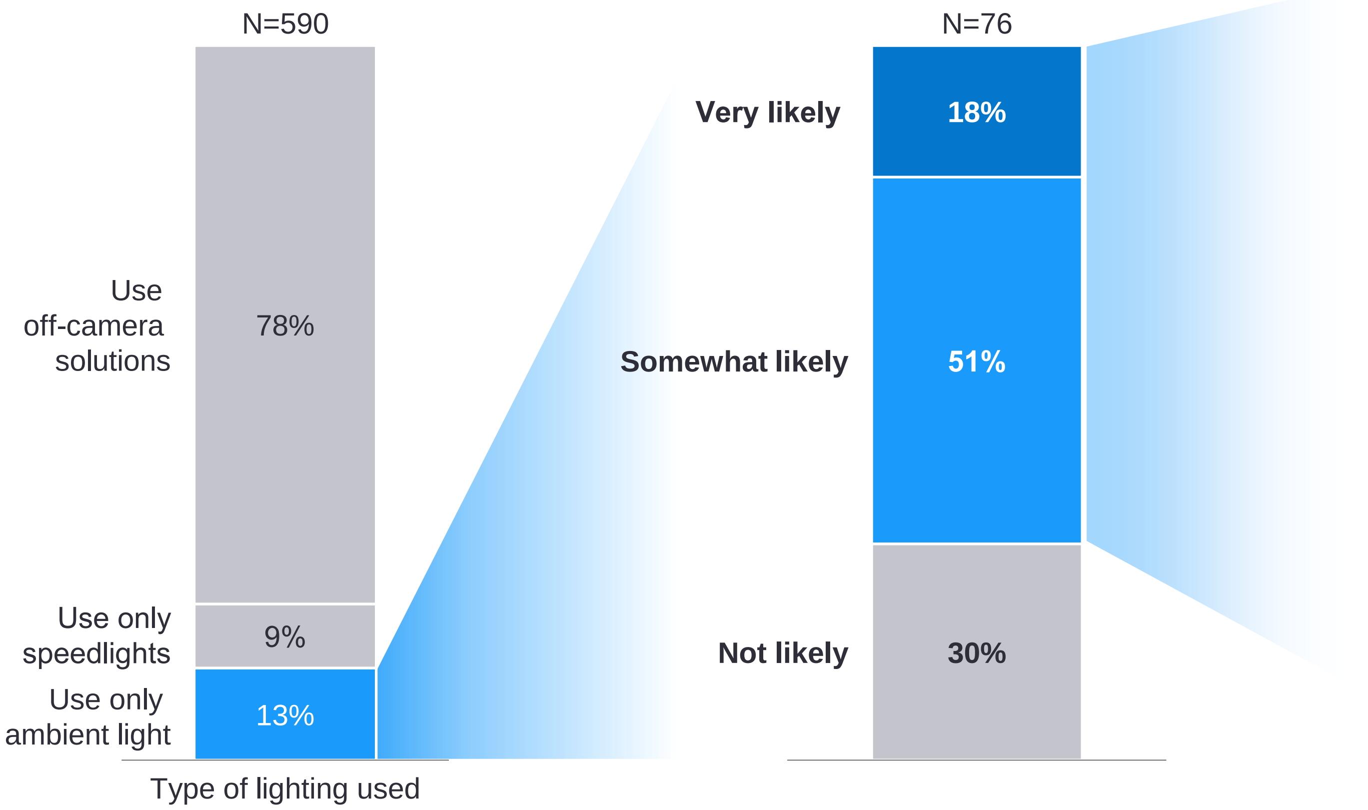
…and there is potential to increase lighting penetration further as a majority of ambient light users are open to using external lighting in the future

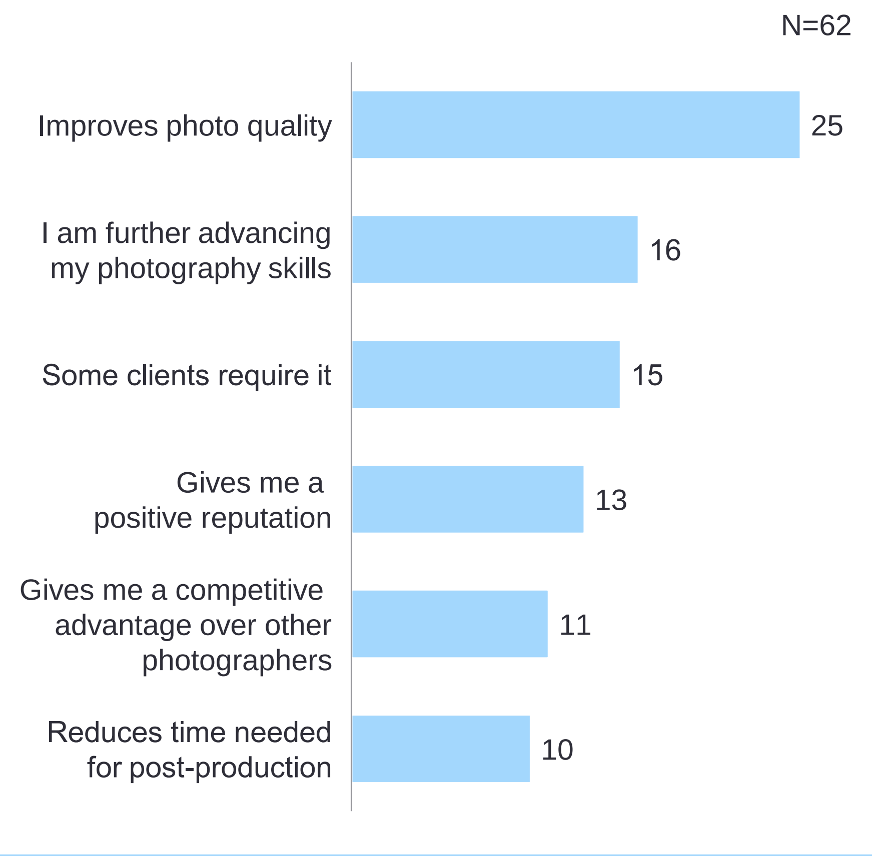
4 Increasing penetration of lighting solutions

Share of lighting equipment users

Likelihood of using external lighting in the future

Reasons to use external flash in the future





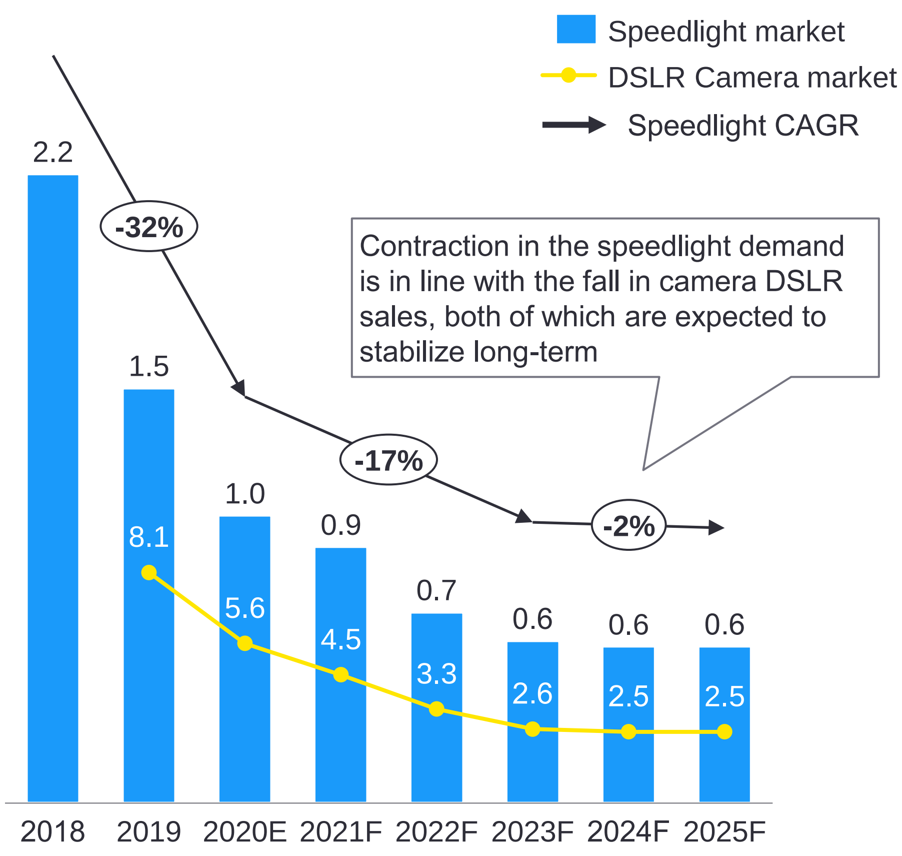
13% of respondents do not use any external lighting, but ~70% of these are likely to use external flash in the future

Source: End-user web survey

While the total number of speedlights sold is expected to decline through 2025, sale of premium speedlight solutions are expected to be resilient

5 Decline in sale of speedlights

Speedlight market size forecast, 2018-2025F (million units)



Contraction in the speedlight demand is in line with the fall in camera DSLR sales, both of which are expected to stabilize long-term

Market participant comments

High-end speedlight solutions is expected to continue being resilient to the decline in digital camera sales

> “Traditional speedlight sales has been falling as the mainstream camera market segment shrinks. However, **speedlight is a solution needed for the professional sector and I see more space to grow the premium segment**”
>
> Photography equipment distributor

> “Despite a fall in speedlights sales by top-tier camera OEMs, **speedlight is a growing segment for the high end solutions** as well as for the new low-end brands disrupting the market”
>
> Top-tier lighting OEM distributor

> “**I expect a decrease in traditional speedlight sales mainly to smaller strobes** since the low end on and off-camera flashes led by Godox sell at more competitive price points”
>
> Photography equipment dealer

Speedlights are core to professional segments including journalism, weddings, sports and events

> “Speedlights are key for professional photographers within the wedding and journalism segments in the US. **COVID-19 has particularly impacted speedlight sales as there are no events**”
>
> Former executive at top-tier camera OEM

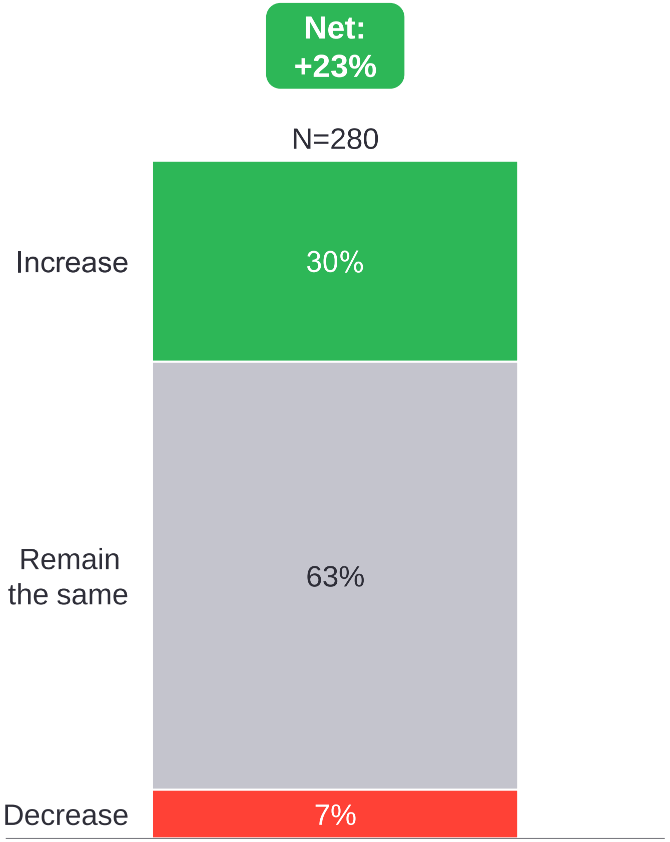
> “In the upcoming 5 years the sales of speedlights will likely decline for the enthusiast segment. **Speedlights for professional use such** as journalism, sport and photography will remain relevant”
>
> Top-tier lighting OEM distributor

Source: CIPA, Market participant interviews

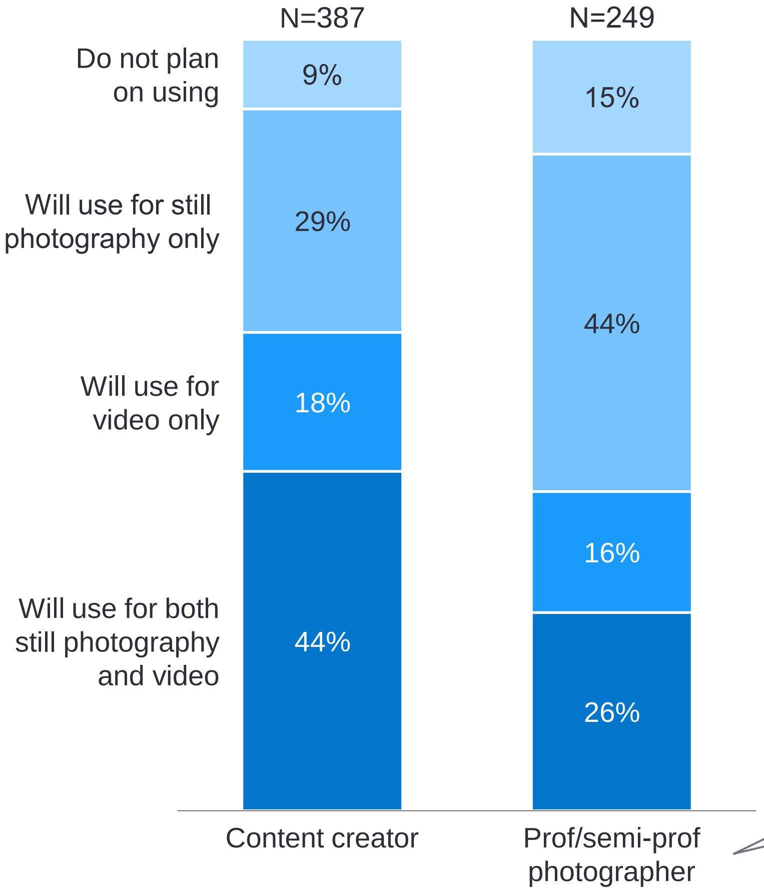
Spend on continuous lighting is expected to increase as end-users migrate towards becoming “hybrid users,” creating both still images and video content

6 Growth in use of continuous lighting

5y spend outlook for continuous lighting



Planned use of continuous lighting[1]



45% of content creators’ professional work is video, versus 32% for prof./semi-prof. photographers

Market participant comments

> “Probably **~10% of photographers are today shooting still images with continuous light**. Beginners use it for both video and picture since they can see how the end product will be before shooting. Professional photographers will also experience an **increase in demand for video work**”
>
> Top-tier lighting OEM distributor

> “There is a trend of **photographers shifting from pure still photography to videography.** The professional segment is moving into video, not only the amateur”
>
> Photography equipment distributor

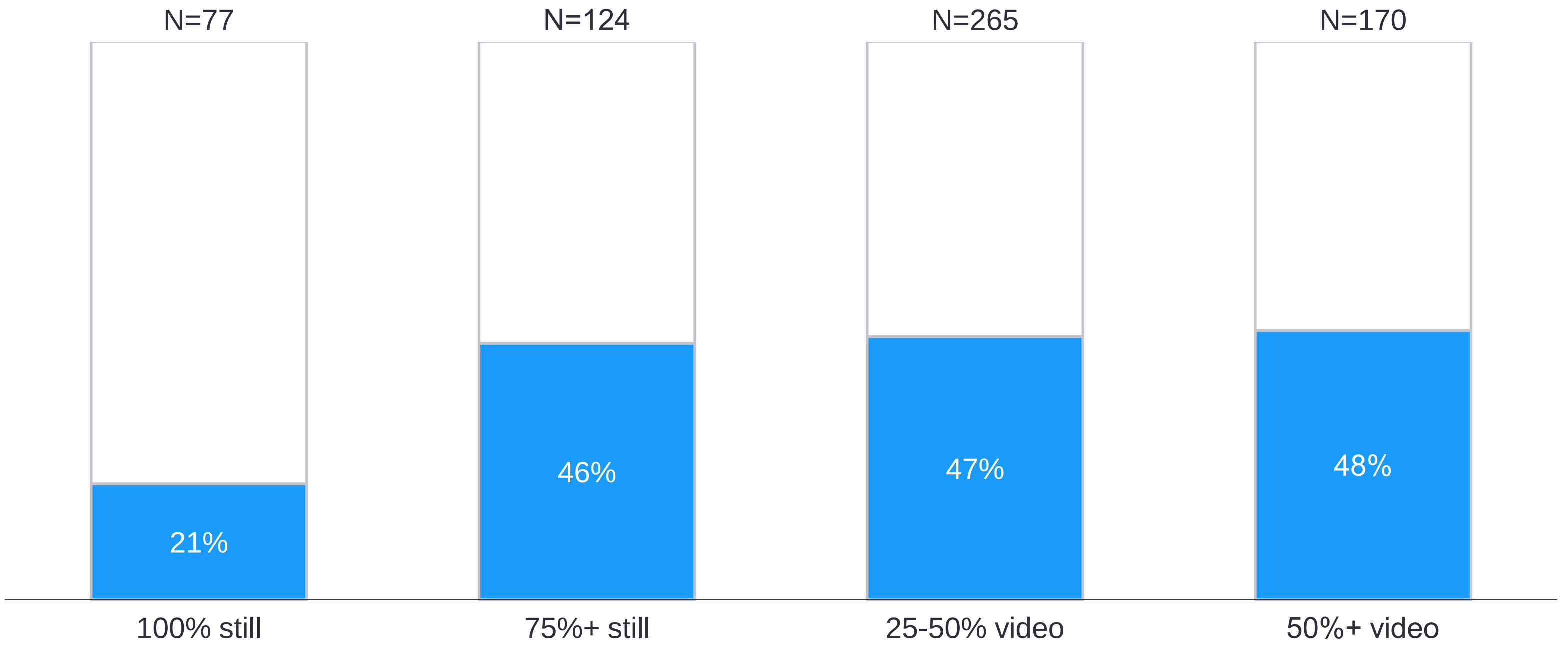
1. Segments represent end-users who identify themselves as a professional/semi-professional photographers or content creators

Source: End-user web survey, Market participant interviews

Penetration of continuous lighting increases with a photographer’s share of videography work, however there is ample room for further adoption across all user segments

6 Growth of continuous light

Continuous lighting penetration by share of work that is video versus still



Percentage that use continuous as their main lighting solution

Commentary

- Of users that do both photography and some video to different extents, adaption of continuous lighting solution is stable at almost 50%
- However, for end-users that only do still photography, penetration is low
- The share which use continuous lighting as their main solution type is still quite low, while increasing with share of video work

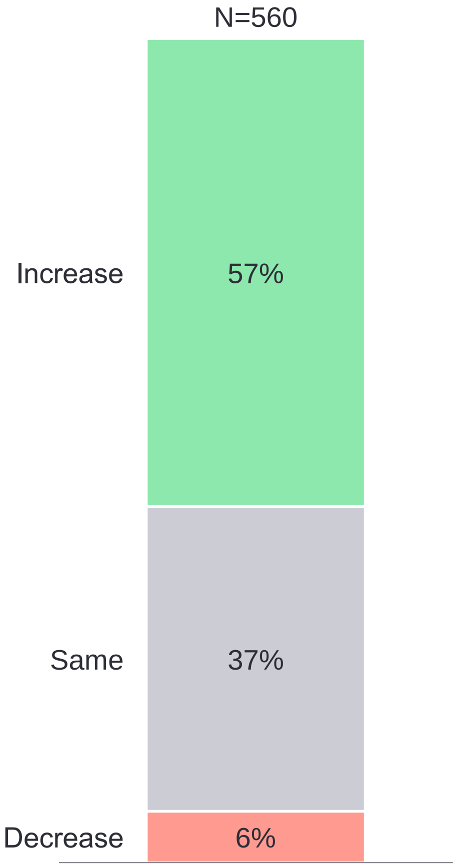
> “COVID-19 has further accelerated the already growing adoption of continuous light. With people staying at home, there is a growing need for lighting used in e.g. live video sales and social network streaming like TikTok and Taobao”
>
> Photography equipment dealer

Source: End-user web survey, Market participant interviews

Users expecting to increase spending state a desire to upgrade to a better brand and improved functionality/durability

7 Positive spend outlook

Expected change in spend on lighting equipment coming 5y



N=319

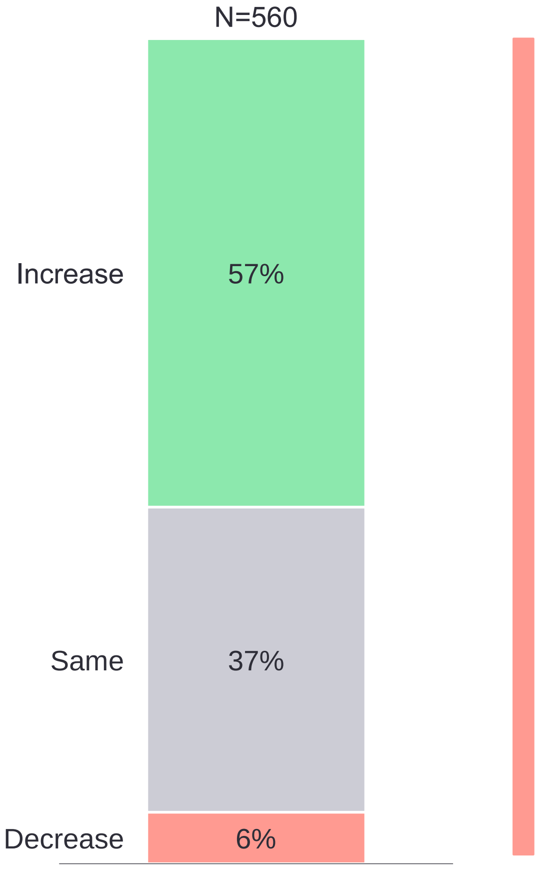
Top 4 reasons to increase spend	Description	Share
Brand	I want to upgrade my current equipment to a better brand	41%
Type of work	I expect more work that will require lighting products	40%
Functionality/durability	I want products with improved functionality/durability	38%
Price increase	I expect the prices of lighting products to increase	36%

Source: End-user web survey

Users who expect to spend less on lighting cite less work requiring lighting products, lower cost alternatives and investment in other equipment as main rationale

7 Positive spend outlook

Expected change in spend on lighting equipment coming 5y



N=34

Top 4 reasons to decrease spend	Description	Share
Type of work	I expect less work that will require lighting products	40%
Lower cost alternatives	I prefer to switch to lower cost alternatives	31%
Investment in non-lighting equipment	I plan to invest in other (non-lighting) equipment which will improve the quality of my photography work	26%
Renting equipment	I expect to rent equipment going forward	20%

Source: End-user web survey

Introduction of new Godox solutions has hindered price increases in the low-end of the market while premium brands have successfully increased prices

8 Polarization of pricing

NON-EXHAUSTIVE

Evolution of selected Godox products

- Godox has continuously launched new products with improved technical functionality but limited price increases over the last years

In 2012, Godox launched their the Godox AD180, a 180Ws OCF/speedlight with 1/128-1/1 flash variability for USD 200

In 2017, Godox launched their the Godox AD200, a 200Ws OCF with 1/128-1/1 flash variability for USD 300

In 2019, Godox launched their the Godox AD200 Pro, a 200Ws OCF with 1/256-1/1 flash variability for USD 350

> “**There is ongoing price war in the low-end segment** of the market where Godox, Westcott and other players are competing for the same space. This has resulted in **mid-segment players such as Bowens being pushed out of the market** and has **increased the gap between the low-end and premium lighting players**”
>
> Photography equipment dealer

Like-for-like development of selected lighting solutions

	Brand & product	Price upon launch[1]	Current price[2]	Price development
Premium brands	Profoto  *B1X To-go-kit 500 AirTTL*	USD 2,095 *(2018)*	USD 2,390	↗ 4.5% p.a.
	broncolor  *Siros 400 L*	USD 2,053 *(2016)*	USD 2,158	↗ 1.0% p.a.
Value brands	elinchrom  *D-Lite RX One Flash head*	USD 230 *(2016)*	USD 230	→ 0% p.a.
	Godox  *AD400Pro Witstro Outdoor flash*	USD 650 *(2018)*	USD 650	→ 0% p.a.
	westcott  *FJ400 Strobe 400Ws*	USD 570 *(2019)*	USD 570	→ 0% p.a.

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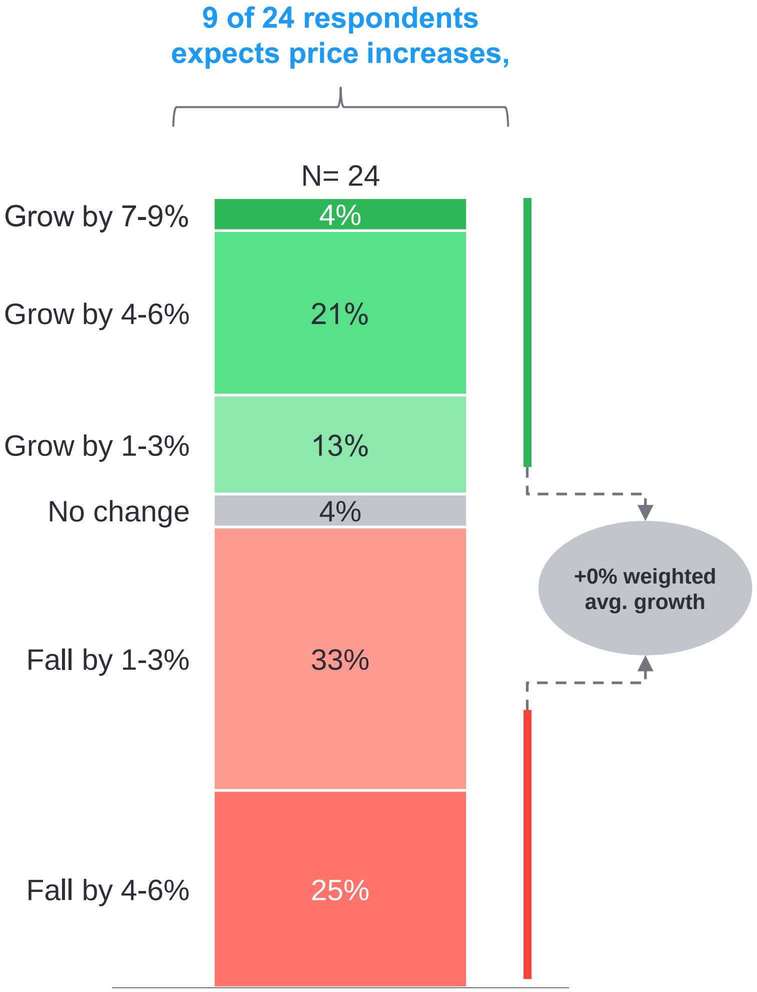
1. Price based on B&H listed price on presumed launch year or 2016 if launch year not available (historical prices sourced through archive.org)
2. Prices based on B&H listed price as of April 2021

Source: B&H, Market participant interviews, archive.org

Market participants have a mixed view of price development for lighting solutions, with over half of them expecting price decrease in the coming years

8 Polarization of pricing[1]



	Trend	Market participant input
Upward price trend for premium lighting products	The premiumization trend in the market is leading to the development of high quality products priced at a higher price points than historical by former mid market players	“Prices for lighting are moving up slightly as demand is quality driven and price sensitivity is not critical” Executive at top-tier camera OEM “The off-camera lighting will increase by 3-5% due to new features and technology improvements” Executive at top-tier camera OEM
Downward price pressure in the low-end of the market	Continued price pressure in the low-end of the market has led to players such as Godox to successfully take market share from former mid-market players. The lower end lighting solutions have a price point a fraction of premium products in the same categories, while meeting the requirements of users with less sophisticated needs	“There will be a decrease driven by competition, less demand and slow in technology innovation” Former executive at Camera OEM “For on camera lighting there are many new manufacturers which makes prices fall” Photography equipment distributor

---

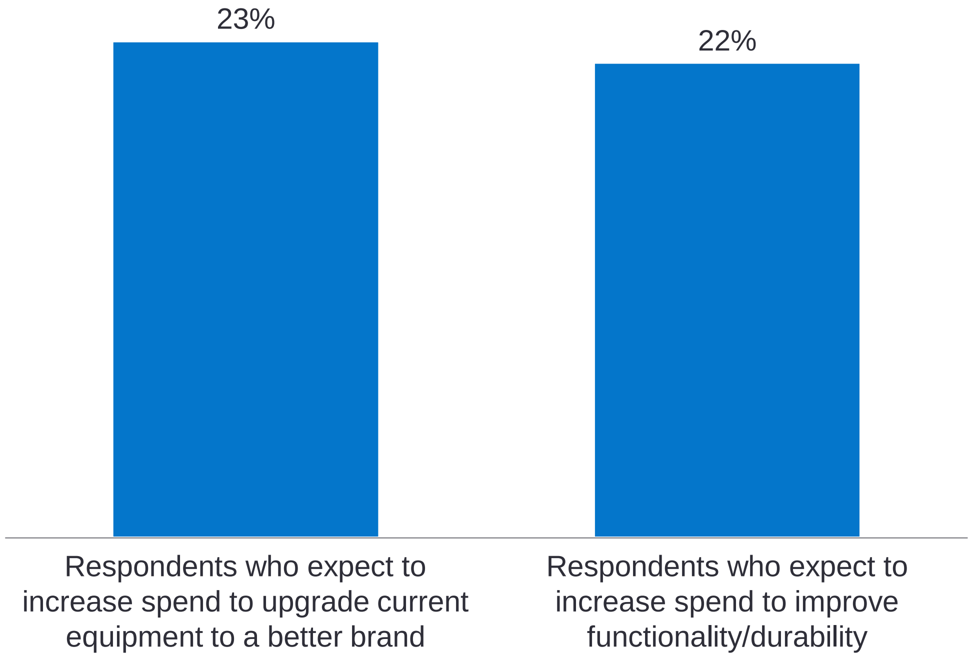
1. Market participants were asked “How do you expect prices for lighting solutions to develop in the coming 5 years?”

Source: Market participant interviews

Key drivers for increased spend on lighting solutions are brand upgrades and improved functionality and durability

9 Upgrading of solutions

Share of respondents who aim to increase spend on lighting solutions due to upgrade



Commentary

- Market participants indicate that there is an ongoing shift in the market where **customers who used to buy mid-tier brand products are converting to low-tier brands such as Godox or premium brands such as Profoto and Broncolor**
- Furthermore, market participants express a growing trend of speedlight users migrating to more sophisticated solutions and battery-powered off-camera flashes in particular

> “**I believe that there will be an increased awareness for the utility of better lighting solutions in the larger end-user market**, especially among content creators.”
> Top-tier lighting OEM sales

> “Looking forward post-COVID, **I expect that people with photography as a hobby will continue to invest more in expensive equipment.**”
> Executive at top-tier camera OEM

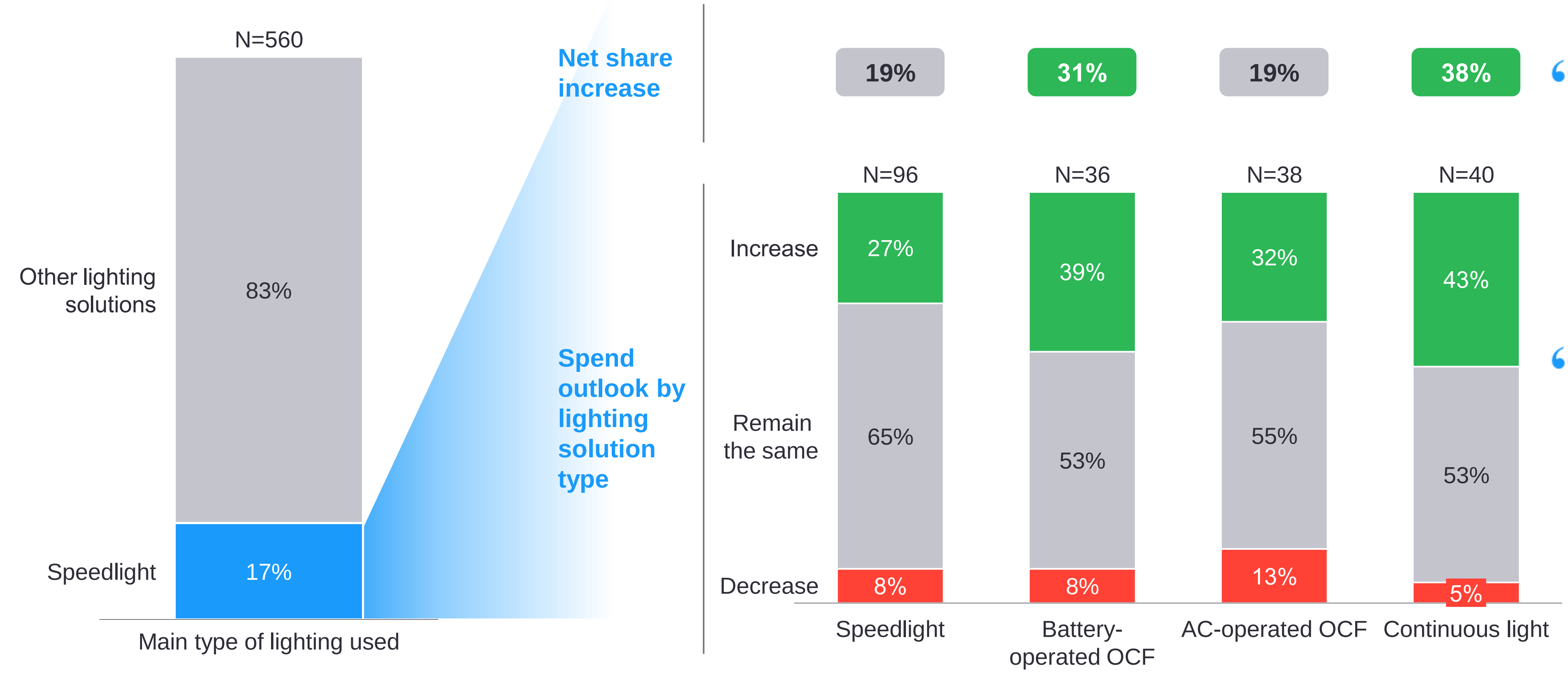
~25% of survey respondents expect to increase spend on lighting solutions to upgrade to a better brand and to improve functionality and durability

Source: Market participant interviews, End-user web survey

End-users who mainly use speedlight are expecting to spend more on off-camera flash and continuous lighting going forward

9 Upgrading of solutions

Share of end-users with speedlight as main type of lighting solution



> “I believe that people using speedlights are moving towards other substitutes for lighting equipment”
>
> Photography equipment dealer

> “There is an ongoing shift from speedlights to smaller battery powered strobes”
>
> Photography equipment dealer

Source: Market participant interviews, End-user web survey

Content

The market has been impacted by COVID-19, however demand is expected to recover by 2023 with 3-5% growth p.a. expected thereafter

Chapter summary – overview of key findings

Key findings

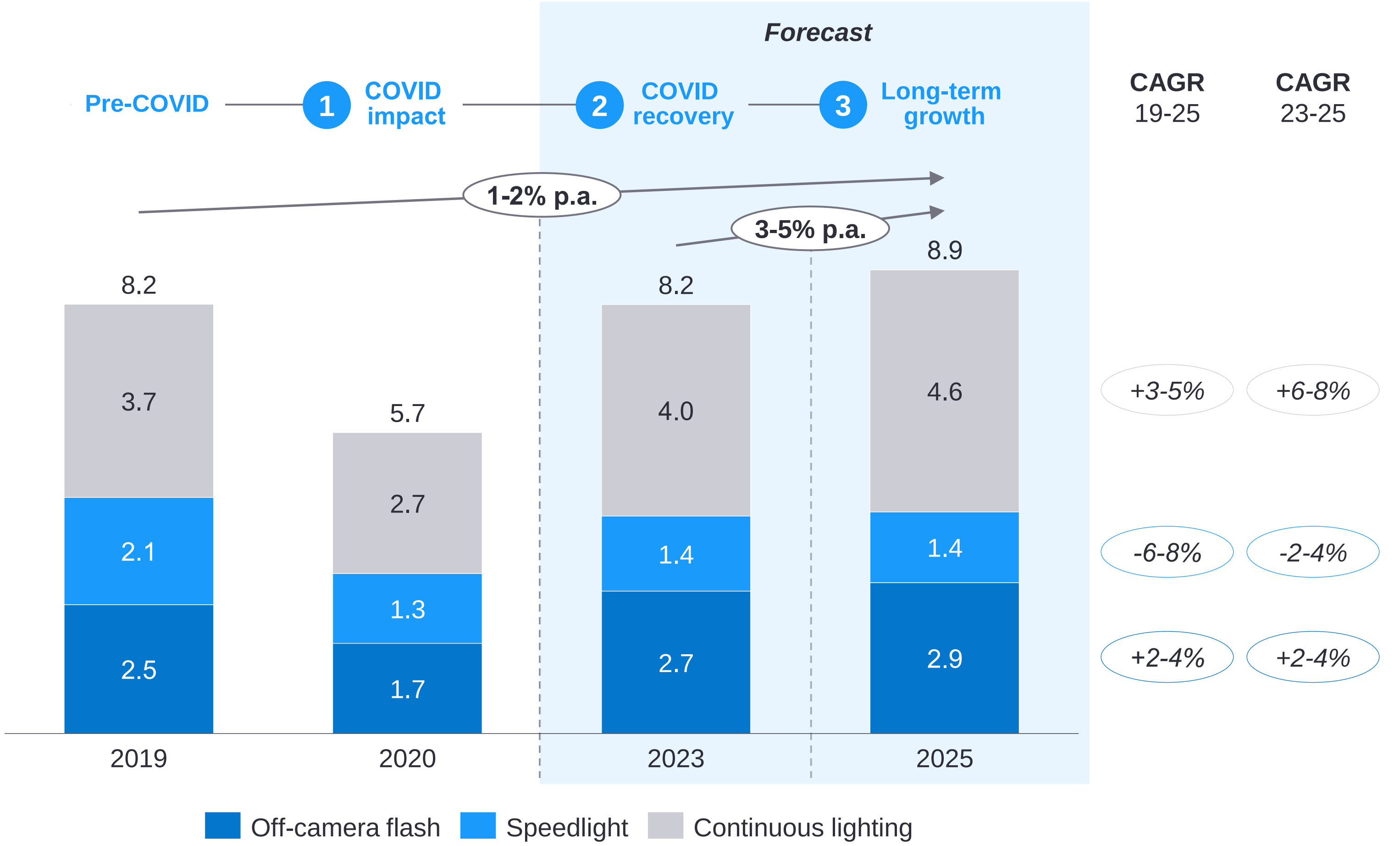
Market outlook

- The lighting solutions market **contracted by ~30% in 2020 as a result of COVID-19**, with speedlight estimated to have been most impacted and self-employed photographers decreasing their spending most
  - **Speedlight** was disproportionately affected because **demand** has contracted in general recent years due to the **displacement of lower-end cameras by smartphones** and **substitution by low-cost off-camera flash,** and is expected to continue contracting by 2-4% p.a. in 2023-2025
  - **Growth of e-com sales during COVID-19 has increased the demand for lighting solutions by e-com businesses and in-house studios**, somewhat reducing the pandemic's impact on the market
- However, the lighting solutions market is expected to **return to 2019 levels by 2023** and to **continue growing by 3-5% p.a. through 2025**
  - Spend on lighting equipment is expected to **return to pre COVID-19 levels by the end of 2023**, with a large share of survey respondents expecting normalization as soon as 2021 and 2022
  - **Asian markets are expected to recover faster**, driven by underlying growth in the Chinese market along with relatively unrestricted populations in other APAC countries such as Australia and South Korea, when compared to other regions globally
  - **More than two out of three market participants expect positive long-term growth** for the lighting solutions market with average growth expectations of **~4% p.a.**
- **Spend on lighting solutions** is **expected to increase from 2020 levels**, due in part to a **COVID-19 rebound**, with **spend on off-camera flash and continuous lighting** expected to reach pre-COVID-19 levels in 2023
  - The **continuous lighting** segment is expected to recover faster, at a rate of **6-8% p.a.**
  - A majority of end-users expect their **long-term spend on lighting solutions to increase**, with spend in **China** expected to increase the most
  - **continuous lighting and battery-operated OCF spend** are expected to increase more than other lighting solutions. Strongest growth is expected within the **continuous lighting segment,** driven in part by a migration towards becoming **"hybrid users" creating both still images and video content**

The global lighting solutions market is expected to return to 2019 levels by 2023 and estimated to grow by 3-5% p.a. onto 2025

Market outlook

Lighting solutions market outlook, 2019-2025F (SEK bn)



Market participant comments

> The decline in camera sales has not affected the lighting solutions market since amateurs are not using external light to a large extent."

Photography equipment distributor

> Continuous lighting is a high-growth category within the lighting solutions market driven by low and mid-tier brands. Prices on continuous lighting products are going down and the built-in technology is improving."

Former executive at mid-tier lighting OEM

> We are seeing an increasing demand for lighting solutions for ecommerce catalogue shooting use and for content creation at home"

Photography equipment dealer

> We expect long term growth of ~5% p.a. driven mainly by our online sales channels"

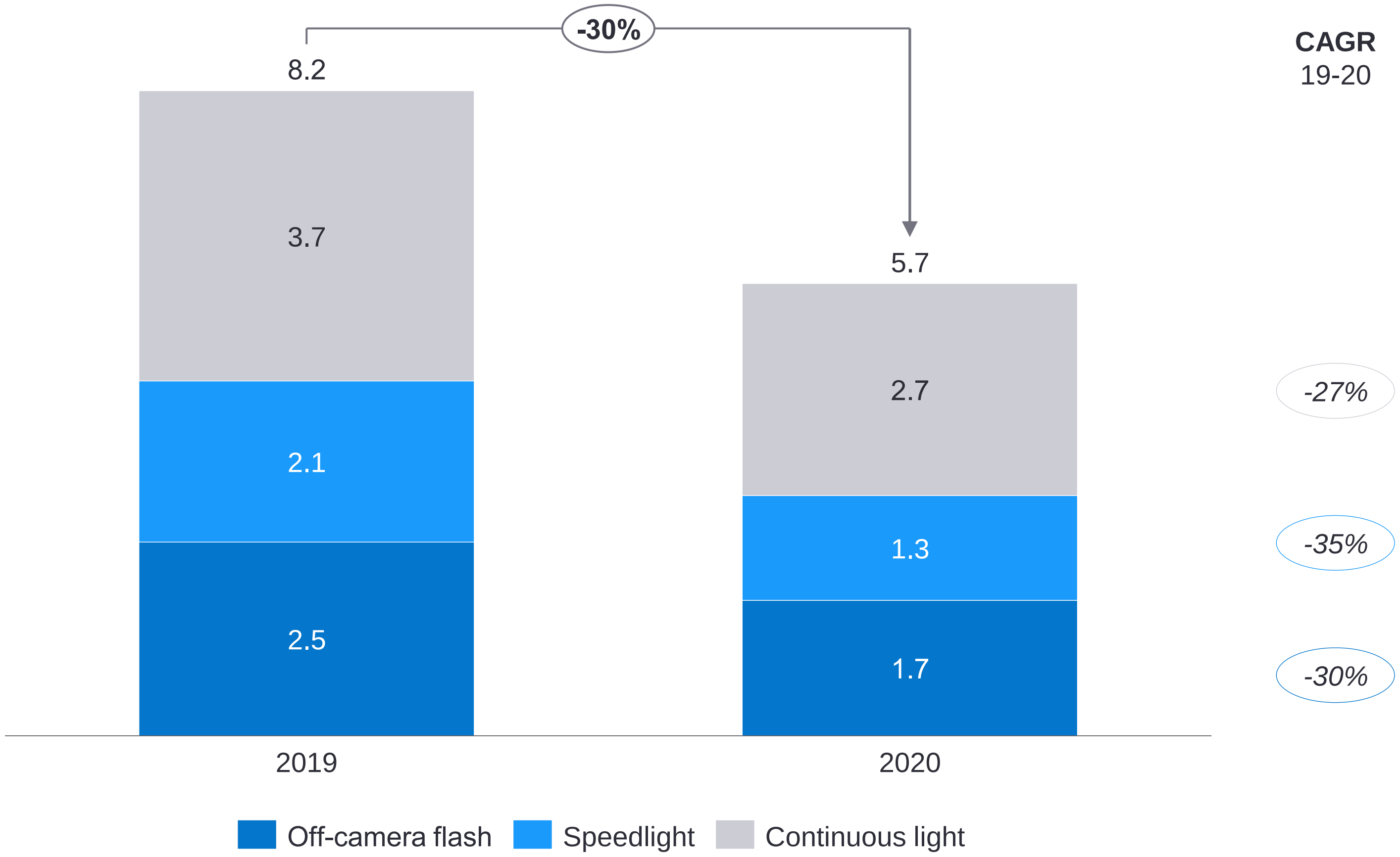
Photography equipment dealership owner

Source: Market participant interviews, End-user web survey

In 2020, the lighting solutions market is estimated to have contracted by ~30% as a result of COVID-19, with speedlight being impacted the most

1 COVID-19 impact on the lighting solutions market

Global lighting solutions market development, 19-20 (SEK bn)



Market comments

> “A large share of the on-location photography work has been postponed or cancelled due to travel and social restrictions during the pandemic. Studio work and indoor shooting have increased in the past year which has somewhat offset the market decline.”
>
> Lighting solution OEM

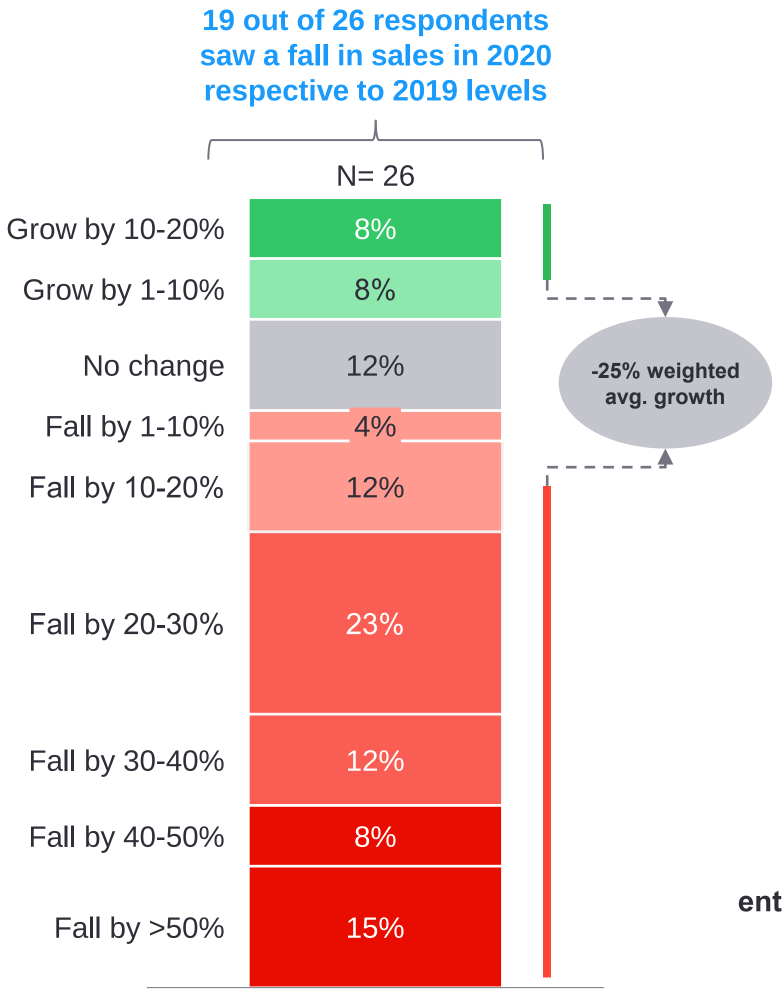
> “We had to close our store during the lock-down period which led to zero revenue for a couple of months”
>
> Photography equipment dealer

> “The pandemic has resulted in a shift for the industry. I think that the event industry might never fully recover from the behavioral change with less gatherings while e-com business with in-house solutions is increasing even more”
>
> Lighting solution OEM

Source: Market participant interviews, End-user web survey

Market participants largely experienced declining sales caused by measures to prevent the spread of COVID-19 such as lockdowns incl. restrictions to travel and gatherings

1 Market participant estimate of COVID-19 impact[1]



	Description	Impact	Market comments
Travel	▸ Unprecedented travel restrictions limited overall opportunities where lighting equipment is used	↘ ◕	“Without travel, people have not been able to get together for shoots, and this has a big effect on our business” Executive at top-tier camera OEM
Events	▸ Social lockdowns have prevented events such as weddings which otherwise would have demanded photographers	↘ ●	“The wedding portrait market was highly impacted, and this affected us as they purchase equipment based on their demand” Former executive at lighting OEM
Online content	▸ However, rise of e-commerce and similar content has provided a source for jobs requiring high-end lighting	↗ ◑	“COVID-19 has contributed to a significant growth in the e-com segment, which is characterized by high-quality lighting demand” Executive at top-tier camera OEM
Hobby enthusiasts	▸ Also, increasing interest from amateur photographers as they spend more time on hobbies and social media	↗ ◔	“As people are spending more time at home, more amateurs seem to have shifted towards high-end lighting for better social media content” Sales distributor of camera OEM

↗ Positive impact … → … ↘ Negative impact

● High impact … ○ Low impact

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1. Market participants were asked “How did COVID-19 impact the lighting solutions market size?”

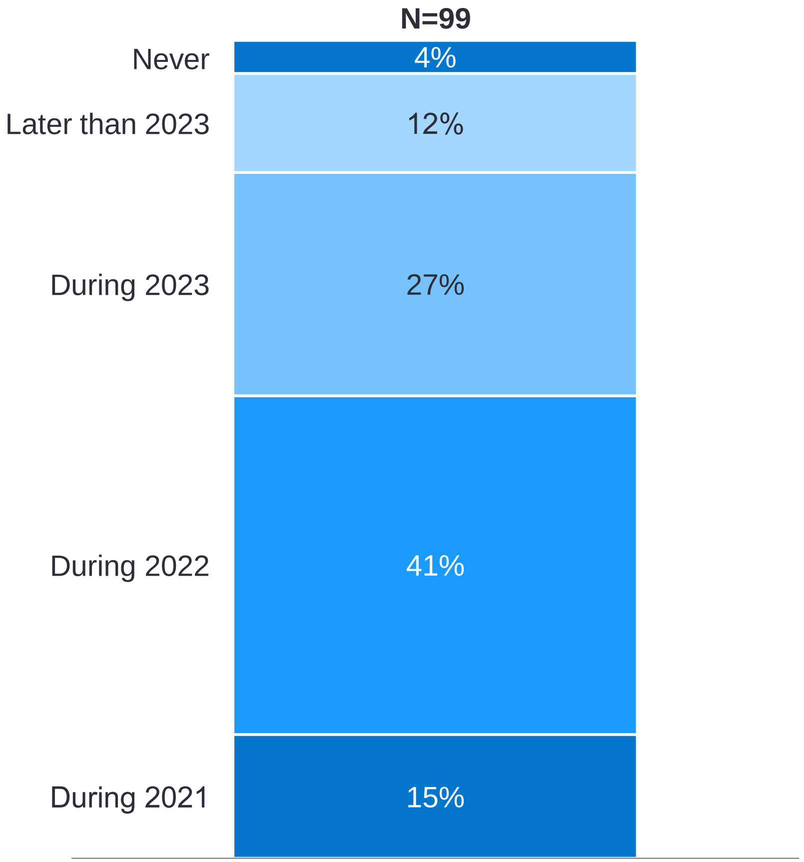
Source: Market participant interviews

Spending on lighting equipment is expected to gradually recover to pre COVID-19 levels by the end of 2023, with Asian markets leading the recovery as restrictions loosen up

2 Expected spend return after COVID-19

POST COVID-19 EXPECTATIONS

Survey respondents expected spend return after COVID-19[1]



Market participant comments

Distributors and dealers in China and Japan expect recovery to pre COVID-19 levels or even further growth

> COVID-19 has a strong initial impact, with a 40% fall in sales. It has been improving since late 2020 and currently we are at a similar sale levels as before"
>
> Photography equipment distributor

> Starting COVID-19 we didn't sell anything but since April 2020 things started recovering and by mid 2020 things were back to normal. Post COVID-19 there is more need for lighting in China, so business sales growth is expected to be better than before"
>
> Photography equipment dealer

The EU-32 market has been negatively impacted by strict gathering and travel restrictions still in place, delaying the recovery

> COVID-19 has not killed the industry but put it on hold. With curfews and travel restrictions still in place there are no events"
>
> Former executive at top-tier lighting OEM

> The wedding and travel industry are negatively impacted by COVID-19. I expect a recovery starting in 2022"
>
> Top-tier lighting OEM distributor

---

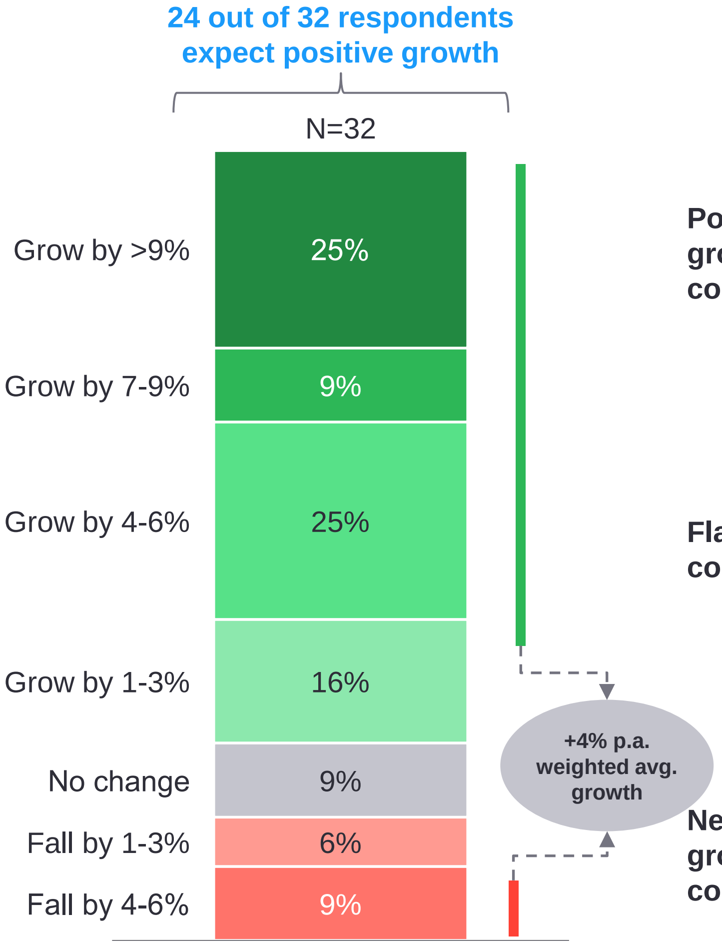
1. Question was given to the respondents who reduced their equipment spend during COVID-19; Excluding those who answered 'I don't know'

Source: Market participant interviews, End-user web survey

The post COVID-19 outlook is positive, with long-term growth expectations reported at ~4% p.a. by market participants

3 Market participant long-term growth outlook[1]

POST COVID-19 EXPECTATIONS



Positive growth comments

> ❝ E-commerce will continue to be a source of growth for lighting demand”
>
> Former director of camera OEM

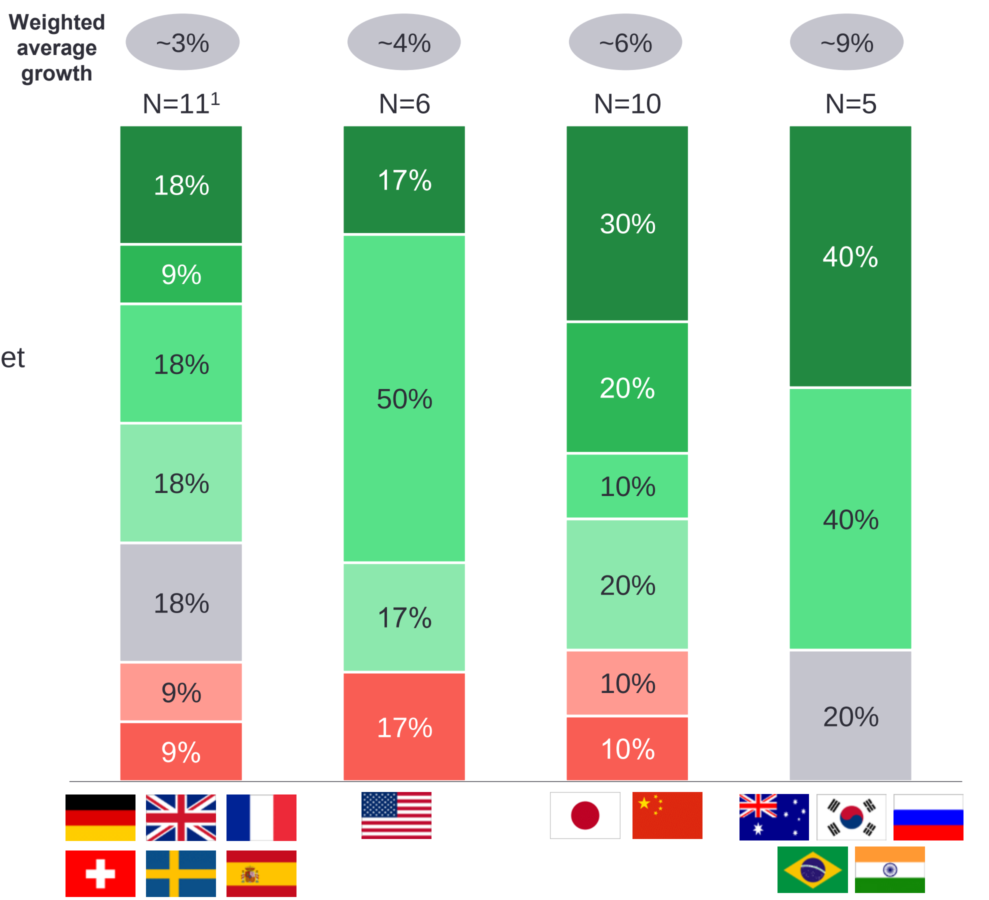
Flat growth comments

> ❝ I do not believe that the market will grow as studio solutions are decreasing while continuous solutions are increasing”
>
> Distributor for lighting OEM

Negative growth comments

> ❝ Number of professional photographers will likely not increase, and end-users will value ease of use going forward”
>
> Director of lighting OEM

Breakdown per region, post COVID-19 through 2025



1. Market participants were asked “How do you expect the lighting solutions market to grow the coming years (post COVID-19)?”
2. Based on interviews in 6 geographies as a proxy for EU-32

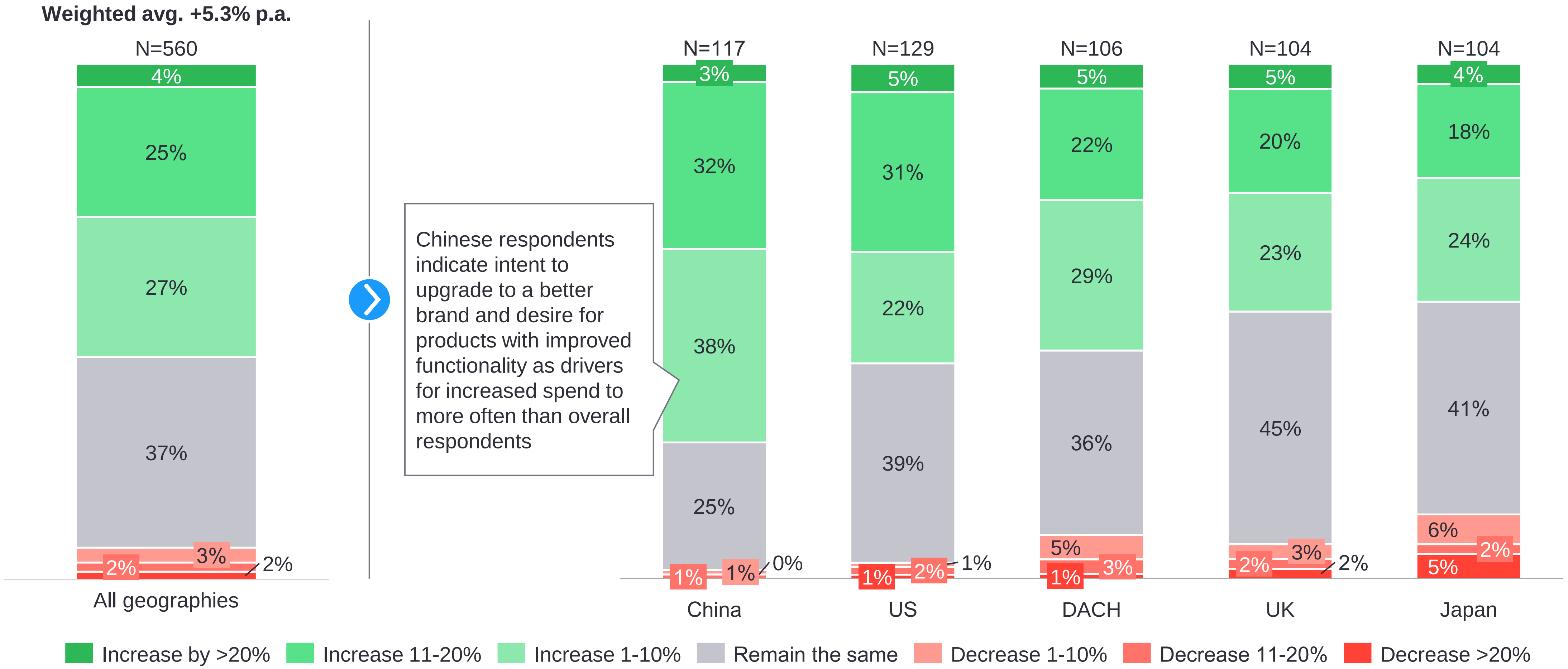
Source: Market participant interviews

Long-term spending expected to increase across regions – end-users in China have the most positive outlook

3 Survey respondents long-term growth outlook

POST COVID-19 EXPECTATIONS

Spend outlook breakdown by geography[1]



Chinese respondents indicate intent to upgrade to a better brand and desire for products with improved functionality as drivers for increased spend to more often than overall respondents

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[1] Respondents were asked “How do you expect your spend on lighting equipment to change over the next five years?”

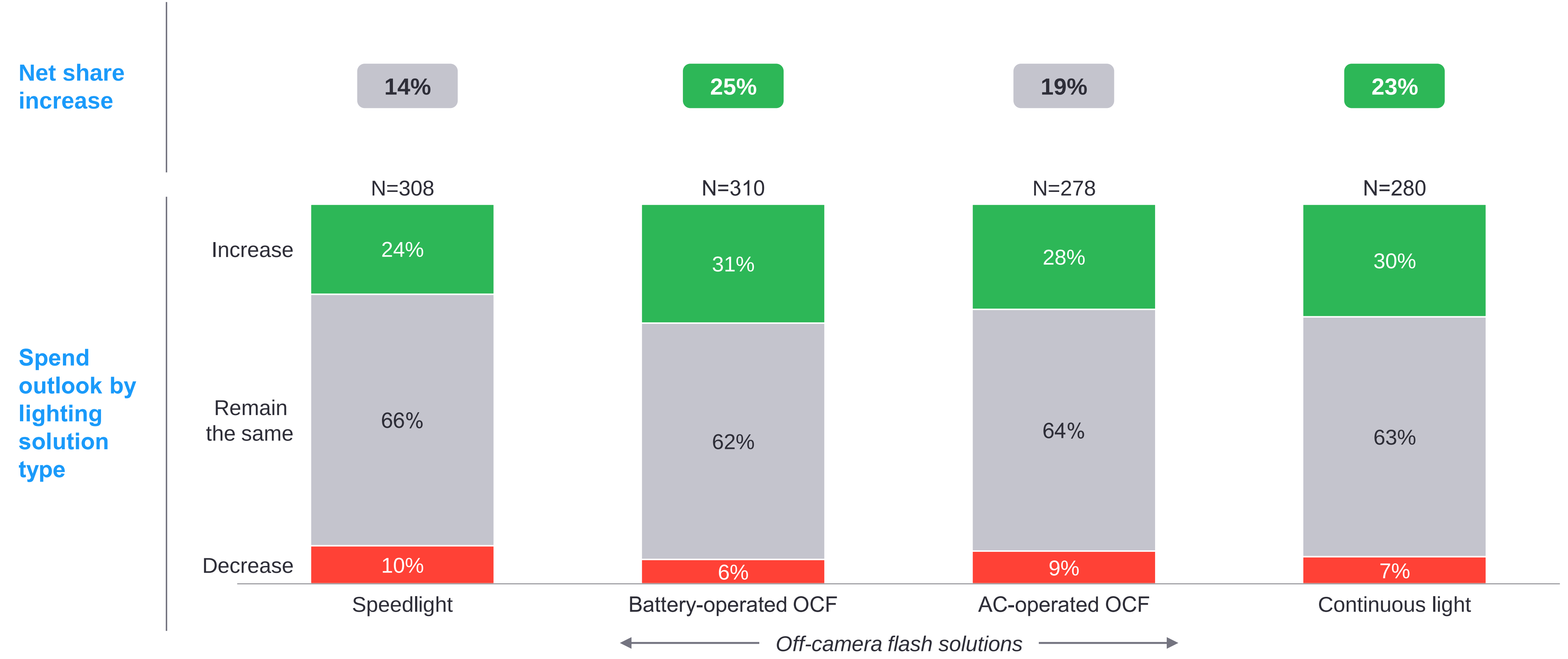
Source: End-user web survey

Spend on lighting solutions is expected to increase in the long term, with continuous lighting and battery-operated OCF growing faster

3 Long-term spend outlook by lighting solution[1]

POST COVID-19 EXPECTATIONS

Spend outlook breakdown by lighting solution[2]



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1. Includes impact of expected COVID rebound
2. Respondents were asked “How do you expect your spend on lighting equipment to change over the next five years?” for each lighting solution

Source: End-user web survey

Content

The lighting solutions market is consolidated – a handful of key players dominate with few competing in both the flash and continuous lighting spaces

Chapter summary – overview of key findings

Key findings

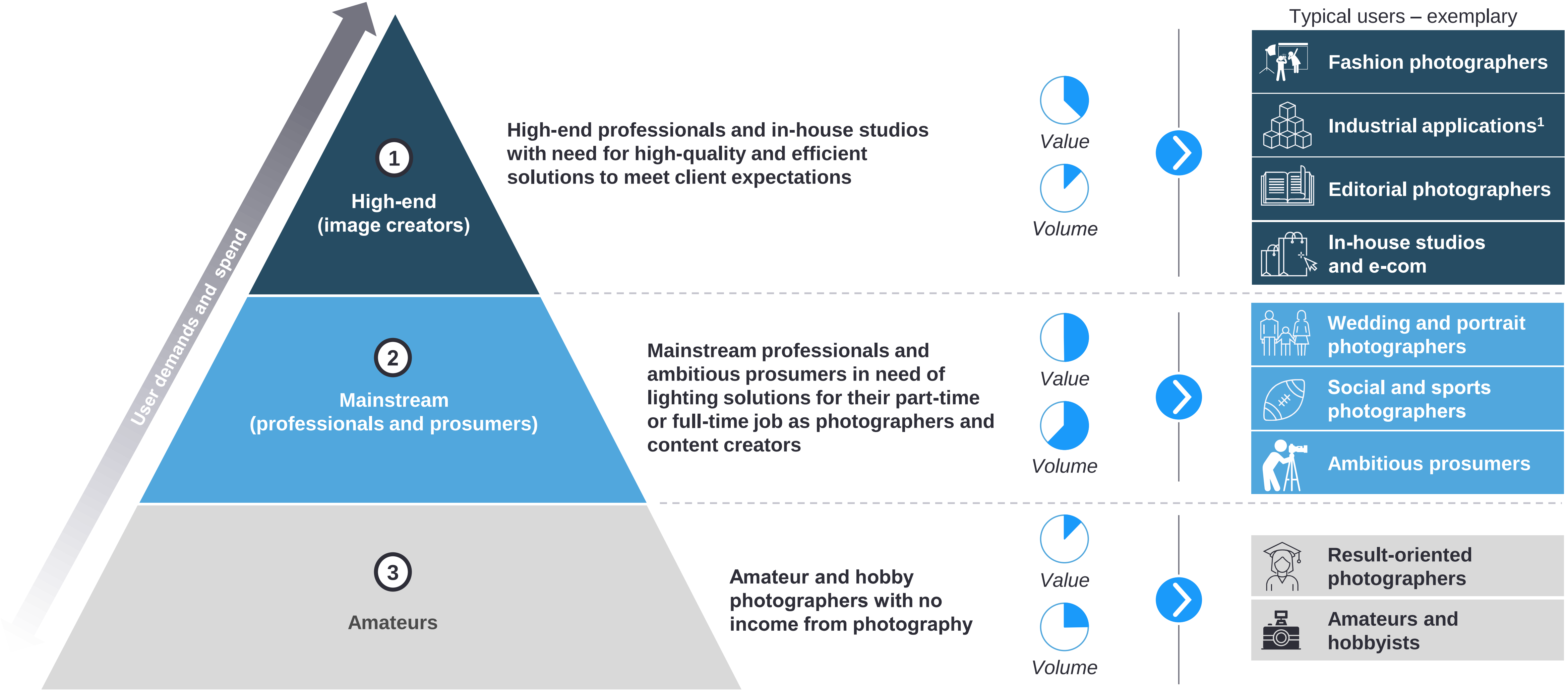
Competitive landscape

- Lighting end-users can be segmented into high-end image creators, mainstream professionals and prosumers, and amateurs / general hobbyists, with high-end image creators demanding the most in terms of quality, consistency and productivity while having the highest spend per customer
  - **High spending users value quality, durability and innovation above all**, while value for money is more important for mainstream users
  - Corporate accounts are becoming increasingly significant due to the rise of e-commerce and in-house studios with high demands on quality and productivity
  - **Rental shops are important for end-users whose work vary by type of event and those who travel** – ease of integration, logistics and user friendly gear are key criteria
- **The flash lighting market is consolidated** and characterized by **a few leading premium and value brands and global speedlight providers** catering for different end-user needs, with the premium segment dominating amongst high-end image creators
  - **Profoto and Godox are the largest players in the market** with ~20% and ~25% market share respectively while addressing different end-users
  - The leading flash players have a long heritage of providing solutions for professional photographers – Godox has become a key player on the market over the last decade
  - Legacy camera manufacturers still have a strong footprint within speedlight, while a long-tail of flash providers address various end-user needs
  - **Profoto is the most recognized among premium brands as well as the general market** – with all top brands well known among users
  - **Profoto has the highest NPS of the premium brands** targeting the most demanding users, while Godox rates lowest of the top players
  - With a high level of innovation across key flash brands, **Profoto differentiates as innovation leader**, having been first to market on major new product launches
  - The premium brands have successfully captured higher pricing for similar product segments relative to competitors
  - **Profoto has a leading position in the rental shops and the dealer channel** with a broad footprint and geo coverage supported by incentives designed to drive rental and sales
- The continuous lighting solutions consists of premium brands for high-end filmmaking, multipurpose lighting providers, and brands who focus on still photography/video gear – several flash players compete within the latter category
  - **A majority of the key continuous flash competitors offer multi-purpose solutions**, while Godox and Westcott focus on still photography and video-oriented end-users
  - **Brand awareness is generally high for key continuous lighting brands**, and Westcott has the highest brand awareness
  - Westcott, Hive, and Rotolight have the highest NPS, while Nanlite and Light & Motion trail behind

Lighting end-users can be segmented into high-end image creators, mainstream professionals and prosumers, and amateurs…

Overview of lighting end-user segments

ILLUSTRATIVE



1 High-end (image creators): High-end professionals and in-house studios with need for high-quality and efficient solutions to meet client expectations

2 Mainstream (professionals and prosumers): Mainstream professionals and ambitious prosumers in need of lighting solutions for their part-time or full-time job as photographers and content creators

3 Amateurs: Amateur and hobby photographers with no income from photography

Typical users – exemplary

- Fashion photographers
- Industrial applications[1]
- Editorial photographers
- In-house studios and e-com

- Wedding and portrait photographers
- Social and sports photographers
- Ambitious prosumers

- Result-oriented photographers
- Amateurs and hobbyists

Indicative relative share of market

● High ··· ○ Low

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[1] Includes the use of lighting solutions for content creation within various areas such as the military, law enforcement and for 3D imaging

Source: Market participant interviews

…with high-end image creators performing demanding professional work using primarily off-camera solutions, and having the highest appetite to invest

End-user segment characteristics[1]

AC-powered OCF | Battery-powered OCF | Speedlight

End-user segment	① High-end (image creators)	② Mainstream (professionals and prosumers)	③ Amateurs
Lighting Spend profile	Large in-house fashion studios have been known to spend in excess of SEK 250k annually, with e-comm studios often spending more than SEK 50k annually as well High-end photographers annual spend >SEK 20k	Average spend profile ranging from SEK 2k to 20k annually	Sporadic low-value purchase pattern typically less than SEK 2k per year
Experience	Experienced (>10 years) and rising stars	Broad experience profile (from 1 to >10 years)	Varied levels of experience
Occupation profile	High profile photographers with demanding clients working both on location and at top tier studios	On location “business in a bag photographers” and mid/low-tier studios	Non-professional photographers and content creators
Purchase vs. rent propensity	High propensity to purchase Renting used for particularly complicated projects, demand peaks and gigs outside home geography	Purchase core equipment, common to rent high-end lighting equipment for specific projects	Limited rental
Product needs[1]	60% 30% 10%	10% 50% 40%	30% 70%
Commentary	“On average I spend from USD 3-10k every year. I buy 2-3 lights per year to get the latest technology and capabilities” Professional studio photographer	“**Mainstream users typically buy portable products**, while **renting additional equipment and accessories** for one-off jobs” Manager at photography dealer	“**Amateurs do not rent lighting solutions** and are **not recurrent buyers** either” Executive at lighting distributor

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1. Indicative share of volume

Source: Market participant interviews

Corporates are becoming increasingly significant due to the rise of e-commerce and in-house studios with high demands on quality and productivity

Corporates and brand lock-in

Key dynamics drive demand for premium products

Growth of ecommerce	E-commerce content creation is growing rapidly as brands need to generate unprecedented volumes of images on a daily basis to market and sell their products
Premium equipment needs	Premium lighting equipment is required to address the need for precision, consistency, durability and up-time and seamless integrations with other equipment is key to maximizing productivity
Ecosystem lock-in	Compatibility between brand ecosystems can be cumbersome and in some cases not possible, driving a trend toward consolidation of equipment to a single brand

High-end user case study

① nelly.com

Customer needs	Like many online brands, **Nelly creates thousands of images per day, requiring high performance lighting equipment** that improves consistency and quality of the photos, increases workflow efficiency and decreases downtime Prior to switching to Profoto, the company used an array of different flashes, brands and modifiers, which created issues with consistent results and greater need for post-production work
Results	After switching to Profoto's D2 Industrial flash lighting solutions, **speed and reliability increased and downtime was reduced**, allowing them to operate at the much higher pace required in fashion e-commerce Better consistency and higher image quality also reduced the need for hours of post production work and improved the end product

> Costumers never mix Profoto and Broncolor equipment. Users are locked into one brand and ecosystem. Once you adopt one brand's system retention is large at 80-90%. This is partly due to the investment both in the equipment ecosystem and in the staff training."
>
> Owner at photography equipment distributor

> Speed is the nature of the game, and the low downtime of these lights fits our pace – we can just keep firing as the model throws new poses at the camera"
>
> Mathias Nilsson, Photo Manager at Nelly.com

Source: Market participants interviews, Profoto website

High-end users value quality, durability and innovation above all, while value for money is more important for mainstream users

Top brand KPCs by end-user spend level

Top three brand KPCs for users spending >SEK 50k annually

1. High-quality equipment
2. Durability and reliability
3. Innovative and latest technology

> I need high quality and reliable gear that never fails in the middle of a shooting. The lights need to keep up to my use: short recycle time (speed) with high power output"
>
> Professional studio photographer

> High spending customers have need for highly reliable quality picture. The branding image is important in the industry as they work for high-end prestigious customers"
>
> Owner of lighting distributor

Profoto is the most often used brand for the high value segment, where as low purchase value users most commonly use Godox

Top three brand KPCs for users spending <SEK 10k annually

1. Value for money
2. High-quality equipment
3. Durability and reliability

> The mainstream professionals are price sensitive, they care about the portability and versatility of products to allow them to perform at weddings and events."
>
> Executive at lighting distributor

> Mainstream users want quality at a good price. They care about feeling like the pros within their budget possibilities"
>
> Executive at photography equipment dealer

Source: Market participant interview, End-user web survey

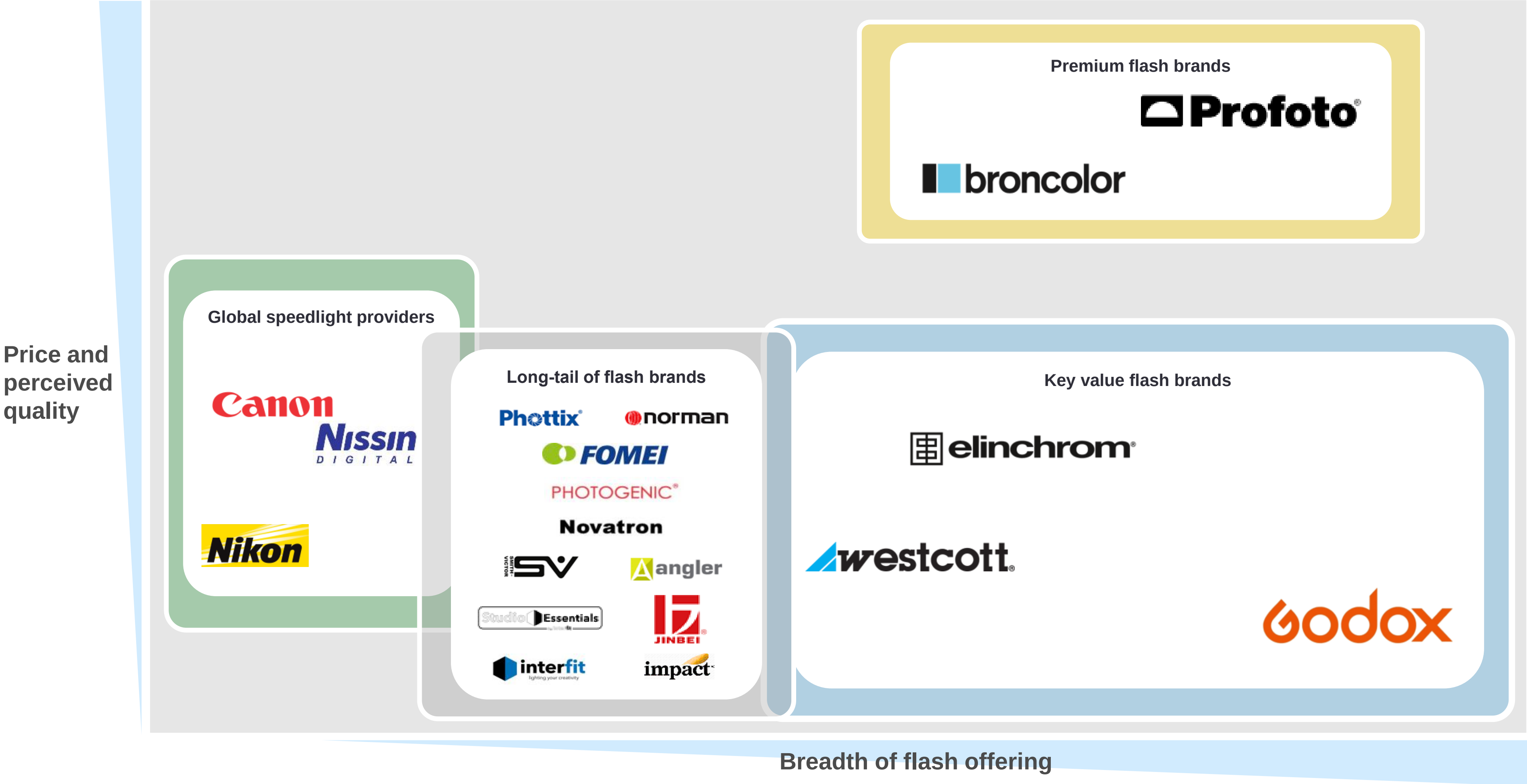
Content

Final report

The market is consolidated and characterized by a few leading premium and value brands, and global speedlight providers…

Competitive landscape mapping (1/2)

NON-EXHAUSTIVE



Premium flash brands

Profoto

broncolor

Global speedlight providers

Canon

Nissin DIGITAL

Nikon

Long-tail of flash brands

Phottix

norman

FOMEI

PHOTOGENIC

Novatron

SV

angler

StudioEssentials

JINBEI

interfit

impact

Key value flash brands

elinchrom

westcott

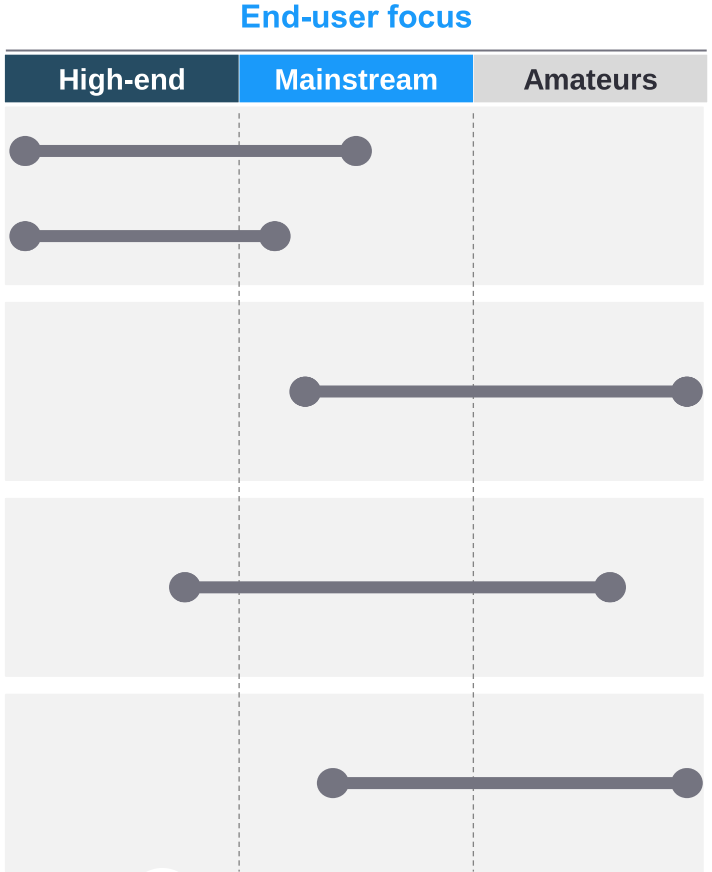
Godox

Source: Market participant interviews

…catering for different end-user needs, with the premium segment dominating amongst high-end image creators

Competitive landscape mapping (2/2)

	Flash segment	Flash brands	Market participant comments
1	**Premium flash brands**	Profoto broncolor	**Profoto** is a premium brand targeting a broad professional audience. **Broncolor** is a high performance brand focused on studios and corporates." Executive at photography equipment dealer
2	**Value flash brands**	elinchrom Godox westcott	**Elinchrom** targets the professional mid market users, while **Westcott and Godox** are the low price brands for the mainstream consumer user" Executive at photography equipment dealer
3	**Global speedlight providers**	Canon Nissin DIGITAL Nikon	Speedlights **from traditional camera manufacturers** are widely adopted by both mainstream consumers and for professional event and press users" Executive at camera equipment manufacturer
4	**Long-tail of flash brands**	Phottix norman Studio Essentials JINBEI SV FOMEI impact angler PHOTOGENIC Novatron interfit	There has been an erosion of the brands positioned in the mid market. **Bowens** is out" Owner of lighting distribution



The end-user needs are to a large extent catered for by the leading brands, which has pushed some mid-market players out of the market in recent years

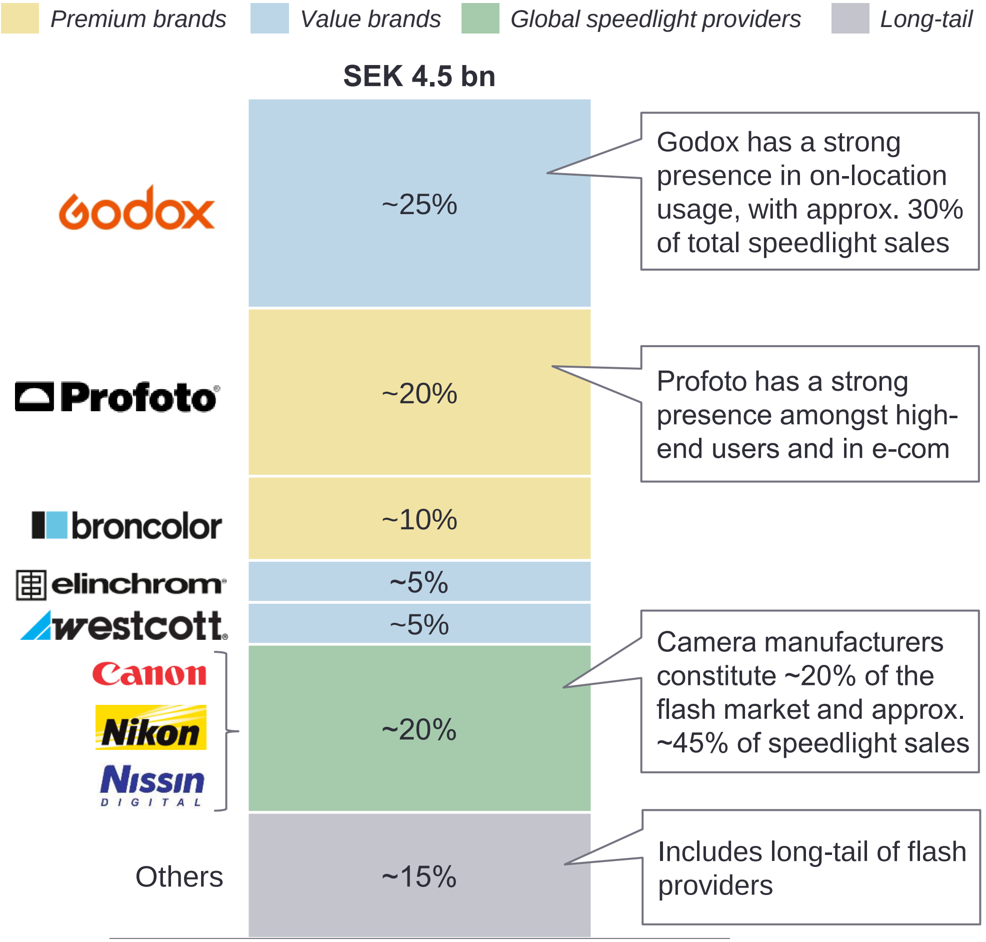
Source: Market participant interviews

Profoto and Godox are the largest players in the market, addressing different end-user segments, with ~20% and ~25% market share respectively

Market shares of key flash solutions providers

INDICATIVE

Estimated market shares within flash solutions[1], 2019



Godox has a strong presence in on-location usage, with approx. 30% of total speedlight sales

Profoto has a strong presence amongst high-end users and in e-com

Camera manufacturers constitute ~20% of the flash market and approx. ~45% of speedlight sales

Includes long-tail of flash providers

Market participant comments

> **Godox is the largest player within flash lighting products**, closely followed by Profoto. Westcott is a growing player on the market and has gained market share in the US in recent years"
>
> Photography equipment dealer

> **Profoto is the market leader in the high-end segment** of the market, and Broncolor and Profoto are dominating the studio and rental segment. Elinchrom is more of a mid-segment player and is more focused on outdoor and sports"
>
> Premium lighting manufacturer

> **Broncolor is a niche player** on the market whose strength is power packs and studio flashes"
>
> Photography equipment dealer

> **Elinchrom** used to be an alternative to Profoto or Broncolor with Swiss made high quality. However they have **been lagging behind in quality and R&D** during the past years- currently positioned closer to the Godox segment "
>
> Manager at photography distributor

> **Speedlight solutions from global camera manufacturers such as Canon and Nikon are still relevant in our assortment,** as many customers are loyal to their camera brand and **want a seamless integration of products**"
>
> Photography equipment distributor

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1. Estimated flash market shares based on value

Source: Market participant interviews

Final report

The leading flash players have a long heritage of providing solutions for professional photographers – Godox has become a key player on the market over the last decade

Flash brands benchmarking (1/2)

	Competitor	Est. market share	Founded	Geography		# of employees	Product offering			Distribution channels		
				HQ	Coverage		Speedlight	OCF (DC)[1]	OCF (AC)[2]	Own e-com	Rental	Dealer
Premium brands	Profoto	~20%	1968	🇸🇪	Global	~90	◔	◑	◔	✓	✓	✓
	broncolor	~10%	1958	🇨🇭	Global	~60	○	◔	◕	✗	✓	✓
Value brands	elinchrom	~5%	1962	🇨🇭	Global	~50	○	◕	◔	✗	✓	✓
	westcott	~5%	1926	🇺🇸	Global	~25	◔	◕	○	✓	✓	✓
	Godox	~25%	2009	🇨🇳	Global	~1,000	◔	◑	◔	✗	~	✓

1. OCF (DC): battery powered Off-camera flash
2. OCF (AC): mains powered Off-camera flash

Source: Market participant interviews, Company websites

Relative share

● High ··· ○ Low

✓ Fit

~ Partial fit

✗ Not a fit

Legacy camera manufacturers still have a strong footprint amongst speedlight users, while a long-tail of small flash providers address various end-user needs

Flash brands benchmarking (2/2)

NON-EXHAUSTIVE

		Competitor	Founded	Geography		Product offering			Description
				HQ	Coverage	Speedlight	OCF (DC)[1]	OCF (AC)[2]	
Global speedlight		Canon	1937	🇯🇵	Global	✓	✗	✗	Headquartered in Japan, Canon is a provider of imaging solutions Speedlight/ On-camera flashes are the lighting solutions available
		Nikon	1917	🇯🇵	Global	✓	✗	✗	Nikon is involved in businesses around imaging, optics & precision equipment Wide range of on-camera flash products are available under flash category
		Nissin DIGITAL	1959	🇯🇵	Global	✓	✓	✗	Nissin is a global manufacturer of electronic flash units based in Japan Offers a range of speedlights and other accessories
Long-tail of flash providers		Phottix	2007	🇨🇳	Global	✗	✓	✓	Founded by a small group of photographers Offers a wide range of flash and LED solutions and accessories
	PromarkBRANDS	norman	1963	🇺🇸	Global	✗	✓	✓	Lighting solutions and accessories for commercial accounts, portrait and high-volume still photography
		PHOTOGENIC®	1903	🇺🇸	US, Canada	✗	✓	✓	Provides studio and on-location solutions for mainly professional photographers
		SMITH VICTOR SV	1874	🇺🇸	US	✓	✗	✓	One of the oldest brands in the industry, now offering affordable lighting and studio accessories for hobbyists and professionals
		Novatron	1997	🇩🇪	Global	✗	✗	✓	Offers a narrow range of flash lighting solutions and accessories for studio and on-location
		FOMEI	1990	🇨🇿	Europe, Vietnam	✗	✓	✓	Provides studio lighting solutions for still photography and video Wide product portfolio also covering medical equipment and binoculars
		GRADUS GROUP angler impact	2011	🇺🇸	US	✗	✓	✓	Angler and Impact lighting are part of the Gradus Group Angler has a limited range of solutions while Impact offers a wide range
		JINBEI	1995	🇨🇳	Global	✓	✓	✗	Founded in Shanghai, Jinbei specializes in Flash and LED lighting products Offers a wide range of flash lighting products apart from other accessories
		interfit Studio Essentials	2001	🇺🇸	US, UK, Ireland, Spain	✗	✓	✓	Provides lighting solutions and accessories in flash and continuous segments Studio essentials is a product line of strobes and accessories under Interfit

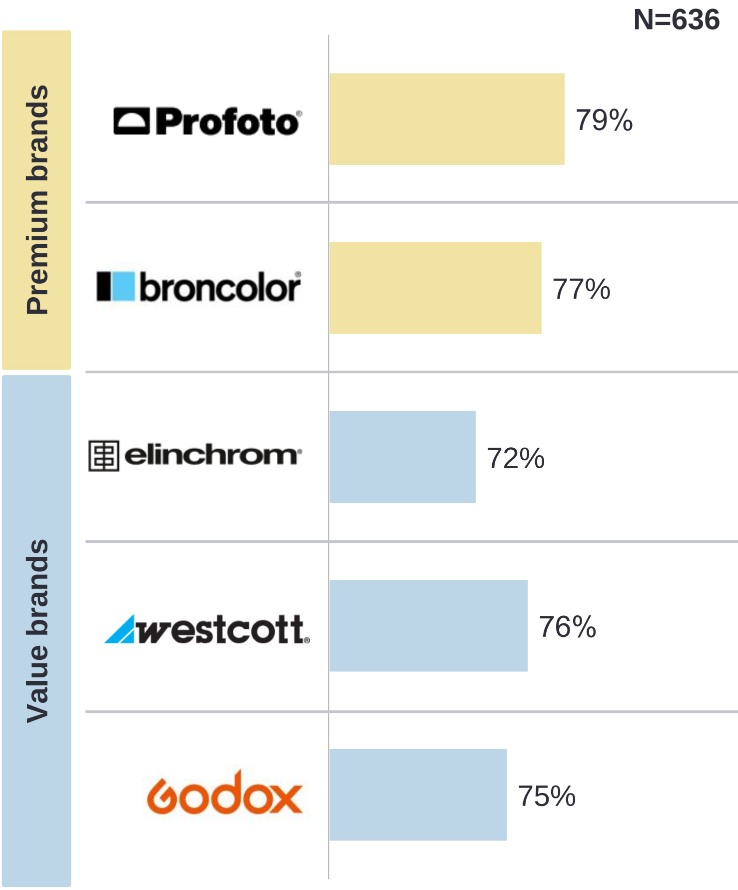
1. OCF (DC): battery powered Off-camera flash
2. OCF (AC): mains powered Off-camera flash

Source: Market participant interviews, Company websites

✓ Fit ~ Partial fit ✗ Not a fit

Profoto is the most recognized flash brand…

Awareness and perception of key flash competitors



		Brand awareness[1]	Market perception	Market participant insights
Premium brands	Profoto	79%	Recognized by dealers as the **leading premium brand for its known quality**	“Profoto is perceived as a pro and premium brand, setting the quality standards & the trends to follow” Executive at lighting distributor
	broncolor	77%	**Premium priced brand with a focus in studio lighting solutions**	“Broncolor is perceived as a highly specialized and premium brand for heavy studio equipment” Photography specialized dealer
Value brands	elinchrom	72%	Perceived by dealers as the **affordable lighting brand for the professional and prosumer users**	“Elinchrom is promoted to professionals who want affordable solutions able with higher quality than Asian manufacturers such as Godox” Owner of photography distributor
	westcott	76%	Perceived to have a **wide solutions offering at low-end prices.** High brand awareness likely driven by **light shapers and accessories** rather than flashes	“Westcott is an upcoming player trying to position as a premium mainstream brand within the low-end pricing segment.” Manager at photography dealer
	Godox	75%	Recognized for its **value for money proposition**	“Godox is known as the mainstream leading brand offering lighting solutions at competitive pricing.” Executive at lighting distributors

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1. Based on end-user web survey, respondents were asked if they were aware of the brand, have used the brand or is currently using the brand. Participation in the survey was limited to professional/semi-professional photographers and professional content creators. Amateurs users were not sampled

Source: Market participant interviews, End-user web survey

…and has the highest NPS of the premium brands – despite that premium brand users are more demanding and critical; Godox has the lowest NPS of the key brands

Performance of key flash brands

		NPS score[1]		Purchasing criteria per brand	Market participant comments
		NPS	N		
Premium brands	Profoto	38	109	+ Leads with high quality consistency and ease of use + Innovative technology - High price point for broader audience	“Profoto is the leading premium brand, where high-end users aspire to get due to its high quality and prestige.” Executive at lighting distributor
	broncolor	37	97	+ High reputable studio offering + Premium brand with high quality products - Heavy technology not portable for on-location - Narrow focus on high-end studio user	“Broncolor has a powerful light known for its stability and consistent quality. Is heavy and not portable so we recommend it for studio oriented work” Owner of camera equipment distributor
Value brands	elinchrom	46	81	+ Strong assortment of soft boxes and accessories + Offers solutions focused on mid-tier photographers - Lagging behind in product innovation - “Stuck in the middle” quality and price position	“The brand for the semi-pro getting started in studio. Not as reliable but more affordable. I have friends shooting with Elinchrom and they love it” Professional studio photographer
	westcott	35	103	+ Competitive pricing within the low-end segment - Narrow flash offering	“Westcott is a mainstream US brand recommended for their good on-location offering for weddings and portrait photography” Photography specialized dealer
	Godox	26	86	+ Attractive value for money proposition + Perceived as highly innovative with broad flash offering - Weak position amongst professional users - Low rated in support service	“The mainstream consumer and amateur segments are very content with Godox, deliver their quality requirements at an affordable price” Executive at lighting distributor

1. NPS calculated as = (%) of respondents scoring 9-10 – (%) scoring 0-6. (10 = Definitely, 0 = Never). Scale of 0-10 (10 = Definitely, 0 = Never), respondents filtered for only current users of the brand

Source: End-user web survey

With a high level of innovation across key flash brands, Profoto differentiates as innovation leader, having been first to market on major new product launches

Innovation benchmarking of key flash brands

NON-EXHAUSTIVE

● High ··· ○ Low

	Number of patents[1]	Radio TTL/HSS[2]	>2,000Ws flash with TTL	High-end speedlight	Smartphone flash	Perceived level of innovation[3]
Profoto	27	✓ *Launched 2013*	✓ *Launched 2016*	✓ *Launched 2017*	✓ *Launched 2019*	●
broncolor	12	✓ *Launched 2017*	✗	✗	✗	◕
elinchrom	0	✓ *Launched 2018*	✗	✗	✗	◔
westcott	1	✓ *Launched 2019*	✗	✗	✗	◑
Godox	7	✓ *Launched 2016*	✗	✗	~ *Launched 2017[4]*	◕

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1. Only covering registered patents established since 2010
2. TTL = Through-The-Lens metering, HHS = High-Speed Sync
3. Indicative assessment based on market participant interviews and desktop research
4. Godox ceased manufacturing of the A1 smartphone flash during 2020

Source: Market participant interviews, Company webpages

Profoto and Broncolor stand out with premium pricing in the market with 3-5x price compared to the key value brands

Price benchmarking of key flash brands[1]

SELECTED EXAMPLES

🟨 *Premium brands*

🟦 *Value brands*

	Battery-powered OCF		AC-powered OCF		Speedlight	
	Product	*Price (SEK)*	*Product*	*Price (SEK)*	*Product*	*Price (SEK)*
Profoto	 **B10 Plus – Power 500Ws**	**~21k**	 **D2 500 – Power 500Ws**	**~19k**	 **A10 – Power 76Ws**	**~11k**
broncolor	 **Siros L400 – Power 400Ws**	**~18k**	 **Siros S400 – Power 400Ws**	**~14k**	*Not offered*	
elinchrom	 **D-Lite RX 4 – Power 400Ws**	**~4k**	 **ELC500 TTL – Power 500Ws**	**~8k**	*Not offered*	
westcott	 **FJ400 – Power 400Ws**	**~5k**	*Not offered*		 **Power – 80Ws**	**~3k**
Godox	 **AD300Pro – Power 300Ws**	**~4k**	 **DP400III – Power 400Ws**	**~2k**	 **VING V860IIC – Power 76Ws**	**~2k**
	Premium to value brand average price factor	**5x**		**3x**		**4x**

Price position

1. Prices sourced through B&H and brand webpages – products assessed to be the most comparable in each segment based on technical specification

Source: Desktop research

Profoto has a leading position amongst peers in terms of channel presence

Rental and dealer channels by brand

● High ··· ○ Low

	Dealer presence	Rental shop presence	Coverage
Profoto	●	●	▸ ~900 outlets globally, with ~500 offer rental ▸ Strong presence globally
broncolor	◑	◕	▸ ~350 outlets globally, with ~290 offering rental ▸ Strong presence amongst rental shops
elinchrom	◑	◑	▸ ~380 outlets, with ~100 offering rental ▸ Strong footprint in the DACH region
westcott	◔	◔	▸ ~250 outlets, with ~50 offering rental (only in US) ▸ Strong foothold in the US
Godox	●	○	▸ ~60 chains globally with no rental presence ▸ Strong footprint within broader e-com such as Amazon

Market participant comments

> “When selling it is key to know that the brand offers service and support, avoiding product return or customer dissatisfaction“
> Executive at photography equipment dealer

> “Broncolor’s heavy and high priced products are typical for rent use. However Profoto leads the rental segment with broader offering and specialized products as Pro-11”
> Owner at photography equipment distributor

> “Elinchrom lacks a proper marketing program for dealers…”
> Photography equipment dealer

> “Godox does not have any representation in the US. The dealers are paying for after sales service, etc.”
> Premium lighting manufacturer

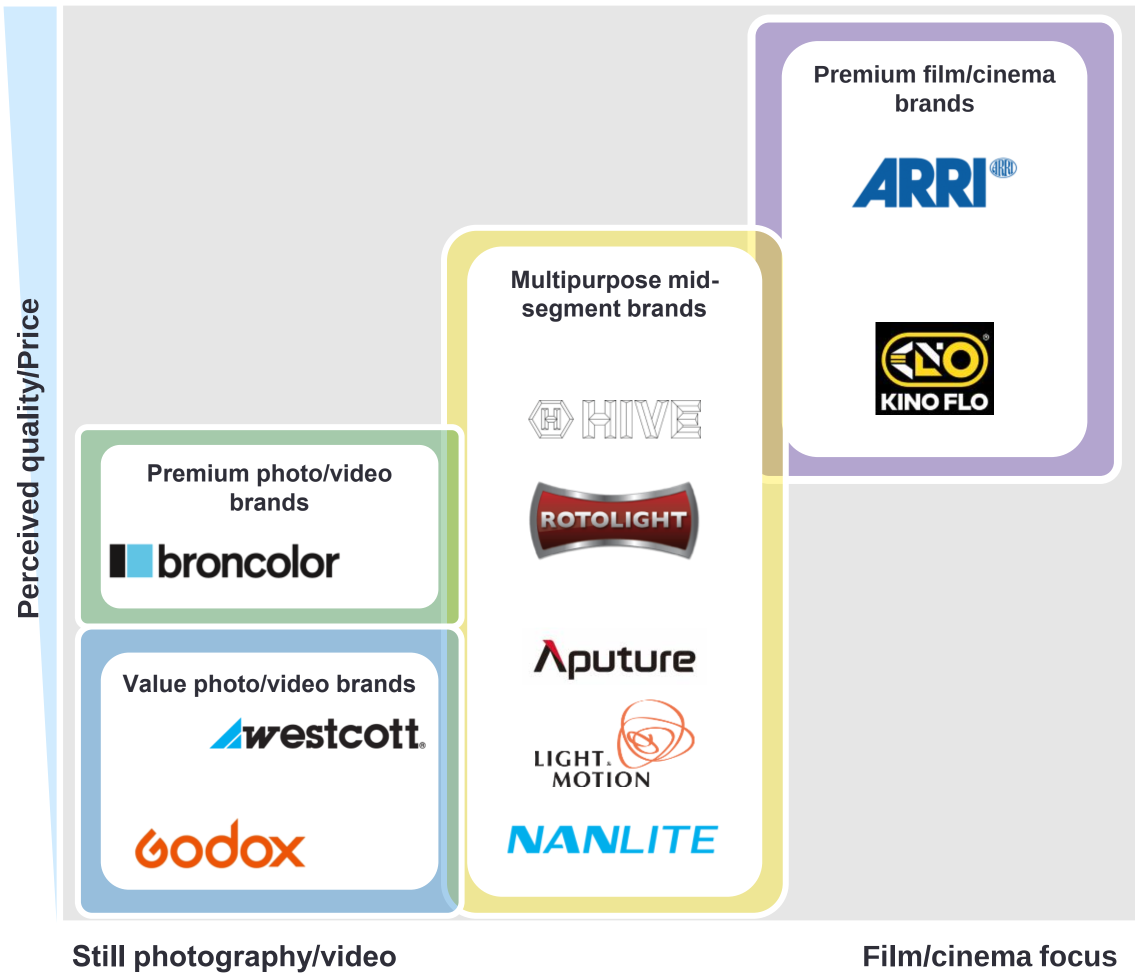
Source: Company websites, Market participant interviews

Content

Continuous lighting solutions consists of premium brands for high-end filmmaking, multipurpose lighting brands, and brands who focus on still photography/video

Competitive landscape for continuous lighting

NON-EXHAUSTIVE



Market participant comments

ARRI

“ARRI caters the high-end movie production houses.”
Photography equipment dealer

“ARRI products are focused on the big budget film industry or commercial film rather than on still images, and are often sourced through rental.
Top-tier lighting OEM distributor

Aputure

“70-80% of Chinese small one-man studios have Aputure equipment.”
Photography equipment dealer

“Aputure is performing well in the US, they are competing to ARRI with high quality products but at a fraction of the price. Their products are sold out and they have a hard time meeting demand with current capacity.”
Photography equipment dealership owner

Nanlite

“Nanlite is the leading mainstream LED manufacturer in China”
Photography equipment dealer

“Despite being low-priced, Nanlite is a good company offering high quality products. They are positioned closer to Aputure than Godox.”
Photography equipment dealer

Godox

“Godox expanded to cover both the still images and movie lighting. They invested heavily in R&D and made a good LED product to suit the beginners. The margins are good for dealers too.”
Photography equipment dealer

“Godox is the more affordable brand within continuous lighting solutions.”
Photography equipment dealer

Source: Market participant interviews

A majority of the key continuous lighting brands offer multi-purpose solutions, while Broncolor, Godox and Westcott focus on still photography and video-oriented end-users

Benchmarking of continuous lighting brands

NON-EXHAUSTIVE

			Geography		Product focus			Indicative end-user focus		Distribution channels		
	Competitor	**Founded**	HQ	Coverage	LED	Fluorescent	Tungsten	Still photo/video	Film/cinema	Own e-com	Rental	Dealer
Multipurpose mid-segment brands	HIVE	2011	🇺🇸	▸ US, UK, Scandinavia, Japan	✓	✗	✗	◔	◕	✗	✓	✓
	ROTOLIGHT	2009	🇬🇧	▸ Global	✓	✗	✗	◔	◕	✓	✓	✓
	Aputure	2005	🇨🇳	▸ Global	✓	✗	✗	◕	◔	✓	✗	✓
	LIGHT & MOTION	1989	🇺🇸	▸ Global	✓	✗	✗	◕	◔	✓	✗	✓
	NANLITE	1992	🇨🇳	▸ Global	✓	✗	✗	◕	◔	✓	✗	✓
Premium phot./vid.	broncolor	1958	🇨🇭	▸ Global	✓	✗	✗	◕	◔	✗	✓	✓
Value photo/video	westcott	1926	🇺🇸	▸ US, Canada, Puerto Rico, UK, Spain	✓	✓	✓	◕	◔	✓	✓	✓
	Godox	2009	🇨🇳	▸ Global	✓	✗	✗	◕	◔	✗	✗	✓

● High ··· ○ Low   ✓ Fit   ~ Partial fit   ✗ Not a fit

Source: Market participant interviews, Company websites

Westcott and Rotolight are the most recognized brands, and they have the highest NPS together with Hive

Awareness and perception of key continuous lighting brands

	Brand	Brand awareness[1] N=636	NPS[2] NPS	NPS[2] N	Market perception	Market participant comments
Multipurpose mid-segment brands	HIVE	80%	47	64	Hive is perceived as a **high quality brand with focus on mid-market cinematography users**	“Hive is a good quality continuous light manufacturer with more of a focus on the mid-market film and cinema users” Executive at photography dealer
	ROTOLIGHT	85%	45	62	Rotolight is recognized as a brand that offers **higher quality solutions to primarily film makers**	“Rotolight is positioned alone somewhere in between the value for price brands like Hive and absolute premium brands like Arri” Top-tier lighting OEM distributor
	LIGHT. MOTION	82%	23	80	Light & Motion is seen as a **mid-segment brand targeting photographers and content creators**	“Light & Motion is a brand mainly used by photographers, or content creators” Top-tier lighting OEM distributor
	NANLITE	84%	29	65	Nanlite is recognized as a highly competitive **brand focused on the broader video and content creation user**	“Nanlite is well known in the LED space. It is more similar to Godox, as both compete for the mainstream content creator user” Owner of photography equipment distributor
Value photo/video	westcott	87%	48	91	Westcott is viewed as a **value for money brand focused on the lower-end users**	“Westcott is similar to Godox in the sense that they both are cheaper than other alternatives. However, Westcott differentiates themselves through their branding” Photography equipment dealer

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1. Based on end-user web survey, respondents were presented with 5 brands, asked if they were aware of each brand, had used the brand or currently use the brand. Participation in the survey was limited to professional/semi-professional photographers and professional content creators. Amateur users were not sampled.
2. NPS calculated as = (%) of respondents scoring 9-10 – (%) scoring 0-6. (10 = Definitely, 0 = Never). Scale of 0-10 (10 = Definitely, 0 = Never), respondents filtered for only current users of the brand

Source: Market participant interviews, End-user web survey

Content

Several avenues for growth exist in the broader lighting solutions market

Chapter summary – overview of key findings

Key findings

Market growth opportunities

- There is a **growing demand for continuous lighting driven by content creators active in social media and live streaming platforms** as well as by traditional photographers extending their services beyond still picture and into film making.
  - **Nearly 90% of photographers plan to use continuous lighting** in the upcoming years. Furthermore its application seems not limited to video making, as ~80% of survey participants plan to use continuous lighting for content creation work that includes still picture.
- Lighting for smartphones is expected to become increasingly relevant as a **growing share of content creators use smartphones** in their professional work
  - More than **one in three photographers report using their smartphone camera in their work** and ~75% plan to do so in the future, **most of whom intend to use an external flash**
  - Whilst some early adopters have already caught the trend, smartphone lighting is still early in the adoption curve and there is large untapped potential when adoption increases within the mass market
- Workflow solutions and industrial applications are **set for high growth and have high demands for lighting and other equipment**
  - **Demands for new and/or improved types of lighting solutions are increasing** amongst industries such as e-commerce, cinematography and gaming, product design, navigation and others
  - **E-commerce and fashion brands are a key near term growth area** that are more mature than other industrial applications, while **large potential exists within 3D imaging and spatial mapping** in the medium to long term

Potential growth opportunities for lighting OEMs include continuous lighting, smartphone solutions, workflow solutions and industry applications

Overview of market growth opportunities

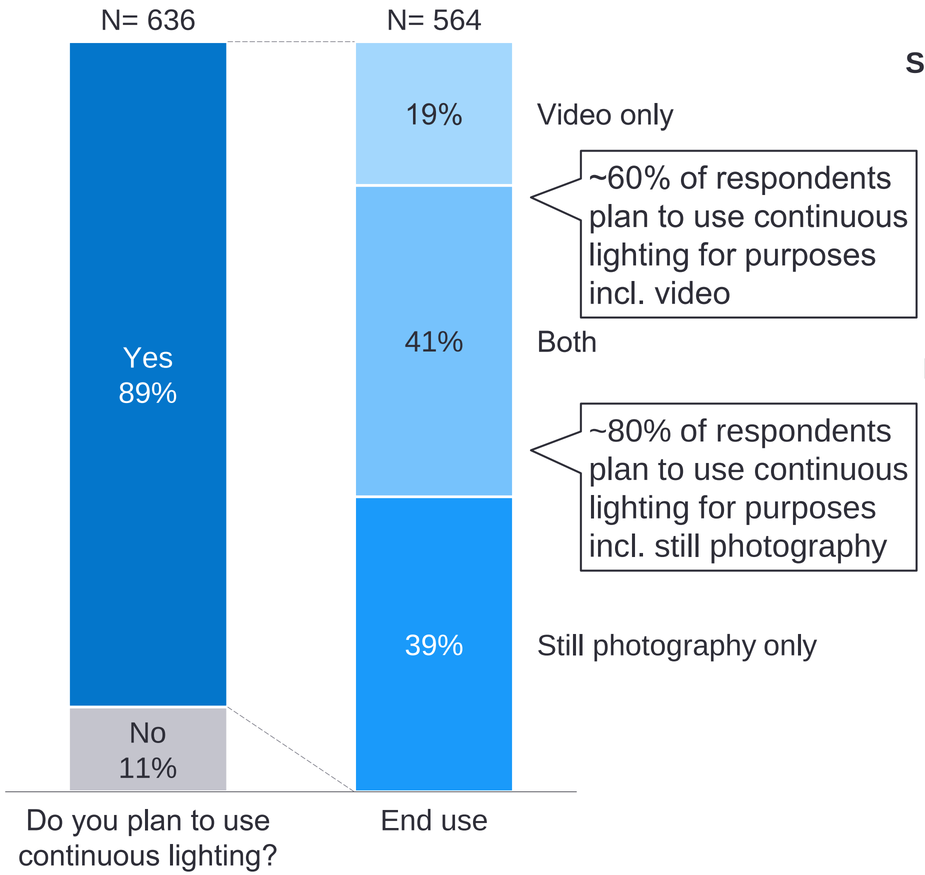
	① Continued strong growth within continuous lighting	② Professional lighting for smartphones	③ Workflow solutions and industrial applications
Description	▸ Continuous lighting is positioned to meet a growing demand from content creators in social media and live streaming platforms (i.e. Youtube, TikTok) as well as the higher demand for commercial video services	▸ Smartphone lighting is expected to be an attractive offering for content creators and semi-professional photographers as these end-user segments are increasingly working with their phone	▸ Increasing demand for new and/or improved types of lighting solutions amongst industries such as e-commerce, cinematography, product design and navigation
Growth drivers	▸ Hybridization of the photographer work expanding from image-only to video / film ▸ Ease of use is enabling fast adoption of continuous lighting for the mainstream and prosumer segment	▸ Low-end cameras are disappearing, raising the entry level price point and driving beginners toward smartphone use ▸ Improved workflow through use of smartphones also expected to drive use by professional content creators	▸ E-commerce and fashion brands are a key near term growth area that are more mature than other industrial applications ▸ Large potential within 3D imaging and spatial mapping in the medium to long term

Source: Market participant interviews, End-user web survey

Continuous lighting adoption is driven by users of video-oriented social media & live streaming platforms, while demand for hybrid photography / video services is growing

1 Continued strong growth within continuous lighting

Continuous lighting use outlook



~60% of respondents plan to use continuous lighting for purposes incl. video

~80% of respondents plan to use continuous lighting for purposes incl. still photography

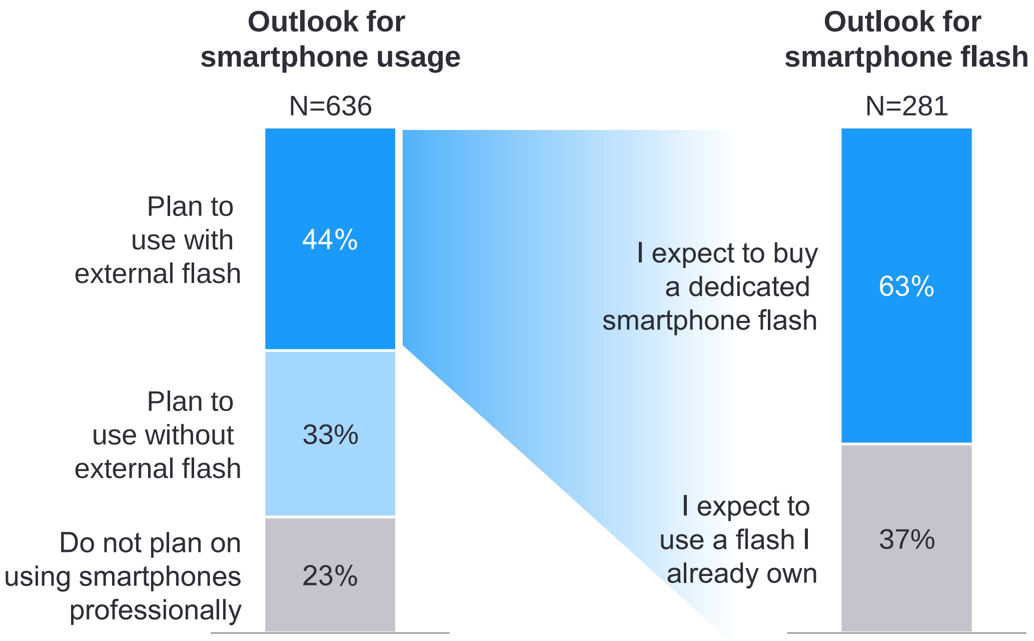
	Main trends description	Market participants comments
Social media and live streaming	Emerging social media and live streaming platforms have a strong focus on video content generation, driving the demand for continuous lighting products	“Covid-19 has seen a **boom in social media apps like TikTok and live video streaming** in Youtube and TaoBao requiring LED lights” Executive at lighting distributor
Hybridization of photographer work	Photographers are experiencing an increased demand for hybrid services as a response to the prosumers using newer mirrorless technology for content creation.	“**Clients are asking** traditional photographers for more and **more hybrid offerings including video,** both for the wedding segment and for marketing campaign purposes” Executive at lighting distributor
Ease of use	Continuous light is appealing to the growing prosumer users who find flash technically complex to manage	“There is a broader adoption of LED lighting among amateur and prosumer level though as **continuous light is perceived to be “easier” because “what you see is what you get””** Executive at lighting distributor

Source: Market participant interviews, End-user web survey

Smartphone lighting is expected to be an attractive offering for content creators and semi-prof. photographers as these segments are increasingly working with their phone

2 Professional lighting for smartphones

Smartphone flash outlook



- 37% of survey respondents are currently using their smartphone professionally
- "New in business" users currently use their phone to a larger extent than experienced while medium experienced end-users plan to use flash to a larger extent

Demand drivers

Smartphone adoption

> "Social event photographers and content creators are switching from cameras to smartphones as they need to share their content immediately "
>
> Owner of photography equipment distributor

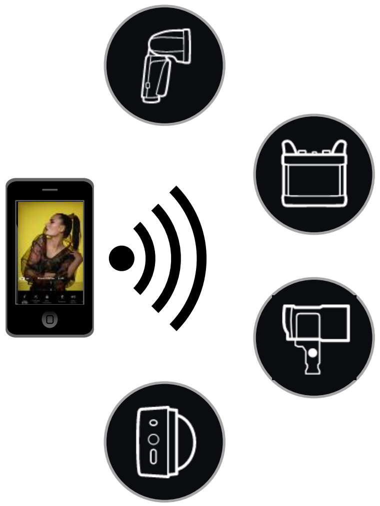
Improved workflow and efficiency

> "Content creators are versatile users, mainly using their smartphones to capture moments for social media and blog use"
>
> Owner of lighting distributor

Need for convenience

> "Photographers are increasingly valuing convenience – smartphones allow them to capture content on the go, without planning"
>
> Owner of photography equipment distributor

Use cases



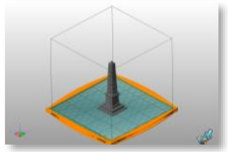
Smartphone photography can be versatile in terms of lighting usage as several brands offer apps to control OCF, speedlight and dedicated smartphone flashes

Whilst some early adopters have already caught the trend, there is a large untapped potential when the mass market pivots to usage of smartphones

Source: Market participant interviews, End-user web survey, Company webpages

Increasing demand for new and/or improved types of lighting solutions amongst industries such as e-commerce, cinematography, product design and navigation

3 Workflow solutions and industrial applications

Use cases	Description	Example applications	Lighting requirements
Ecommerce and in-house fashion studios 	▸ E-commerce and fashion brands using workflow solutions for quality images, often in high volumes with short lead times being desired	▸ Online retailers ▸ Marketplaces ▸ Fashion brands	Traditional solutions that are: ▸ Robust ▸ Easy to use ▸ Well-integrated with multiple brands and devices Solutions for new applications with: ▸ Lighting suitable for scanning environments and objects ▸ An ability to connect with sensors ▸ Effective integration with software on computers and smartphones
3D Imaging 	▸ Scanning real-life objects into 3D images with solutions that can measure depth via projection of light	▸ Cinematography ▸ Video games ▸ Product development and design ▸ 3D printing	
Spatial mapping 	▸ Mapping environments by using access points that utilize e.g., LED light to transmit positioning	▸ Indoor navigation in e.g., malls and airports ▸ Public surveillance ▸ Smart technology in factories ▸ Spatial awareness of robots	

E-commerce and fashion are traditional industries of increasing importance – new industries include cinematography, product development, manufacturing, surveillance, and navigation

Source: Desktop research

Content

The survey segmented end-users by four main categories, and asked a variety of questions focused on purchasing habits/spend, KPCs, and brand preferences

End-user web survey set-up

Key demographics

1 Geography

A. Location
B. Share of work outside home country
C. Key countries they work in outside home country, if applicable

2 Occupation

A. Professional/semi-professional photographer v. content creator
B. Place of work or freelancer

3 Experience and income

A. Years of experience in professional photography
B. Share of income from photography

4 Type of work

A. Types of cameras used
B. Types of photos taken
C. Use of external and natural light
D. Nature of work: share of on-location v. studio
E. Nature of work: share of still photo v. video

Survey areas

Purchasing habits and cycles

Cameras
Camera equipment
Lighting

Key purchasing criteria (KPCs)

Lighting

Brand preferences, awareness, and net promoter score (NPS)

Cameras
Lighting

Spend

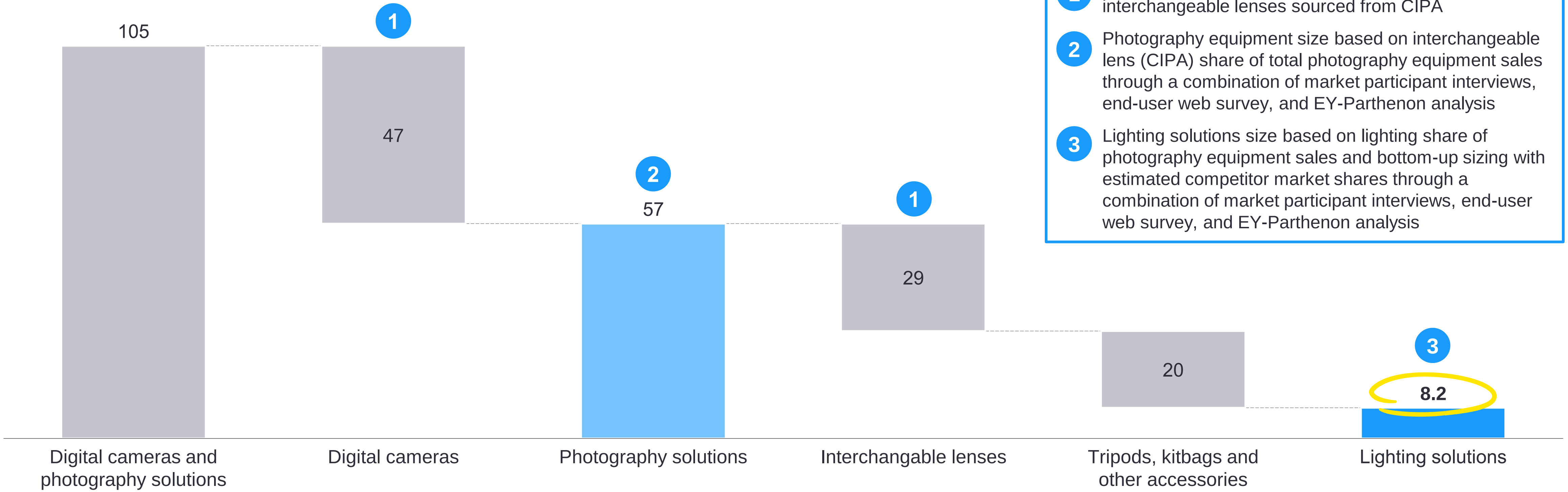
Camera equipment
Lighting

Growth/ outlook

Cameras
Camera equipment
Lighting

The global lighting solutions market size is estimated based on lighting solutions' share of digital camera and photography solution sales

Digital camera and photography solutions market breakdown and methodology, 2019 (SEK bn)



Sizing methodology[1]

1. Actual 2019 shipment values for digital cameras and interchangeable lenses sourced from CIPA
2. Photography equipment size based on interchangeable lens (CIPA) share of total photography equipment sales through a combination of market participant interviews, end-user web survey, and EY-Parthenon analysis
3. Lighting solutions size based on lighting share of photography equipment sales and bottom-up sizing with estimated competitor market shares through a combination of market participant interviews, end-user web survey, and EY-Parthenon analysis

Estimate based on interviews and end-user survey	CIPA	*Estimate based on interviews and end-user survey*	CIPA	*Estimate based on interviews and end-user survey*

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1. Market size is based on distributor sales value, as dealer mark-up on lighting solutions largely fluctuate depending on brand, product, and geography

Source: CIPA, Market participant interviews

The lighting solutions market forecast is estimated through market participant interviews, the end-user survey and secondary research

Market forecast methodology

🟦 *Used in forecast model* ⬜ *Not used in forecast model*

Source	Methodology	Market growth outlook (% p.a.)			
		Historical growth (15-19)	① *COVID-19 impact (19-20)*	② *COVID-19 recovery (20-23)*	③ *Long-term growth (23-25)*
Market participant interviews	**Top-down market participant estimates** of growth outlook per geography and lighting solution	⬜ +5%	🟦 -25%	🟦 +13-20%	🟦 +4%
End-user survey	**Bottom-up survey based modelling**[1] based on answers from End-user web survey with 636 respondents from US, UK, DACH, Japan, and China	*N/A*	*N/A*	🟦 +11%	🟦 +5%
Profoto	**Historical growth figures based on Profoto revenue development**	⬜ +9%	🟦 -37%	*N/A*	*N/A*
THE VITEC GROUP	**Historical growth figures based on Vitec Group's development of the Imaging Solutions division**[2]	⬜ +11%	🟦 -20%	*N/A*	*N/A*
Summary	**EY-P estimate**		**-25-30%**	**+10-15%**	**+3-5%**

1. Respondents from UK and DACH used as a proxy for EU-32
2. Imaging solutions division consisting of lighting solutions, bags and accessories, motion control and stabilizers, "smartphonography" and audio capturing solutions

Source: Profoto annual reports, Vitec Group annual reports, Market participant interviews, End-user web survey

Recent M&A activity demonstrates an appetite by strong brands to acquire new lighting capabilities as well as consolidation

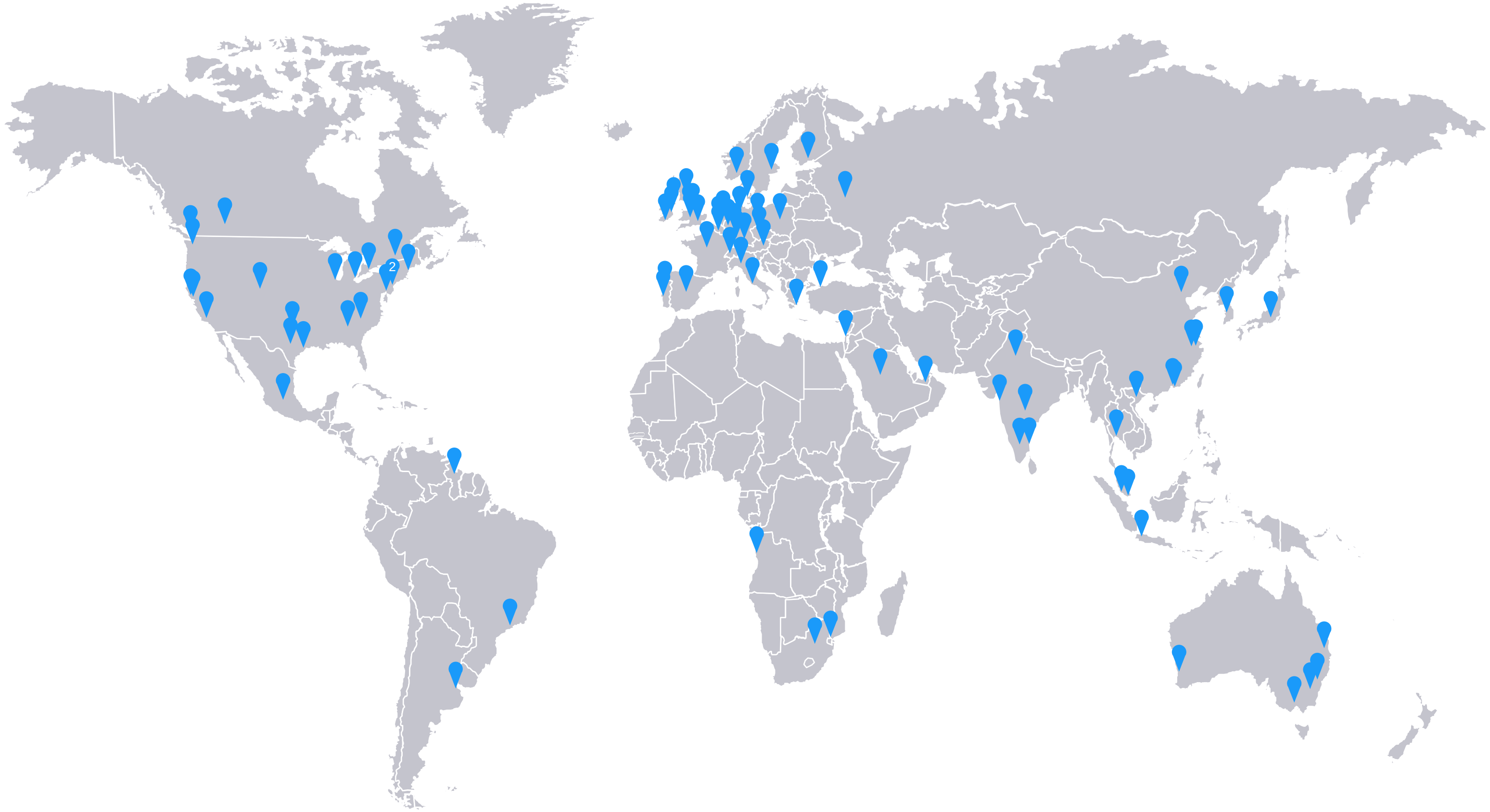
Recent M&A activity

NON-EXHAUSTIVE

Acquirer	Target	Description
THE VITEC GROUP	QUASAR SCIENCE	**Vitec Group acquired Quasar Science**, a US-based LED lighting manufacturer, in **2021** (USD 6.1m deal value)
PromarkBRANDS	OMEGA BRANDESS DISTRIBUTION	**Merge between Promark Brands and OmegaBrandess** Distribution, a US-based photographic equipment distributor, in **2020**
THE VITEC GROUP	adeal	**Vitec Group acquires Adeal**, a Australia-based distributor of imaging solutions, in **2018** (USD 3.9m deal value)
AURELIUS	bowens CALUMET PHOTOGRAPHIC wex photo | video	**Aurelius Capital acquired Bowens, Wex Photographic and Calumet** to form a end-to-end imaging solutions provider in **2017**
PromarkBRANDS	PHOTOFLEX	**Promark Brands acquired Photoflex**, a photography lighting solutions provider, in **2015**

Source: Merger market, Company webpages

Contacts



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