



# Enabling Next Generation Health and Wellness Monitoring

The Power of Silicon Photonics to Deliver Health Insights

**RKLY**  

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**NYSE**

## Forward-Looking Statements

This Investor Presentation may contain forward-looking statements that involve risks and uncertainties, which include all statements other than statements of historical facts, including, without limitation, any statements preceded by, followed by or that include the words “targets”, “believes”, “expects”, “aims”, “intends”, “will”, “may”, “anticipates”, “would”, “could” or similar expressions or the negative thereof. Actual future performance, outcomes and results may differ materially from those expressed in forward-looking statements as a result of a number of risks, uncertainties and assumptions. Forward-looking statements in this Investor Presentation may include, but are not limited to, statements about: (a) the potential of Rockley Photonics Holdings Limited (“Rockley” or the “Company”) solutions to improve individuals’ health and well-being and enable the transition from reactive to proactive healthcare; (b) the timing of the Company’s product development and the commercial launch of the Company’s products; (c) the size and growth potential of Rockley’s target markets; (d) the anticipated and potential features, scope, goals, and benefits of the Company’s platform, products, technology, and partnerships with third parties; (e) the Company’s continued development of a range of photonic integrated circuits and associated modules, sensors, and full-stack solutions; (f) Rockley’s belief that photonics will eventually become as pervasive as microelectronics; (g) Rockley’s potential to support hyper-scale manufacturing, address a multitude of high-volume markets, and deliver the complex optical systems required to bring transformational products to market; (h) the growing demand for non-invasive remote monitoring solutions outside of clinic or hospital settings; (i) the ability of Rockley’s technology to provide continuous health insights and diagnostic information; (j) the Company’s ability to leverage cloud analytics and AI to monetize data collected with its products and (k) the Company’s long-term roadmap beyond health and wellness. The forward-looking statements contained herein are based on Rockley’s current expectations and beliefs concerning future developments and their potential effects. Certain statements contained in this Investor Presentation may be statements of future expectations and other forward-looking statements and involve known and unknown risks, assumptions, uncertainties and other factors that may cause the actual results, performance and financial condition of Rockley, or industry results, to be materially different from any future results, performance or financial condition, expressed or implied by such forward-looking statements, including, but not limited to, the risks discussed in Rockley’s Quarterly Report on Form 10-K for the quarter ended December 31, 2021 and as detailed from time to time in Rockley’s other filings with the SEC. Statements contained in this Investor Presentation regarding past trends or activities should not be taken as a representation that such trends or activities will continue in the future. No assurance can be given that future events will occur, that projections will be achieved, or that the assumptions contained herein are correct. Actual results may differ materially from those projected and you should not place undue reliance on forward-looking statements. Rockley disclaims any obligation to update or otherwise revise these forward-looking statements to reflect future events or developments.

# Rockley Photonics Overview



**\$48B+**

Healthcare TAM

**60%+**

Contracted customers' market share in wearables market

**200**

Patents, with another 292 pending applications\*

**8+**

Years of product development

- Continuous, non-invasive monitoring of key biomarkers
- At the intersection of consumer and healthcare markets
- Miniaturizing clinical machines onto a wearable chip
- Technology stack to serve multiple disciplines
- 17 leading consumer electronics + medical device customers
- Expanding product roadmap creating long-term growth opportunity

## Unique Spectrometer Chip

**Improved Performance** **Up to 1,000,000x**  
higher resolution than LED

**High Accuracy** **1,000x**  
higher accuracy than LED

**Best-in-Class Spectral Range** **100x**  
broader range than LED

**World-Leading Integration** **Numerous Lasers**  
on a single chip

## Key biomarkers for healthcare applications

Blood Oxygen

Heart Rate / HRV

Breath Rate

Core Body Temp.

Hydration

Blood Pressure

Alcohol

Lactate

Glucose Indicator



## Clinic-on-the-Wrist™

Miniaturizing clinical technology onto a wearable chip

# Investment Highlights



**\$48bn+ consumer and health market opportunity**



**Industry-revolutionizing technology platform**



**Validated by leading blue-chip customers**



**Capex-light and scalable manufacturing model**



**Multiple avenues for consistent growth with compelling value creation**



**World-class multi-disciplinary management team with extensive track record**

## The Problem

- Reactive healthcare system
- Multiple devices required
- Current wearable devices lack accuracy and sophistication

## The Opportunity

- Personal health & wellness monitoring
- Converging consumer and healthcare markets
- Continuous, remote and codified monitoring technology

**\$48B+ TAM**  
in 2025



**\$48bn+ consumer and health market opportunity**



**Industry-revolutionizing technology platform**



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**Capex-light and scalable manufacturing model**



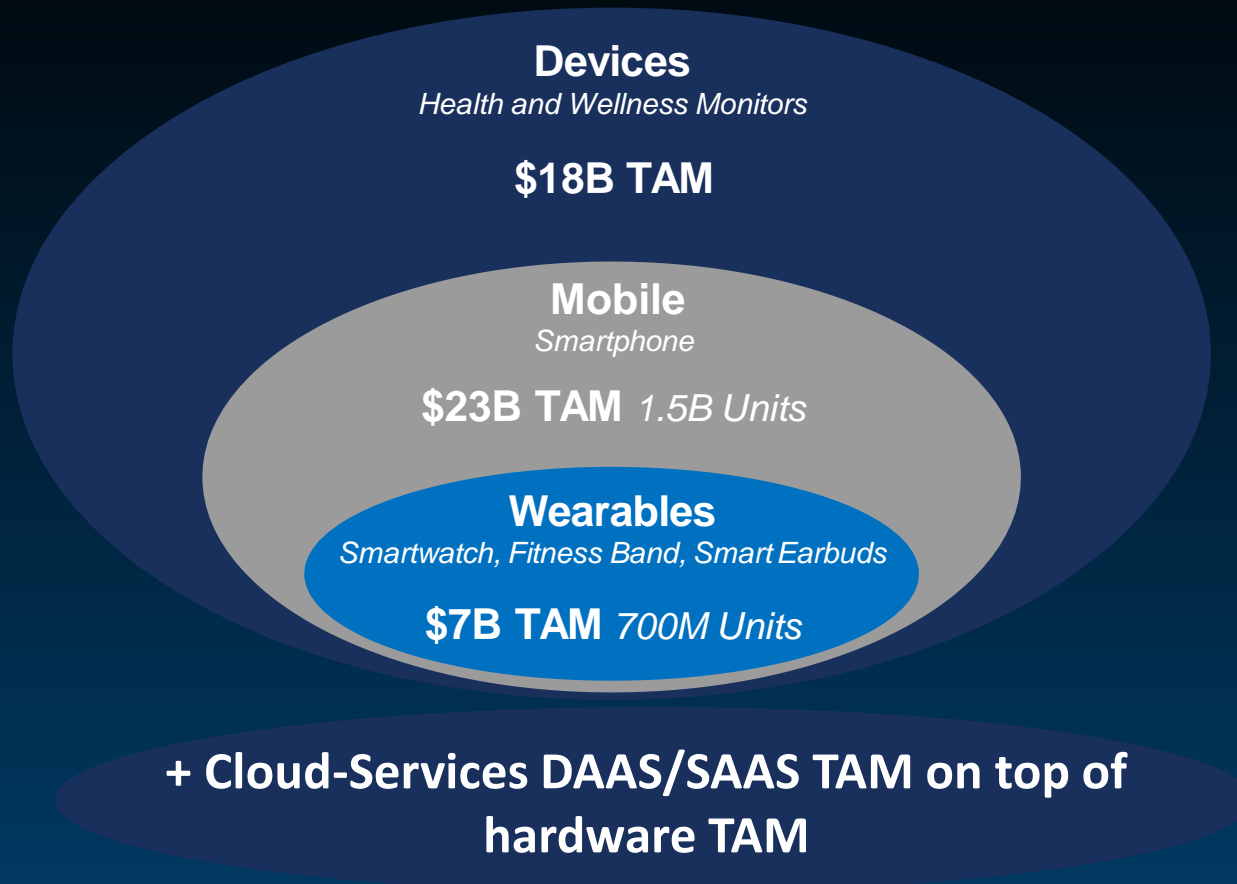
**Multiple avenues for consistent growth with compelling value creation**



**World-class multi-disciplinary management team with extensive track record**

# Operating at Intersection of Consumer and Healthcare – Maximizing Market Opportunity

**\$48B+** Hardware TAM in 2025  
Large Market Opportunity for Unique Sensing



**Roll out strategy that drives market access and enables new markets**

- Initial roll-out in consumer health and wellness
- Roadmap to fully-regulated offering
- New uses cases for better patient monitoring
- Accretive cloud services offering that further increases TAM via SAAS model and creates further value

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# Miniaturizing a Clinic into a Wearable Device

## Conventional Approach

### Biomarkers

Blood Oxygen

Breath Rate

Heart Rate / HRV

Hydration

Core Body Temp.

Blood Pressure

Alcohol

Lactate

Glucose



In-Clinic • Clinician-Led • Non-Continuous



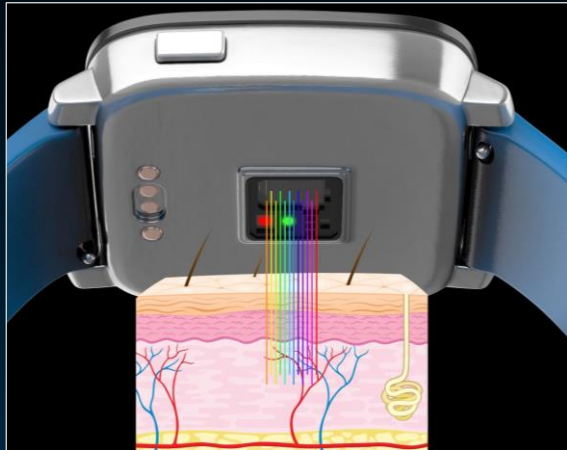
## Rockley Approach



Continuous • Non-Invasive  
• Non-Supervised

# Deeper Data Collection By Analyzing A Wider Optical Spectrum

## Clinic-on-the-Wrist™ Module



Multiple laser wavelengths probe non-invasively into the skin to extract a “spectral fingerprint” of user’s health.

**Rockley Differentiation.**

## Rockley AI Platform



AI/ML derived algorithms refine accuracy and maximize functionality from spectral fingerprint.

## The Result

A platform that is collecting much richer data than current LED PPG solutions

Capable of continued and long-term increase in functionality and use cases powered by AI/ML led inference and interpretation

# Delivering Continued Growth Through Cohesive Market Expansion

## VitalSpex™



- Addressing consumer electronics market
- *Baseline* and *Pro* modules for integration into Consumer Devices

## Bioptx™



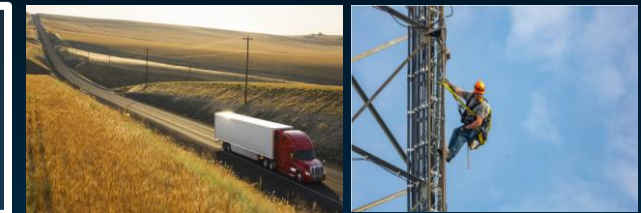
- Addressing healthcare market
- Full wearable offering and cloud infrastructure

## Additional Target Markets

High Risk / High Demand Scenarios



Lone Worker Monitoring



FDA Regulatory Approval Use Cases



# Initial Biomarker Product Roadmap



## Baseline Module

Blood Oxygen (SpO<sub>2</sub>)

Respiratory Rate

Heart Rate

Heart Rate Variability

Blood Pressure

Core Body Temperature

Hydration



## Pro Module

Baseline Module  
Functionality +

Lactate

Alcohol

Glucose Indicator

## The Future

Urea

Creatinine

Albumin

Bilirubin

Hemoglobin

## *Rockley is executing on innovation*



### Blood Pressure

- IRB-approved pilot human study in progress
- Early results show strong correlation with blood pressure cuff measurements
- Initial studies help improve AI cloud platform and sensing algorithms



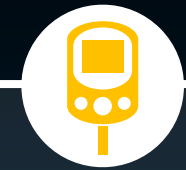
### Hydration

- Preliminary IRB-approved human studies in progress
- Early results detect hydrated and dehydrated body states
- Initial data helps improve effectiveness of sensing algorithms



### Alcohol

- Peer-reviewed study with predicate technology
- Results demonstrate efficacy of IR-based sensing technology
- Studies utilizing miniaturized solution to begin soon



### Glucose Indicator

- Early results with Rockley-acquired predicate technology shows good performance
- Studies utilizing miniaturized solution to begin soon

# Target Biomarkers Identify Prevalent Human Diseases

Multi-biomarker approaches exponentially increases use cases and growth opportunities.

		Heart			Liver		Kidney		Lung		Brain		Thyroid		Pancreas	Infection		
		CAD	HTN	CHF	Cirrhosis	Hep C	CKD	Kidney Stones	Asthma	COPD	Alzheimer's	Stroke	Hyper	Hypo	Diabetes	Flu / Pneumonia	COVID-19	Sepsis
Baseline	SpO2	●		●					●	●		●	●			●	●	●
	RR	●	●	●					●	●		●	●		●	●	●	●
	HR / HRV	●	●	●			●		●	●	●	●	●	●	●	●	●	●
	BP	●	●	●			●		●	●	●	●	●	●	●	●	●	●
	CBT			●			●						●	●		●	●	●
	Hydration			●			●	●			●	●				●	●	●
Pro	Glucose	●	●	●	●	●	●			●	●	●	●	●	●			●
	Lactate									●	●				●	●	●	●
	Alcohol	●	●	●	●						●	●						
Future	Urea			●			●	●					●	●			●	●
	Creatinine						●	●					●	●	●		●	●
	Albumin			●	●	●	●								●		●	●
	Bilirubin				●	●			●	●							●	●
	Hemoglobin			●	●		●			●							●	●

# Substantial Technology Lead by Innovating across Technology Stack



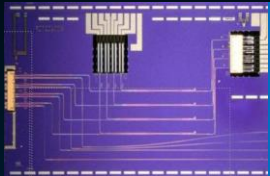
**Rockley is unique in its approach of innovating across the entire technology stack.**  
**200 Issued Patents and 292 Pending Patents\*.**

## Semiconductor Technology & Process

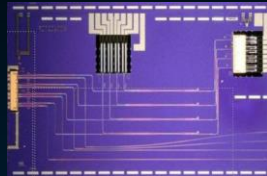
## Full Module & Product Capability

## Measurement Science & Data Analytics

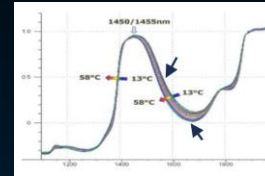
## Highlights



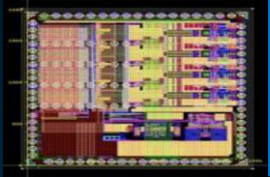
Photonic ICs in silicon with integrated III-V



System architecture and hardware design



Biosensing algorithms, cloud analytics, and AI



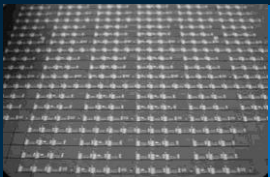
Electronic ICs



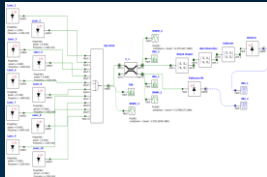
Photronics-based sensing module (LED and IR)



Biomarker data collection



Photonic and electronic co-packaging



Firmware / software



AI/ML-based analytics



High-volume manufacturing process and ecosystem



**Robust multi-disciplinary patent portfolio:**  
182 issued, 298 pending\*



**Technology and process complexity:** End-to-end manufacturing process and design technology



**Huge technological commitment:**  
8 years & \$400M of R&D



**World class multi-disciplinary team:**  
109 PhDs, 205 engineers\*

## Rockley AI Platform



Connect

### Data Collection

- Deploy and manage a fleet of wearables
- Utilize spectral & multi-modal data at scale



Discover

### Model Development

- Search for patterns and correlations
- Build AI models for partners to leverage



Infer

### Inference/Insight Development

- Serve Rockley and third-party AI models
- Leverage AI Cloud Suite

**Scalable, secure** platform expected to be HIPAA and GDPR compliant

## Rockley AI Cloud Suite

### *Allows partners to*

- Build and monetize their models
- Discover and deploy third-party models into their applications
- Create customized applications
- Accelerate product development



# Broadest Range of Biomarker Detection



	Rockley <sup>®</sup> PHOTONICS	amun	ANALOG DEVICES	SiTime <sup>™</sup>	TEXAS INSTRUMENTS
HR / HRV	✓	✓	✓	✓	✓
Pulse oximetry	✓	✓	✓	✗	✓
BP	✓	✓	✗	✗	✗
Respiration rate	✓	✗	✓	✗	✗
Core body temperature	✓	✗	✗	✗	✓
Body hydration	✓	✗	✗	✗	✗
Blood flow	✓	✗	✗	✗	✗
Hemoglobin constituent	✓	✗	✗	✗	✗
Blood alcohol	✓	✗	✗	✗	✗
Lactate	✓	✗	✗	✗	✗
Glucose indicator	✓	✗	✗	✗	✗

# Investment Highlights



\$48bn+ consumer and health market opportunity



Industry-revolutionizing technology platform



**Validated by leading blue-chip customers**



Capex-light and scalable manufacturing model



Multiple avenues for consistent growth with compelling value creation



World-class multi-disciplinary management team with extensive track record

# Customer Base Intersects Consumer and Medical

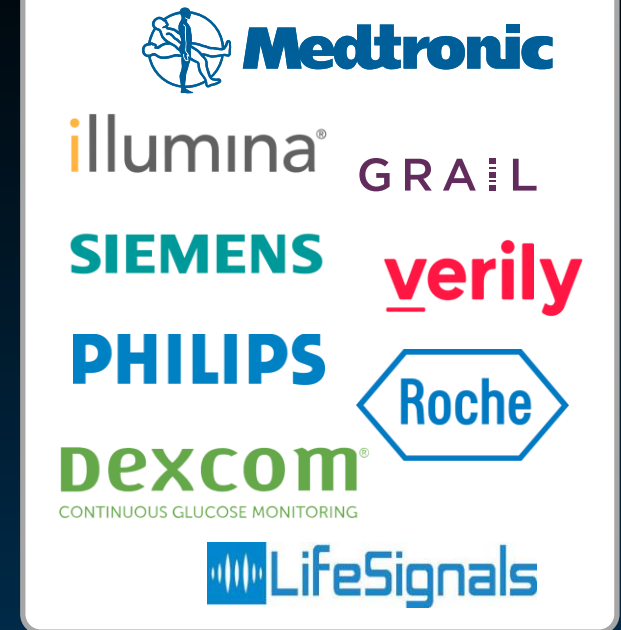
## Pipeline of consumer device, medical device and life sciences companies



### Illustrative Health and Wellness Pipeline



### Illustrative Medtech Pipeline





Massive Consumer and Health Market Opportunity



Industry-revolutionizing technology platform



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Capex-light and scalable manufacturing model



Multiple avenues for consistent growth with compelling financial profile



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# Established Capex-Light, Scalable Manufacturing Model

- Fabless model enables extremely strong product margins whilst remaining cap-ex light.
- Rockley's proprietary manufacturing process already ported into volume manufacturing ecosystem with capacity to support business needs.

## Proprietary Process Wholly-Owned by Rockley and IP Protected

### High-Volume IC / Wafer Foundry Partners



Silicon photonics ICs and wafer-scale integration

- Health, auto, & consumer qualified
- 400K+ wafers per year capacity

### High-Volume III-V Semiconductor Foundry Partners



III-V semiconductor active optics

- Telecom & consumer qualified
- Large wafer scale, fully automated

### Leading Global IC Foundry Partners



Electronic Integrated Circuits

- Used by most major consumer OEMs
- Qualified ultra-high-volume process node

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# Product Offering Drives Adoption and Opportunities



**Revenue**

Per-unit Revenue

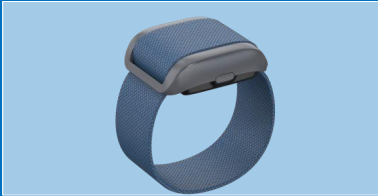
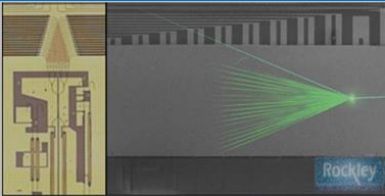
Per-Unit Revenue  
(Higher ASP than  
Chipset)

Higher ASP. Drives  
Adoption. Widens  
Customer Funnel.

Recurring Revenue.  
Increases  
Opportunity.

Revenue Share.  
Drives Functionality  
and Long-Term  
Growth.

**Product**



**Chipsets** that  
enable unique  
biomarker sensing

**Modules** that  
include complete  
set of sensing  
capabilities

**Stand-alone  
wristband** with  
complete  
functionality

**Expanding suite of  
algorithms**, cloud  
analytics, and AI

**AI models** that  
allow customers /  
partners to design  
within our platform

**Value**

Allows customers  
to design and build  
their own sensing  
modules

Provides customers  
“plug and play”  
integration into  
their own product

Allows healthcare  
providers and  
clinics to expand  
research & services





Provides customers  
key insights —  
“health insights as  
a service”

Drives adoption  
and functionality  
across entire  
platform

# Product Launch Expected to Begin in 2022



First commercial product launch is expected to begin late 2022, additional product lines ramping throughout 2023  
Go-to-market strategy creates scalable market access that captures economies of scale

Rockley Product Offering	End-Product Form Factor	2021		2022		2023		2024		2025	
		H1	H2	H1	H2	H1	H2	H1	H2	H1	H2
 Baseline Module/Chipset	<ul style="list-style-type: none"> <li>Wearable</li> <li>Entry smart watch/band</li> <li>Mobile</li> </ul>	Pre-alpha samples		Commercial launch & volume ramp							
				Gen. 1		Gen. 2		Gen. 3		Gen. 4	
 Pro Module/Chipset	<ul style="list-style-type: none"> <li>High-end smart watch</li> <li>High-end smart band</li> <li>Mobile (high-end / niche)</li> </ul>	Pre-alpha samples		Commercial launch & volume ramp							
				Gen. 1		Gen. 2		Gen. 3		Gen. 4	
 Wristband	<ul style="list-style-type: none"> <li>Stand-alone / medical-grade</li> </ul>	Pre-alpha samples		Commercial launch & volume ramp							
						Gen. 1		Gen. 2		Gen. 3	
 AI Cloud Suite	<ul style="list-style-type: none"> <li>Cloud analytics</li> <li>AI models</li> </ul>			Collaboration platform		Commercial launch & volume ramp					
						Gen. 1		Gen. 2		Gen. 3	



# Significant Execution and Traction Since IPO



- 1** **12 CE customers (from 4\*).** Deep design wins and commitment. Negotiating volume POs. Significant increase in committed consumer devices customers, now contracted with 6 of the top 10 wearables providers in the world and 12 in total.
- 2** **5 leading medical equipment customers (from 0\*).** Negotiating volume POs. Includes 2 of the top 10 medical equipment and devices manufacturers with strong pipeline. Acceleration of opportunity via Rockley's full wearable device.
- 3** **Acceleration of medical devices market access. Delivery of pre-alpha modules.** \$48B+ TAM. Faster deployment. Significant ASP uplift opportunity (wearable and recurring revenue). Delivery of pre-alpha modules and wearable devices. Significant customer pull.
- 4** **World-leading medical and technical partnerships.** Collaborations with Mount Sinai Health Systems and with Caltech, in addition to deep relationships with VTT, Tyndall Institute, and others.
- 5** **Completion of preliminary stages of human studies. Encouraging results.** Multiple human studies using Rockley's wearable wristband. Encouraging results across a range of biomarkers. Refining the overall performance of the biomarker sensing platform.
- 6** **Launch of full biosensing platforms.** Full end-to-end platforms for both consumer (*VitalSpex™*) and medical markets (*Bioptx™*), incorporating hardware, software, measurement science, sensing algorithms, cloud-based analytics.
- 7** **Significant IP portfolio increases.** 200 granted patents (292 pending)\*\*

# Looking Ahead: Key Near-Term Milestones

## Customer

- Further customer wins H1 2022
- Product purchase commitments H1-H2 2022
- Volume purchase orders H2 2022

## Product/Technology Development

- Engineering Samples of *Baseline* + *Pro* module *Baseline* Q1 2022, *Pro* Q4 2022
- Initial Commercial Volumes of *Baseline* band H2 2022
- Alpha Release of Cloud Analytics – *Connect* + *Discover* *Connect* H1 2022, *Discover* H2 2022
- Beta Release of Cloud Analytics – *Connect* H2 2022

## Application Science Development

- Human studies across *Baseline* biomarkers Throughout 2022
- Commencement of *Pro* biomarker human studies H1 2022
- Completion of algorithm development for *Baseline* biomarkers H2 2022

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**World-class multi-disciplinary management team with extensive track record**

# World Class Multi-Disciplinary Management Team



## Executive Team



**Dr. Andrew Rickman, OBE\***

Founder, CEO and Chairman

- Founder & CEO of Bookham, the first silicon photonics company
- Chairman of Kotura (acquired by Mellanox)
- Awarded OBE in the Queen's Millennium Honors



**Mahesh Karanth**

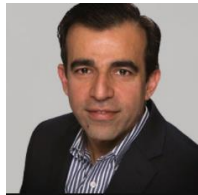
Chief Financial Officer

- CFO, Enlightened
- CFO, InvenSense (acquired by TDK)
- Partner at Ernst & Young
- Various senior roles at CPQ and HP

**110**  
PhDs\*\*

**212**  
Engineers\*\*

## Strong Engineering and Operational Team Builds on the Rockley Platform



**Sanjiv Kapoor**

EVP of Operations

- Senior Director, TDK InvenSense
- Director, Lenovo



**Hooman Abediasl**

EVP of Engineering

- Nokia Bell Labs Award Winner
- Annenberg Fellow



**Aaron Zilkie**

CTO of Photonics

- PM, Kotura and Mellanox
- Sr. Optical Scientist, Oclaro



**Ben Ver Steeg**

SVP of Sensing Product Dev

- CEO, TruTouch Technologies
- Co-Founder and CTO, Morelight Technologies



**Cas Wierzynski**

SVP of Cloud and AI

- Senior Director AI Product, Intel
- Research Lead, Qualcomm
- PhD, Caltech



**Vish Kulkarni**

SVP of Commercial

- Head of Product Mgmt and Marketing, Mammoth Biosciences
- Director, Global Marketing, Cepheid
- Product Management, iRythm Tech



**Ciaran Rooney**

VP of Strategy

- Corporate Development
- General Counsel
- Attorney, Cooley

## Deep Bench of Industry Expertise and Talent



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*Transforming Lives through the Power of Light*