



# **CrayoNano**

# **Q1 2023 Results Presentation**

**15 May 2023**

**Disrupting the fast-growing market for disinfection**



## Presenters today



**Jo Uthus**

CEO



**Jens Kielland**

CFO



# Q1 Strategic Update



# About CrayoNano

- Global presence with headquarters in **Norway** and facilities in **Taiwan**
- Pioneers in **nanotechnology**-based **semiconductor** components
- **Strong technology IP** portfolio with **266 patents** (109 granted 169 licensed from partner)
- Enabling Environmental, Social and corporate Governance (**ESG**) solutions with our partners
- Our first product line of **radically efficient UV-C LEDs** are vital components for the **fast-growing** disinfection markets
- **Fab-lite** business model utilising global supply chain





# Q1 Highlights

## Continued revenue generation

- CrayoNano continue to generate commercial revenue from the sale of initial test units to customers with further demand for our product remaining strong with new sales resource focused on the US

## Distribution agreements signed

- Support in inventory management, logistics, and distribution ensures timely delivery of our products to our customers

## Improved performance expands addressable market

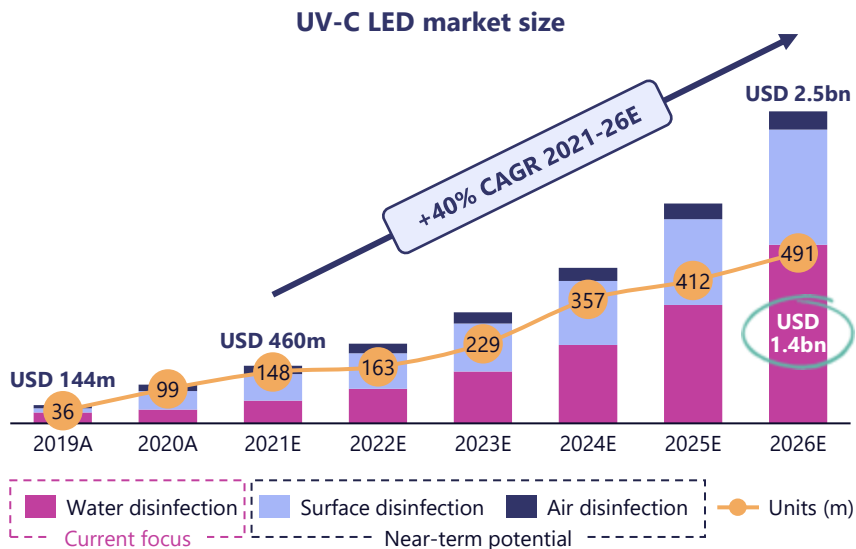
- Achieved improved product performance of H-series UV-C LED by 30% expanding our serviceable markets, engaging both Industrial, Consumer and Automotive customers
- Opens up opportunities in high-flow water disinfection and surface disinfection markets

## Private placement update

- As announced on 18 April, the Company has raised approximately NOK 125 million in gross proceeds to support its planned operational ramp up



# UV-C LED market estimated growth of 40% CAGR to \$2.5bn



## Market segments



## Drivers for UV LED integration – UV disinfection

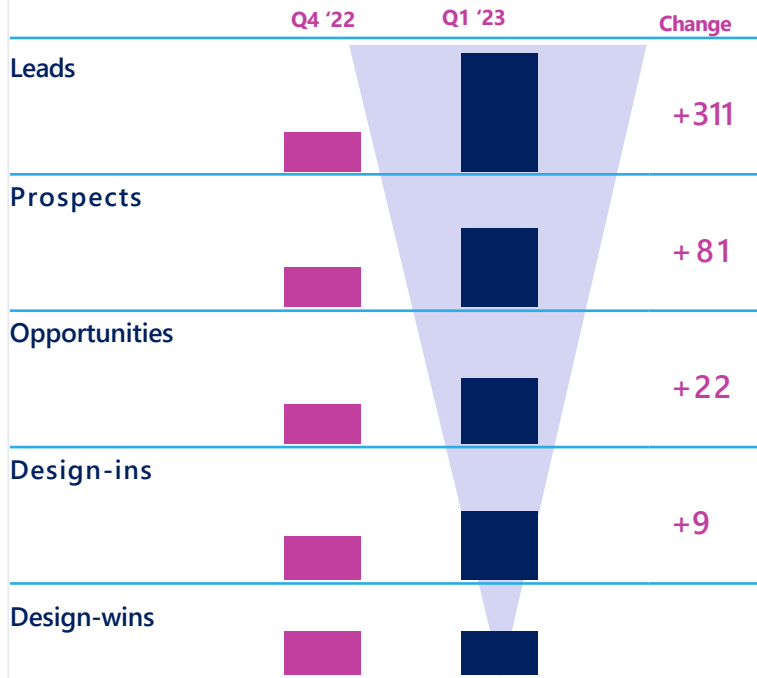
- Environmentally-friendly
- Low power consumption
- Instant start and stop
- Compactness and lightweight
- Longer lifetime
- No heat emitted

UV-C disinfection dates back to 1910, and used on a bigger scale since the mid 1950s



# Strong customer demand continues in Q1

Strong growth in interest from customers across our target segments



- Massive increase in interest in Q1 from customers across our three target segments
- Conversion of interest (leads) to opportunities shows real demand
- Managing customer expectations of qualification phase (6-12 months)
- Next steps for us is to ramp up sales and sales support activities to convert higher interest



# Continued prioritisation of quality & performance

**A more than 30% improvement since the launch of our CrayoLED™ H-series - entering the performance class of 100 mW, 5% wall plug efficiency, high drive current capacity**

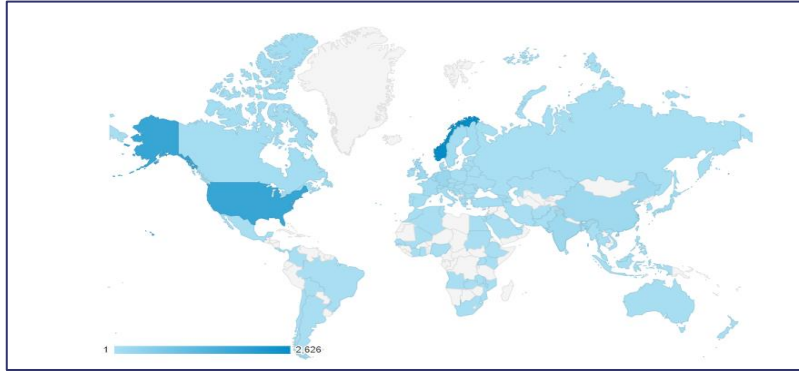
<b>Power</b>	140mW	Impressive radiometric output power of 140mW at 500mA current driving
<b>Lifetime Stability</b>	L70 10,000hrs	Effective commercial lifespan of 5-10 years
<b>Forward current</b>	500mA	Achieving wall plug efficiency of 4.7% when operated at 500mA
<b>Small footprint</b>	3.5x3.5mm	Industry standard making for easy plug-in application
<b>Wavelength</b>	275nm	High germicidal efficacy

- All round effective solution for UVC-LED disinfection
- Ideal for applications that require effective pathogen inactivation
- Providing a reliable & long-lasting solution for water disinfection





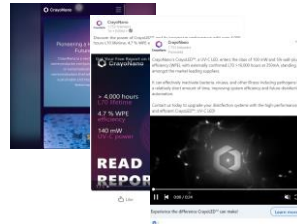
# Targeted Digital Marketing to Drive the Buying Process



## Highly engaged international audience

- Audience group expanding internationally – most followers on LinkedIn are from the Semiconductor Manufacturing industry

## Building the product marketing and applications support to design-ins




**CLH-N3S**  
on Aluminum MCPCB  
Functionality testing and  
product qualification



**CLH-N3S Demobox**  
Designed for irradiance  
measurements  
(mW/cm<sup>2</sup>)



**Product Datasheet,**  
**Application notes**  
Materials to support  
our customers

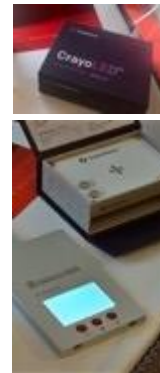


# Building a network of business enablers

- Distributors



*Sven Schreiber, CSO at LASER COMPONENTS Germany—"This is exactly the kind of cutting-edge technology that our customers expect in our portfolio. CrayoNano's trust is proof that our long-standing commitment to UV LED technology is paying off."*



*Stefan Stockbauer, Global Sales Director at ICULTA 2023*

- System Partners



*LEDiL is an industry leading optics supplier to the world's largest lighting manufacturers. An extensive product range, innovative solutions, close cooperation with leading LED manufacturers and customer-oriented service have enabled LEDiL to become the market leader in its field.*



## Deep dive: ProPhotonix

- ProPhotonix, a subsidiary Exaktera LLC of Union Park Capital, is a renown European LED module manufacturer, OEM, and system integrator in the specialty lighting industry in the areas UV curing, machine vision and now, disinfection.
- Product: Cobra Clean FX1 Lamp
  - Application: Disinfection
  - Product status: in production
  - CrayoLED status: Design-in
    - Average driving current: 500mA
    - First phase validation and qualifications have passed
    - Lifetime testing in progress (requires >3000 hours)



*"ProPhotonix has started our qualification process with CrayoNano's CrayoLED H-series UV-C LEDs. After passing the first phase of the process, characterization and validation, we have built a prototype of our Cobra Clean FX1 Lamp with the CrayoLED H-series UV-C LED's inside to proceed with lifetime testing."*

*~ Simon Stanley, Director of Technology, ProPhotonix*



# Financial Update



# Q1 2023 Financial results

## Profit and loss

NOK millions

	Q1 2023	Q1 2022
Sales revenue	0.1	0
Other revenue	1.8	2.9
<b>Revenue</b>	<b>1.9</b>	<b>2.9</b>
COGS	0.1	0
Payroll and related costs	13.1	9.5
Other operating costs	10.2	6.7
<b>EBITDA</b>	<b>-21.5</b>	<b>-13.3</b>
Depreciation & Amortization	2.1	1.9
<b>EBIT</b>	<b>-23.6</b>	<b>-15.2</b>
Net financial items	-1.0	-0.2
<b>Net profit before tax</b>	<b>-24.6</b>	<b>-15.4</b>

## Comments

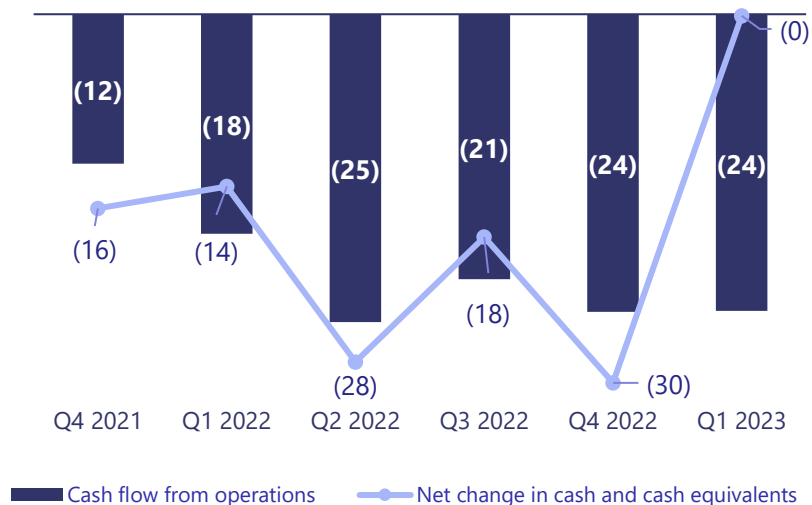
- Sales revenue of NOK 0.1m in the quarter from initial shipments to Laser Components (distributor)
- Total operating cost increased to NOK 23.3m, in line with previous quarter, an increase of NOK 7.1m (44%) from the same quarter last year driven by scaling of operations, higher R&D activity and Taiwan Fab 2
- Negative EBITDA of NOK 21.5m in Q1-23, in line with previous quarter, below NOK 13.3m negative in the same period last year



# Continue to invest to support growth plan

## Quarterly cash flow development

NOK million



## Comments

- Negative cash flow from operations of NOK 24.0m in the quarter, flat quarter-on-quarter and up NOK 6.2m year-on-year
  - Continue to build strategic inventory which increased by NOK 3m in the quarter
  - Fab 2 fully operational with associated cost
  - High R&D activities, both internal and partners
  - Onboarded 5 new FTEs in Q1-23 (3 in TRD and 2 in TW)
- No change in net cash and cash equivalents as negative operating cash flow and capex was offset by positive cash flow from financing with the shareholder loan of NOK 27.5m
- Cash balance at end-Q1 of NOK 10.1m, increased in April with the successful completion of a private placement



# Private placement successfully completed

## Private placement

- Completed private placement in April and raised NOK 125 million in gross proceeds (including shareholder loan)
- Growth capital will be used for sales acceleration, investments in manufacturing capacity and flexibility, product development and quality, as well as general corporate purposes

## Subsequent offering

- The Board has resolved an intention to carry out a subsequent offering
- Subscription period expected to commence within next few weeks

## Listing Process / Euronext Growth update

- The Board has resolved to pursue a listing on Euronext Growth Oslo within 12 months following the private placement



# Q1 Key Takeaways



# Q4 key takeaways

## Ongoing commercial engagement

Huge increase in interest in the quarter from customers across three target segments  
Conversion of interest to opportunities shows real demand  
Continue to generate commercial revenue with further demand for our product

## Operational readiness and supply chain

Continuous product development without compromising on quality and performance  
Ongoing investment in our sales and marketing to expand our reach  
Strategic partnerships agreed to support our growth in the UVC-LED market

## Funding our growth

Successful private placement raising NOK 125 million to support our growth  
Subsequent retail offering to our private shareholders announced  
Euronext Growth markets listing to take place within 12 months



Q&A



# Appendix



# Profit and loss

(unaudited)

<i>(Figures in NOK thousands)</i>	<b>Q1 2023</b>	<b>Q1 2022</b>	<b>FY 2022</b>
Sales revenue	135	0	438
Other revenue and public grants	1 784	2 896	7 559
<b>Total revenues</b>	<b>1 920</b>	<b>2 896</b>	<b>7 997</b>
Cost of goods sold	67	0	236
Payroll and related costs	13 066	9 472	34 993
Other operating costs	10 243	6 711	41 378
<b>EBITDA</b>	<b>-21 456</b>	<b>-11 233</b>	<b>-68 611</b>
Depreciation	2 112	1 861	7 253
<b>EBIT</b>	<b>-23 568</b>	<b>-15 148</b>	<b>-75 864</b>
Net financial items	-1 045	-241	- 633
<b>Net profit before tax</b>	<b>-24 613</b>	<b>-15 389</b>	<b>-76 497</b>
Tax expense	-5 449	-3 386	-17 145
<b>Net profit (loss)</b>	<b>-19 164</b>	<b>-12 003</b>	<b>-59 351</b>
# shares in 1000	28 401	28 401	28 401
Earnings pr share (NOK)	-0.67	-0.42	-2.09

Note: P&L presented is net of capitalized R&D



# Balance sheet

(unaudited)

<i>(Figures in NOK thousands)</i>	<b>31.3.2023</b>	<b>31.3.2022</b>	<b>31.12.2022</b>
<b>Assets</b>			
Development, patents and licenses	66 972	59 860	66 129
Deferred tax assets	48 503	29 295	43 054
Tangible fixed assets	12 172	13 336	12 735
Financial fixed assets	1 059	2 061	1 059
<b>Total non-current assets</b>	<b>128 706</b>	<b>104 551</b>	<b>122 977</b>
<b>Current assets</b>			
Inventory	5 117	0	2 087
Trade and other receivables	17 395	6 413	16 896
Cash and cash equivalents	10 097	86 163	10 238
<b>Total current assets</b>	<b>32 609</b>	<b>92 576</b>	<b>29 221</b>
<b>Total assets</b>	<b>161 315</b>	<b>197 127</b>	<b>152 199</b>
<b>Equity and liabilities</b>			
<b>Equity</b>			
Share capital	568	568	568
Share premium account	105 786	234 362	105 786
Additional paid-in capital	2 596	2 596	2 596
Retained earnings	-19 164	-81 226	0
<b>Total equity</b>	<b>89 786</b>	<b>156 300</b>	<b>108 950</b>
<b>Liabilities</b>			
Convertible loans	27 500	0	0
Liabilities to finance institutions	6 810	9 837	8 073
Trade payables	8 012	5 384	9 239
Government charges	2 245	2 432	2 277
Other liabilities	26 962	23 174	23 659
<b>Total liabilities</b>	<b>71 529</b>	<b>40 827</b>	<b>43 249</b>
<b>Total equity and liabilities</b>	<b>161 315</b>	<b>197 127</b>	<b>152 199</b>

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