

# CMOS IMAGE SENSOR QUARTERLY MARKET MONITOR

Imaging Service - March 2020

*As camera quantity per end-device increases, double-digit revenue growth continues.*

## WHAT ABOUT THE CMOS IMAGE SENSOR QUARTERLY MARKET MONITOR?

### A full package:

The CMOS Image Sensor Quarterly Market Monitor includes the following deliverables:

- Excel database with quarterly update on historical and forecast data
- PDF slide deck with graphs and comments/analysis covering expected evolutions
- **Direct access to a Yole Développement analysts for one year, providing an opportunity for on-demand Q&A and discussions regarding trends, analyses, forecasts, and breaking news**

### Frequency:

Receive every quarter the updated Market Monitor documents

Get the sample of the monitor on [www.i-Micronews.com](http://www.i-Micronews.com)

## CMOS IMAGE SENSORS (CIS) HAVE BECOME A KEY SEGMENT IN THE SEMICONDUCTOR INDUSTRY

The CIS process is an analog version of the CMOS process commonly used for memory. It has become a key segment in the semiconductor industry, being worth \$19.3B in 2019 and exceeding 4.6% of total semiconductor sales. This segment has seen Sony become a significant semiconductor player, alongside other CIS companies such as Samsung, OmniVision, STMicroelectronics and ON Semiconductor. Innovative approaches like wafer stacking technologies have emerged specifically for CIS, and have become key developments for the semiconductor market in general. In the context of fierce rivalry, imaging has become the focal point of smartphone makers and the entire semiconductor supply chain.

Beginning in 2019, Yole Développement began publishing, in quarterly instalments, a monitor containing world-class research, data, and insights pertaining to the imaging markets. This monitor analyses the CIS markets' evolution in terms of revenue, shipments, capital expenditure (capex), and near-term price evolution, as well as demand per market segment and CIS technology evolution. Near InfraRed (NIR) sensing is also included in this quarterly imaging market monitor, as well as detailed profiles of main suppliers are also provided. In the future, Yole Développement will extend its imaging coverage to key components of the CMOS Camera Module (CCM) market.

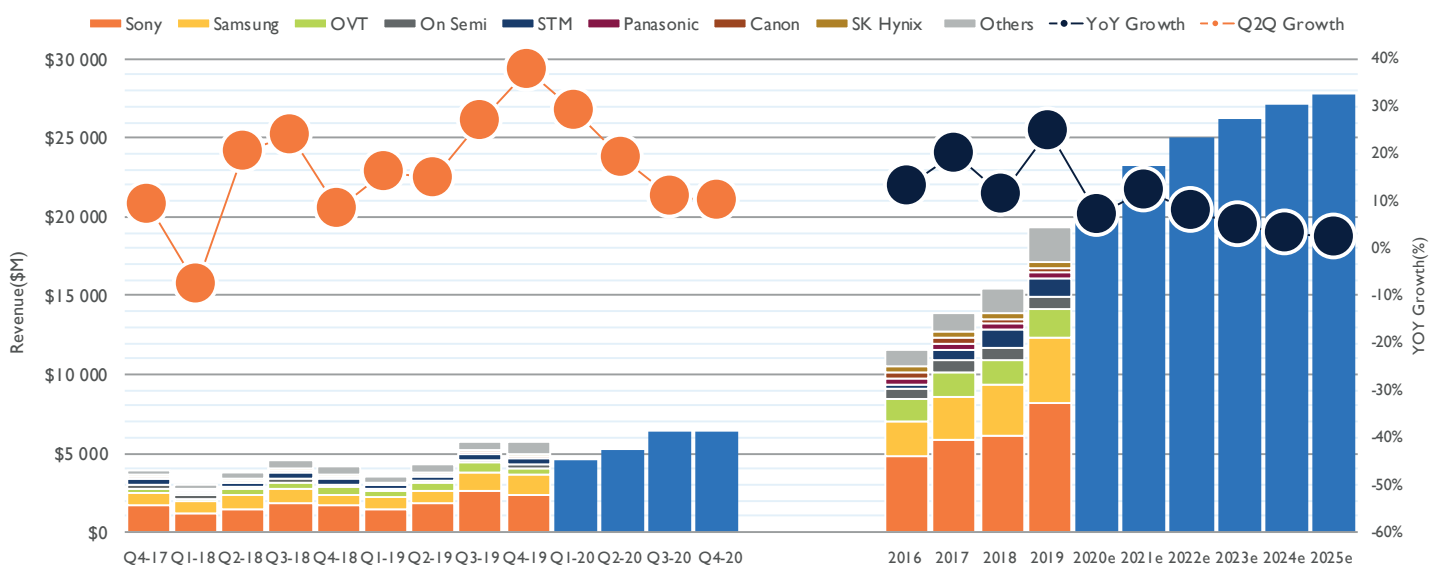
## IMAGE SENSOR ATTACHMENT RATES ARE INCREASING, THANKS TO MULTI CAMERA TREND

It all started in 2007, smartphones began completely disrupting the imaging market and its corresponding technology. Just five years later, the production peak for digital still-cameras was reached, and phones became the primary imaging device for consumers. New use-cases linked to social media began fuelling the need for high-quality rear, world-facing, cameras for photography, quickly followed by front selfie cameras for videos and top-grade photography.

2015-2017 saw additional cameras attached, either to extend the zoom capability on the rear or to provide 3D biometric interaction on the front. In 2019, 3D rear cameras improved the photographic experience and made inroads into augmented reality (AR) applications.

In 2019, the overall attachment rate for CIS cameras moved towards an average of 3.1 units per phone. The growth rate for CIS

### CIS market dynamics

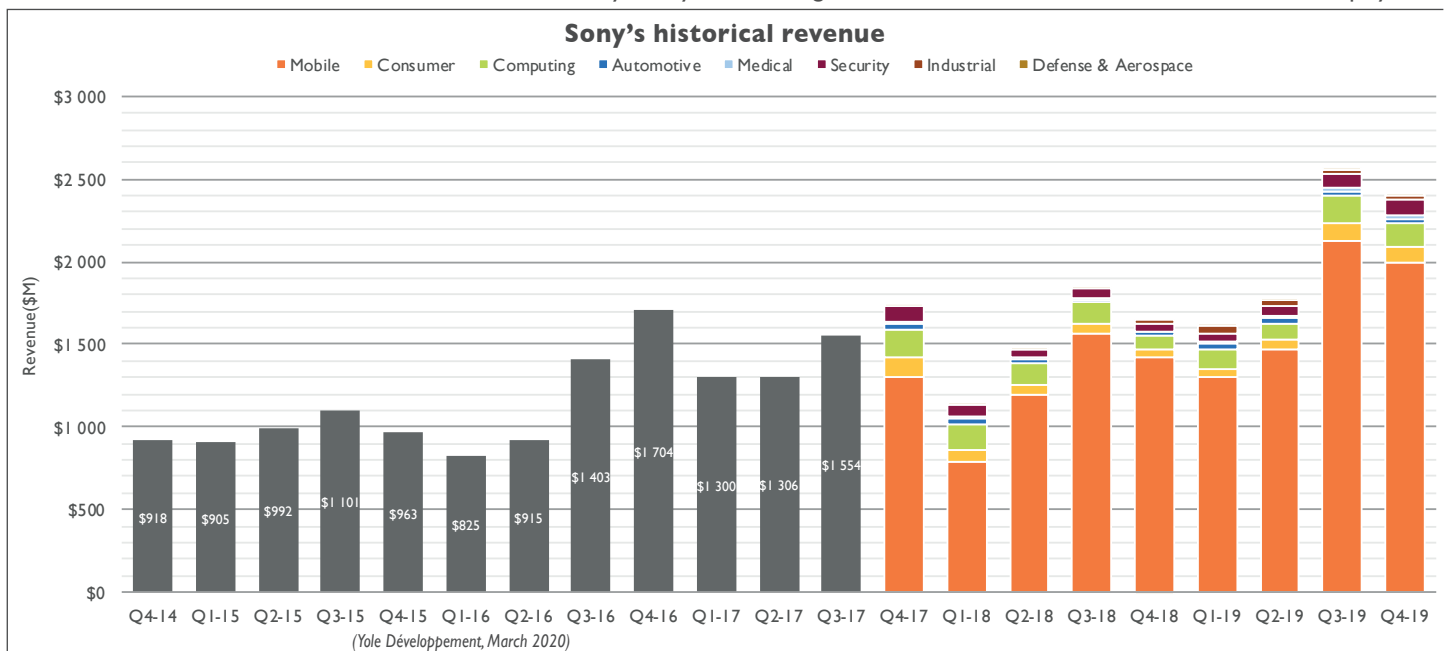


attachment rose to 25% year-over-year. At the start of 2020 the CIS industry was overheating, with a combination of high demand and high prices due to capacity limitations. Yole Développement's quarterly monitor will answer the pressing questions facing this industry, including:

- What is the latest news?
- What is the status of the market indicators? Is the market really growing/decreasing? What are the revenues of the leading companies?
- What demand segments will emerge to compensate for the diminishing PC and consumer categories?
- How much farther will the CIS roadmap extend? Is there a future beyond hybrid stacking?

- How will AI and machine learning impact CIS demand and the technology roadmap?
- Will autonomous vehicles meaningfully impact the CIS market? If so, when?
- Will CIS capital expenditures continue their recent upward trend, or will capital intensity climb too high and threaten supplier stability?

With its CIS Quarterly Market Monitor, Yole Développement provides opinions and answers to all of these questions on a quarterly basis, including sensing. Yole's CMOS Image Sensor Quarterly Market Monitor will be published at the beginning of March (Q1), June (Q2), September (Q3) and December (Q4). And it will give you a closer look at the main CIS markets and players.



### WHAT DO THE UPCOMING QUARTERS HOLD?

The short-term forecast will be impacted by the COVID-19 outbreak. One thing is certain, we now have one or two quarters of cooling down of the overheating of the CIS industry. The outbreak of COVID-19 stopped the supply chain for a month in February in China. It seems slowly to be returning to normal, and Yole's analysts expect it will take the rest of the year to be fully operational. 2020 will probably look somewhat similar to 2019, and the

end of the year will again put the industry under high production strain in order to compensate for the early losses. What we cannot predict is the possibility of a systemic recession. People will still buy smartphones and smart speakers in 2021, so the risk is more from the financial sector than the biological threat itself.

The overall aim of Yole's Quarterly Market Monitor is to stick to the reality of the market in order to

### CIS market forecast

YOLE Développement		CIS Market Monitor Q1 2020																
		Covering the entire CIS market: Mobile, Consumer, Computing, Automotive, Medical, Security, Industrial, Aerospace, & Defense																
CIS Market (Revenue Shipment, Pricing)		2016	2017	2018	2019	2020e	2021e	2022e	2023e	2024e	2025e	CAGR						
Revenue annual (\$M)		\$XX	\$XX	\$XX	\$XX	\$XX	\$XX	\$XX	\$XX	\$XX	\$XX	X%						
Revenue Growth Rate		X%	X%	X%	X%	X%	X%	X%	X%	X%	X%	X%						
Shipment annual (Munit)		XX	XX	XX	XX	XX	XX	XX	XX	XX	XX	X%						
Shipment Growth Rate		X%	X%	X%	X%	X%	X%	X%	X%	X%	X%	X%						
ASP annual (\$)		\$XX	\$XX	\$XX	\$XX	\$XX	\$XX	\$XX	\$XX	\$XX	\$XX	X%						
ASP Growth Rate		X%	X%	X%	X%	X%	X%	X%	X%	X%	X%	X%						
Database Quarterly		Q4-18	Q1-19	Q2-19	Q3-19	Q4-19	Q1-20	Q2-20	Q3-20	Q4-20	Q1-21	Q2-21	Q3-21	Q4-21	Q1-22	Q2-22	Q3-22	Q4-22
Revenue quarterly (\$M)		\$XX	\$XX	\$XX	\$XX	\$XX	\$XX	\$XX	\$XX	\$XX	\$XX	\$XX	\$XX	\$XX	\$XX	\$XX	\$XX	\$XX
Shipment quarterly (Munit)		XX	XX	XX	XX	XX	XX	XX	XX	XX	XX	XX	XX	XX	XX	XX	XX	XX
ASP quarterly (\$)		\$XX	\$XX	\$XX	\$XX	\$XX	\$XX	\$XX	\$XX	\$XX	\$XX	\$XX	\$XX	\$XX	\$XX	\$XX	\$XX	\$XX
ASP quarterly growth		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X

(Yole Développement, March 2020)

react accordingly. The CIS industry has entered a period of volatility, pushed toward fire and ice at the same time. Yole remains confident about the medium term forecast, and we expect the industry to reach US\$28 billion in 2025. Growth

will eventually slow due to diminishing returns related to additional cameras in mobiles, but saturation of the market is not imminent.

## CIS QUARTERLY MARKET MONITOR - CONTENT

The CIS Quarterly Market Monitor contains all of the data related to CIS revenue per quarter. These include: CIS shipments, near and long-term revenue, market share per quarter, capex per company, and market demand/supply forecasts. It includes a complete analysis and details of the demand side, with a deep dive into mobile, consumer, computing, automotive, medical, security, industrial, and defense and aerospace. For the top players, including Sony, Samsung, Omnivision, On Semiconductor, STMicroelectronics, Panasonic, Canon, SK Hynix, and others, the CIS Quarterly Market Monitor

furnishes a detailed analysis of capex, shipments, and wafer production per technology including process mix, along with the expected impact of CIS technology changes. The following deliverables are included:

- Excel database with all historical and forecast data
- PDF slide-deck with graphs and comments/analysis regarding expected evolution
- Direct access to a Yole Développement analyst for one year, providing an opportunity for on-demand Q&A and discussions regarding trends, analyses, forecasts, and breaking news.

### KEY FEATURES OF THE MONITOR

- Market forecast through 2025 in \$US, units, and wafers
- Market share (Sony, Samsung, OmniVision, ON Semiconductor, STMicroelectronics, Panasonic, Canon, SK Hynix) from 2015 to present: by revenue (\$US), segment (\$US), technology (wafer), and foundry (wafer)
- Demand forecast through 2025 by category (i.e. mobile, consumer, security, auto), in revenue (\$US) and units
- Supply forecast through 2025: by supplier for wafer production (wpm, by fab), technology mix (% of wafers), and process node (% of wafers)

### COMPANIES MONITORED IN THE PRODUCT (non exhaustive list)

Canon, OmniVision, ON Semiconductor, Panasonic, Samsung, SK Hynix, Sony, STMicroelectronics, and more.

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- > SK Hynix – Market mix
- > Others – Market mix

### RELATED REPORTS, MONITORS & TRACKS



- 3D Imaging & Sensing 2020
- Mobile CMOS Image Sensor Comparison 2019
- Status of the CMOS Image Sensor Industry 2019
- Status of the Camera Module Industry 2019 - Focus on Wafer Level Optics
- Mobile Camera Module Comparison 2019

More information and details about our offers and bundles opportunities on [www.i-micronews.com](http://www.i-micronews.com)



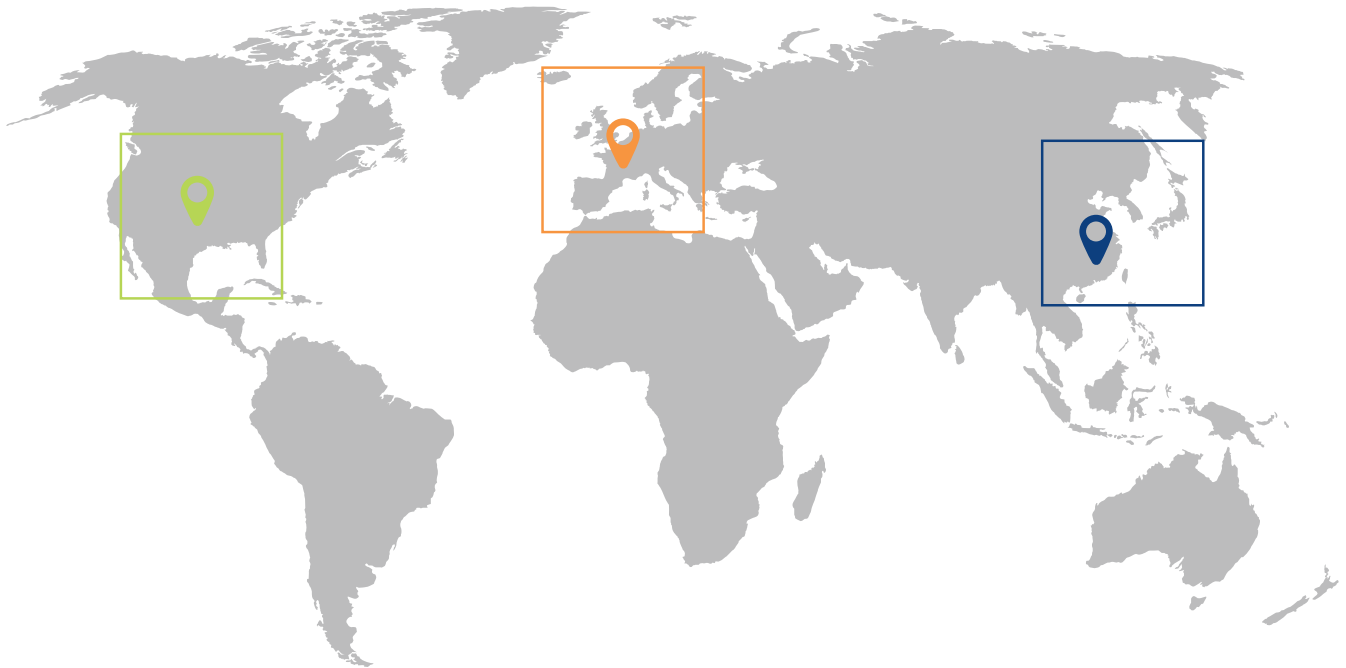
### AUTHORS

**Pierre Cambou MSc, MBA**, is Principal analyst in the Photonic and Display Division at Yole Développement (Yole). Pierre's mission is dedicated to imaging related activities by providing market & technology analyses along with strategy consulting services to semiconductor companies. He is responsible for the CIS Quarterly Market Monitor while he has authored more than 15 Yole Market & Technology reports. He has been deeply involved in the design of early mobile camera modules and the introduction of 3D semiconductor approaches to CMOS Image Sensors (CIS). Known as an expert in the imaging industry, he is regularly interviewed and quoted by leading international media. Pierre has an Engineering degree from Université de Technologie de Compiègne (France) and a Master of Science from Virginia Tech. (VA, USA), Pierre also graduated with an MBA from Grenoble Ecole de Management (France).



**Chenmeijiang Liang** works as a Technology & Market Analyst within the Photonics, Sensing & Display Division at Yole Développement (Yole). As part of the Imaging team, Chenmeijiang contributes analyses of CIS markets, related technologies and market strategies of the leading semiconductor companies, as well as the quarterly reports. Prior to Yole, she was engaged in the development of R&D projects: Chenmeijiang was a member of Group PSA R&D department where she worked on Vehicle 3D Imaging projects. In addition, she assisted with various technical and commercial projects. Chenmeijiang Liang holds a Master's Degree in the field of Applied physics and Optical engineering from Paris-Saclay University and University Pierre and Marie Curie (UPMC) (Paris, France).

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## ABOUT YOLE DEVELOPPEMENT

Founded in 1998, Yole Développement (Yole) has grown to become a group of companies providing marketing, technology and strategy consulting, media and corporate finance services, reverse engineering and reverse costing services and well as IP and patent analysis. With a strong focus on emerging applications using silicon and/or micro manufacturing, the Yole group of companies has expanded to include more than 120 collaborators worldwide covering MEMS and image sensors, Compound semiconductors, RF Electronics, Solid-state lighting, Displays, Software, Optoelectronics, Microfluidics & Medical, Advanced Packaging, Manufacturing, Power Electronics, Batteries & Energy Management and Memory.

The “More than Moore” market research, technology and strategy consulting company Yole Développement, along with its partners System Plus Consulting, PISEO, KnowMade and Blumorpho, supports industrial companies, investors and R&D organizations worldwide to help them understand markets and follow technology trends to grow their business.

### **CONSULTING AND ANALYSIS**

- Market data & research, marketing analysis
- Technology analysis
- Strategy consulting
- Reverse engineering & costing
- Patent analysis
- Design and characterization of innovative optical systems
- Financial services (due diligence, M&A with our partner)

*More information on [www.yole.fr](http://www.yole.fr)*

### **MEDIA & EVENTS**

- i-Micronews.com website, application & related e-newsletter
- Communication & webcast services
- Events: TechDays, forums...

*More information on [www.i-Micronews.com](http://www.i-Micronews.com)*

### **REPORTS & MONITORS**

- Market & technology reports
- Market, reverse technology and patent quarterly monitors
- Patent investigation and patent infringement risk analysis
- Structure, process and cost analysis and teardowns
- Cost simulation tool

*More information on [www.i-micronews.com/reports](http://www.i-micronews.com/reports)*

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- Public Relations: Sandrine Leroy ([sandrine.leroy@yole.fr](mailto:sandrine.leroy@yole.fr))

Definitions: **“Acceptance”**: Action by which the Buyer accepts these General Terms and Conditions of Sale in their entirety. It is done by signing the purchase order which states “I hereby accept Yole Développement’s General Terms and Conditions of Sale”.

**“Buyer”**: Any business user (i.e. any person acting in the course of its business activities for its business needs) placing an order pursuant to these General Terms and Conditions of Sale, with the exclusion of any individual consumer acting for his/her sole personal interest.

**“Seller”**: Headquartered in Villeurbanne (France), Yole Développement provides marketing, technology and strategy consulting, media and corporate finance services, reverse engineering/costing services as well as IP and patent analysis. With dedicated teams of technology & market analysts, Yole Développement operates worldwide with the key industrial companies, R&D institutes and investors to help them understand the market and technology trends.

**“Contracting Parties” or “Parties”**: The Seller on the one hand and the Buyer on the other hand.

**“Intellectual Property Rights” (“IPR”)** means any rights held by the Seller in its Products, including any patents, trademarks, registered models, designs, copyrights, inventions, commercial secrets and know-how, technical information, company or trading names and any other intellectual property rights or similar in any part of the world, notwithstanding the fact that they have been registered or not and including any pending registration of one of the above mentioned rights.

#### “Products”

Our products can be bought either on a unit basis or as a bundled offer (i.e. subscription for a period of 12 calendar months).

#### “Report”

Reports are established in PowerPoint and delivered in a PDF format with an additional Excel file. 30 min of Q&A session with an analyst/author can be included for all purchased reports (except the ones bought as a one user license). More time can be allocated on a fee basis.

#### “Monitor”

Monitors are established and delivered in Excel. An additional PDF can also be added. Q&A with an Analyst is possible for each monitor (except where specified otherwise). Frequency of the release vary according to the monitor or service (quarterly and monthly). All monitor products are eligible for a Corporate License.

#### “Tracks”

Yearly subscription to access a web-based interactive portal to view features and specs of a device or component based on a complete turnaround process.

#### “License”

For the reports 3 different licenses are proposed. Buyer has to choose one license type:

- One User License: The report is intended for only one identified user at the Company purchasing the report - Sharing is strictly forbidden
- Multi-User License: The report can be shared by an identified user at the Company purchasing the report with an unlimited number of employees of said Company, working in the country where the identified user is based. No rights are granted to any employees of any Subsidiaries or Joint Ventures of the Company.
- Corporate License: The report or monitor can be shared by an identified user of the Company purchasing the report with an unlimited number of employees of said Company on a global basis. Subsidiaries controlled by the Company are included, however Joint Ventures involving the Company are excluded.

**DISCLAIMER:** Notwithstanding the fact that certain persons within an organisation may be entitled to access a report pursuant to a Multi-User or a Corporate License, Yole Développement shall in no event incur any liability in any form whatsoever, if Yole Développement should sell one or more licenses directly to any such persons.

#### 1. SCOPE

1.1 Both Contracting Parties undertake to comply with these General Terms and Conditions of Sale.

**ANY ADDITIONAL, DIFFERENT, OR CONFLICTING TERMS AND CONDITIONS IN ANY OTHER DOCUMENTS ISSUED BY THE BUYER AT ANY TIME ARE HEREBY OBJECTED TO BY THE SELLER, ARE DEEMED WHOLLY INAPPLICABLE TO ANY SALE MADE HEREUNDER, AND SHALL NOT BE BINDING IN ANY WAY ON THE SELLER.**

1.2 These General Terms and Conditions of Sale shall be deemed valid and enforceable between the Contracting Parties after acceptance of an order from the Buyer by the Seller pursuant to Article 1.3 below. For such purpose, the Buyer, when signing the purchase order which mentions “I hereby accept Yole Développement’s Terms and Conditions of Sale” is deemed to have fully and unequivocally accepted these Terms and Conditions of Sale.

1.3 Orders are deemed to be accepted only upon written acceptance and confirmation by the Seller, within [7 days] from the date of order, to be sent either by email. In the absence of any confirmation in writing, no order shall be deemed to have been accepted.

#### 2. MAILING OF THE PRODUCTS

2.1 Products are sent by email to the Buyer after Seller’s confirmation:

- Within a few days from the Seller’s confirmation of the order for Products already released and paid; or
- Within a reasonable time for Products ordered prior to their effective release. In this case, the Seller shall use its best endeavours to inform the Buyer of an indicative release date and the evolution of the work in progress.

2.2 The Seller shall by no means be responsible for any delay pursuant to Article 2.1 above, in particular in cases where a new event or access to new contradictory information would require the Seller analyst to dedicate extra time to compute or compare the data in order to enable the Seller to deliver a high quality Product.

2.3 The mailing of the Product will occur only upon payment by the Buyer, in accordance with the conditions contained in Article 3 above.

2.4. The mailing is operated through electronic means either by email via the sales department or automatically online via an email/password. The Buyer is responsible for ensuring that the Buyers platform has the required capacities and authorisations to receive the Product(s) emailed by the Seller. If the Product’s electronic delivery format is defective, the Seller undertakes to replace it at no charge to the Buyer provided that the Seller is informed of the defective formatting within 90 days from the date of the original download or receipt of the Product.

2.5 The person receiving the Products on behalf of the Buyer shall immediately verify the quality of the Products and their conformity with the order. Any claim for apparent defects or for non-conformity shall be sent in writing to the Seller within 8 days of receipt of the Products. For this purpose, the Buyer agrees to produce sufficient evidence of such defects.

2.6 No return of Products shall be accepted without prior written notification from the Buyer to the Seller, even in case of delayed delivery. Any Product returned to the Seller without the Buyer providing prior notification to the Seller as required under Article 2.5 above shall remain at the Buyer’s risk. In no event shall the Seller incur any liability for Products erroneously ordered by the Buyer, or for any request from the Buyer to replace a Product previously ordered by a different Product.

#### 3. PRICE, INVOICING AND PAYMENT

3.1 Prices are given in the orders corresponding to each Product sold on a unit basis or corresponding to annual subscriptions. They are deemed to be inclusive of all taxes applicable in the country where the Seller is based (except for France where VAT will be added). The prices are re-evaluated from time to time by the Seller. The effective price is deemed to be the one applicable at the time of the order.

3.2 Payments due by the Buyer shall be sent by cheque payable to Yole Développement, or made by credit card or by electronic transfer to the following account:

HSBC, 1 place de la Bourse 69002 Lyon France  
Bank code: 30056  
Branch code: 00170  
Account n°: 0170 200 1565 87  
BIC or SWIFT code: CCFRFRPP  
IBAN: FR76 3005 6001 7001 7020 0156 587

To secure the payments due to the Seller, the Seller reserves the right to request down payments from the Buyer. In such case, the need for a down payment will be mentioned on the corresponding order.

3.3 Payment is due by the Buyer to the Seller within 30 days from invoice date, except as otherwise specifically agreed in writing by the Buyer and the Seller. If the Buyer fails to pay at the due date and fails to request and obtain from the Seller a payment extension, the latter shall be entitled to invoice interest in arrears based on the annual rate Refi of the “BCE” + 7 points, in accordance with article L.441-6 of the French Commercial Code.

3.4 The Seller publications (reports, monitors, tracks...) are due for delivery only after receipt by the Seller of any payment due by the Buyer prior to delivery.

3.5 In the event of termination of the contract by the Seller attributable to Buyer misconduct during the contract, the Seller will have the right to invoice all work performed at the time of termination, and to take legal action for damages.

#### 4. LIABILITIES

4.1 The Buyer or any other individual or legal person acting on its behalf, being a business user buying the Products for its business activities, shall be solely responsible for the choice of the Products purchased as well as for the use and interpretations the Buyer makes of the documents it purchases, of the results the Buyer obtains, and of the advice and acts the Buyer bases thereon .

4.2 In no event shall the Seller be liable for:

- a) Damages of any kind, including without limitation, incidental or consequential damages (including, but not limited to, damages for loss of profits, business interruption and loss of programs or information) arising out of the use of a Product or the use of or the inability by the Buyer to use the Seller’s website, or any information provided on the website, or contained in a Product;
- b) Any claim attributable to errors, omissions or other inaccuracies in a Product or interpretations thereof.

4.3 All the information contained in the Products has been obtained from sources believed to be reliable. The Seller does not warrant the accuracy, completeness adequacy or reliability of such information, which cannot be guaranteed to be free from errors.

4.4 Any Product that the Seller sells may, upon prior notice to the Buyer from time to time be modified by Seller or substituted with a similar Product meeting the needs of the Buyer. Such modification shall not lead to any liability of the Seller, provided that the Seller ensures the substituted Product is similar to the Product initially ordered.

4.5 In the case where, after inspection, it is acknowledged that a Product contain defects, the Seller undertakes to replace the defective product to the extent reasonably feasible and without indemnification or compensation of any kind for labour costs, delays, loss caused or any other reason being due by the Buyer . This undertaking from the Seller shall be effective for a maximum of two months starting from the delivery date but shall not be applicable in the event of force majeure as described in Article 5 below.

4.6 The deadlines that the Seller is asked to provide for the mailing of a Product are given for information purposes only and are not guaranteed. If such deadlines are not met, this shall not, without the agreement of the Seller lead to any claim for damages or right of cancellation of one or more orders by the Buyer, except for non-acceptable delays exceeding [3] months from the stated deadline. In such case only i.e. only in the event of a delay exceeding (3) months from the stated deadline the Buyer shall be entitled to ask for a reimbursement of any down payment previously made to the Seller, to the exclusion of any other damages.

4.7 The Seller does not make any warranties, express or implied, including, without limitation, those of sale ability and fitness for a particular purpose, with respect to any Products. Although the Seller shall take reasonable steps to screen Products for infection of viruses, worms, Trojan horses or other codes containing contaminating or destructive properties before making Products available, the Seller cannot guarantee that any Product will be free from infection.

#### 5. FORCE MAJEURE

The Seller shall not be liable for any delay in performance directly or indirectly caused by or resulting from acts of nature, fire, flood, accident, riot, war, government intervention, embargoes, strikes, labour difficulties, epidemics, major health event (e.g. Corona virus), equipment failure, late deliveries by suppliers or other difficulties which are beyond the control, and not attributable to the fault of the Seller.

#### 6. PROTECTION OF THE SELLER’S IPR

6.1 All the IPR attached to the Products are and remain the property of the Seller and are protected under French and international copyright law and conventions.

6.2 The Buyer agreed not to disclose, copy, reproduce, redistribute, resell or publish a Product, or any part of it to any other party other than employees of the Buyer Company (and only in the country of the Primary User for Multi-User Licenses). The Buyer shall have the right to use Products solely for its own internal information purposes. In particular, the Buyer shall therefore not use any Product for purposes such as:

- Information storage and retrieval systems;
- Recordings and re-transmittals over any network (including any local area network);
- Use in any timesharing, service bureau, bulletin board or similar arrangement or public display;
- Posting any Product to any other online service (including bulletin boards or the Internet);
- Licensing, leasing, selling, offering for sale or assigning a Product or any derivative thereof.

6.3 If the Buyer would like to use data coming from a Product for presentations, press announcements and any other projects, the Buyer needs to contact Yole Développement’s Public Relations Director (info@yole.fr) to get an official authorization and confirm that the data are up to date. In return the Seller will make sure to provide up-to-date data under a suitable public format.

6.4 The Buyer shall be solely responsible towards the Seller for any infringement of the obligation described in Article 6.3 above, whether such infringement originates from the Buyer’s employees or any person to whom the Buyer has sent the Products. Furthermore, the Buyer shall initiate and personally take care of any related proceedings in coordination with the Seller, and the Buyer shall bear the related financial consequences in their entirety.

6.5 The Buyer shall define within its Company an identified user who shall serve as a contact person for the License purchased by the Buyer. This person will be the recipient of each new report. This person shall also be responsible on behalf of the Buyer, for compliance with all copyrights and other obligations relating to the protection of the Seller’s IP rights and general compliance with the terms of the License purchased by the Company. In the context of Bundle and Annual Subscriptions, the contact person shall decide within the Buyer which person(s) shall be entitled to receive the protected link that will allow the Buyer to access the Products.

6.6 It is acknowledged and accepted by the Buyer that whether purchased in the form of Bundles or Annual Subscription, all unselected reports will be deemed cancelled and lost after a period of 12 month following acceptance of the corresponding order by the Seller in accordance with provisions of Article 1.3 above .

6.7 It is further acknowledged and agreed by the Buyer that any investor in the Buyer Company, any external consultant of the Buyer Company or any joint venture done with a third party in which the Buyer Company is involved , is not entitled to use a Product, without paying to the Seller the full price for a license to the required Product..

#### 7. TERMINATION

If the Buyer cancels the order in whole or in part or postpones the date of mailing, the Buyer shall indemnify the Seller for the entire costs that have been incurred as at the date of notification by the Buyer of such delay or cancellation. This may also apply for any other direct or indirect consequential loss that may be incurred by the Seller, pursuant to such cancellation or postponement.

#### 8. MISCELLANEOUS

8.1 All the provisions of these General Terms and Conditions of Sale are for the benefit of the Seller, but also for that of its licensors, resellers and agents. Each of them is entitled to assert and enforce these provisions against the Buyer.

Any notices under these Terms and Conditions shall be given in writing and shall be effective upon receipt by the other Party.

8.2 The Seller may, from time to time, update these General Terms and Conditions of Sale, and the Buyer, shall be deemed to have accepted the latest version of such General Terms and Conditions of Sale, once they have been duly communicated to the Buyer by the Seller.

#### 9. GOVERNING LAW AND JURISDICTION

9.1 Any dispute arising out or linked to these General Terms and Conditions of Sale or to any Licenses or Products purchased in application thereof shall be submitted to the French Commercial Court of Lyon, which shall have exclusive jurisdiction upon such issues.

9.2 French law (without reference to any applicable conflict of law provisions) shall apply to these General Terms and Conditions of sale and any agreement between the Buyer and the Seller made pursuant thereto.