



SENSIRION

ZKB Investor Conference

7th November 2024

SENSIRION

Disclaimer

Certain statements in this document are forward-looking statements, including, but not limited to, those using words such as "believe", "assume", "expect" and other similar expressions. Such forward-looking statements are based on assumptions and expectations and, by their nature, involve known and unknown risks, uncertainties and other factors that could cause actual results, performance or achievements to differ materially from those expressed or implied by the forward-looking statements. Such factors include, but are not limited to, future global economic conditions, changed market conditions, competition from other companies, effects and risks of new technologies, costs of compliance with applicable laws, regulations and standards, diverse political, legal, economic and other conditions affecting markets in which Sensirion operates, and other factors beyond the control of Sensirion. In view of these uncertainties, you should not place undue reliance on forward-looking statements. Sensirion disclaims any intention or obligation to update any forward-looking statements, or to adapt them to future events or developments.

Sensirion uses certain key figures to measure its performance that are not defined by Swiss GAAP FER. These alternative performance measures may not be comparable to similarly titled measures presented by other companies. Additional information on these key figures can be found at www.sensirion.com/additional-performance-measures.

This document is not an offer to sell, or a solicitation of offers to purchase, any securities.

SENSIRION
at a glance



“

We make the difference in sensing
for a better world

Our Mission Statement

Sensirion at a glance



A **pure-play sensor** company, driven by mega trends for long-term growth



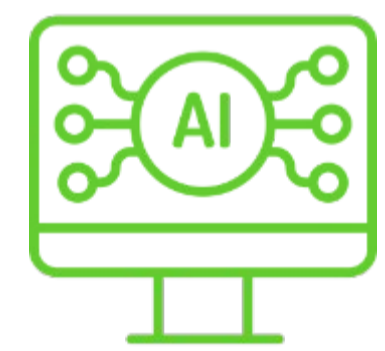
Leading position in **environmental & flow sensors** as well as entering the **leak detection** market



A deeply anchored **mindset of innovation**: it's in our DNA to continuously seek new challenges and to drive disruptive innovation



Highly diversified in end markets; long-standing customer relationship with top players in all fields



SensiSpirit: our dedicated and award-winning entrepreneurial culture to attract and retain best talents



~200 million sensors produced per year
~1.5 billion sensors sold worldwide

Sensirion's favorable position



Environmental sensing solutions



Flow sensing solutions



Leak detection

1998



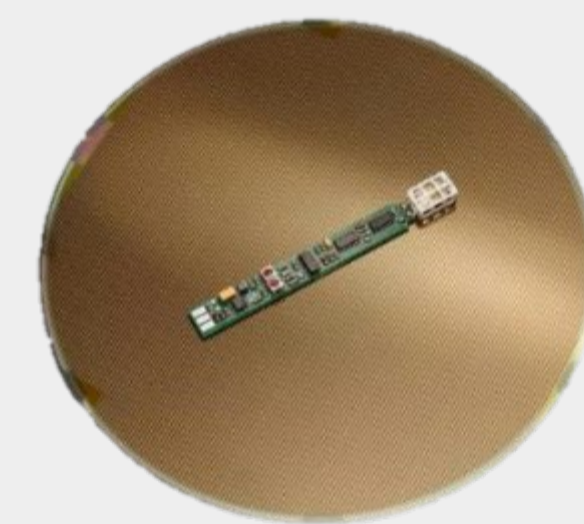
1 humidity sensor
(~11 cm)

CMOSens®



1 humidity sensor
($< 1\text{mm}$)

CMOSens®



up to 75'000 sensors
per wafer

PIONEER
in sensor
miniaturization

Sensirion supports you through the day

6 am



7 am



10 am



6 pm



11 pm

Breakfast at home



Energy optimization in the refrigerator



Commuting



Car cabin air monitoring & car emission optimization



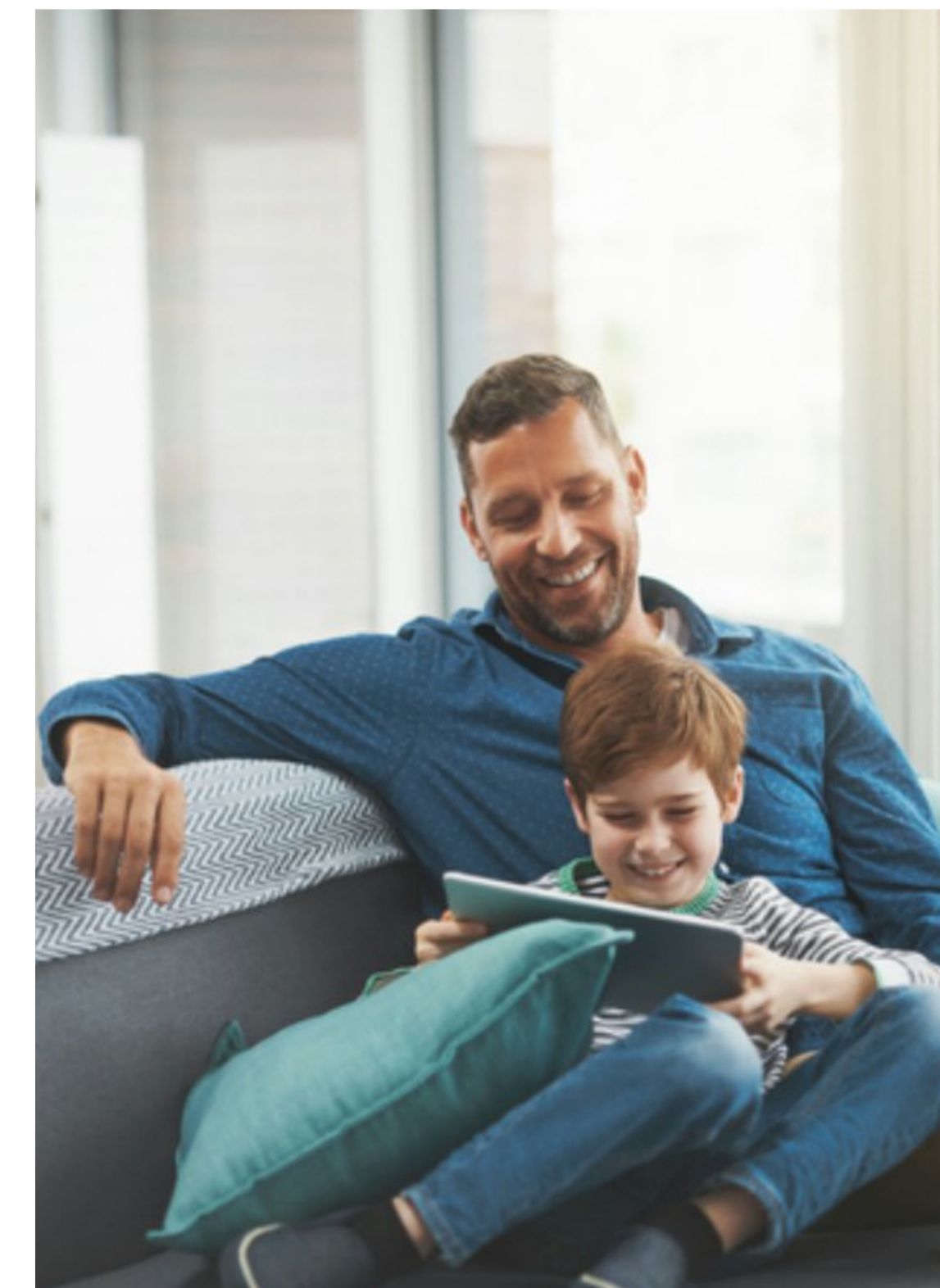
Work



Optimized ventilation & Indoor Air Quality (CO₂)



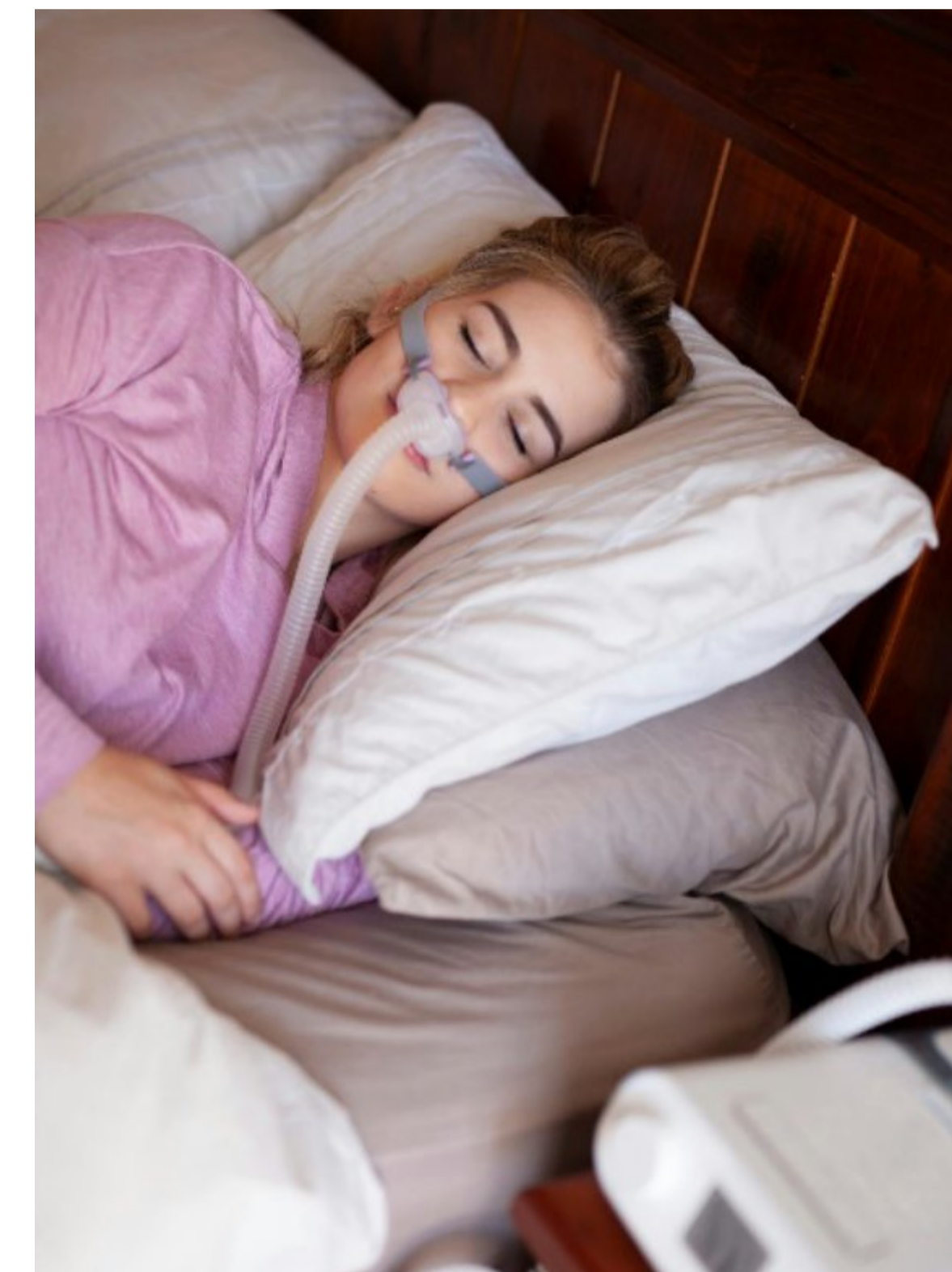
Family time



Air Purifier Heating system



Sleeping





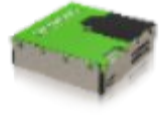












CPAP-devices for sleep apnoe patients



SENSIRION

Wide range of solutions across diverse end markets

		Innovation	Automotive	Medical	Industry	Consumer
		% of FY 2023 revenue	31%	19%	43%	7%
 Environmental sensing solutions	Humidity / temperature					
	Gas (VOC, Formaldehyde)					
	Carbone dioxide (CO ₂)		✓	✓	✓	✓
	Particulate matter		✓	✓	✓	✓
	Gas chromatography					
	Automotive Module					
 Flow sensing solutions	Differential pressure					
	Mass flow		✓	✓	✓	✗
	Gas metering		✓	✓	✓	✗
	Liquid flow					
 Leakage detection solutions	Refrigerants leakage					
	Methane leakage		✓	✗	✓	✗
	CO ₂ leakage		✓	✗	✓	✗
	NEW Hydrogen leakage					

We are committed to our environmental and social responsibility

Environmental commitment and responsibility



Our innovative sensors enhance **energy efficiency** and help customers **create eco-friendly products** and decarbonize operations.



In Operations we focus our efforts on production that avoids **waste, increases material efficiency**, and uses **natural resources** thoughtfully and as sustainably as possible.



In 2021, we have kicked off an **ambitious journey to decarbonize** our own operations (focus first on Scope 1&2)

Social commitment and responsibility



We aim to offer our employees an **inspiring and safe working environment** and optimal conditions for personal and professional development.



Pillars of this commitment are equal opportunity, diversity, non-discrimination; health and safety; training and education, work-life balance, and our **unique and award-winning corporate culture**.

STRATEGIC UPDATE STRATEGIC UPDATE

Strong underlying megatrends drive innovation and growth

Sensirion's sensor solutions are critical for many applications across these megatrends



Energy efficiency

- Scarcity of resources
- Governmental and societal initiatives



Environmental protection

- Decarbonization
- Electrification
- Climate change



Health and aging society

- Economic development
- Increasing health costs
- Increasing awareness around health & comfort



Safety and regulations

- Increasing awareness of safety
- Increasing regulation level

We can “make the difference” to enable these megatrends by our sensor solutions

Growth along three strategic foci

Our strategic foci



Strategic focus 3

Lay the technological foundation for long-term growth



Strategic focus 2

Go beyond our core to foster additional growth opportunities in adjacent market fields



Strategic focus 1

Drive and expand our strong market position in our core markets of environmental and flow sensing



Foundation

“SensiSpirit”: unique culture of innovation and entrepreneurship

Growth along three strategic foci

Our new strategic foci



Strategic focus 3

Lay the technological foundation for long-term growth



Strategic focus 2

Go beyond our core to foster additional growth opportunities in adjacent market fields



Strategic focus 1

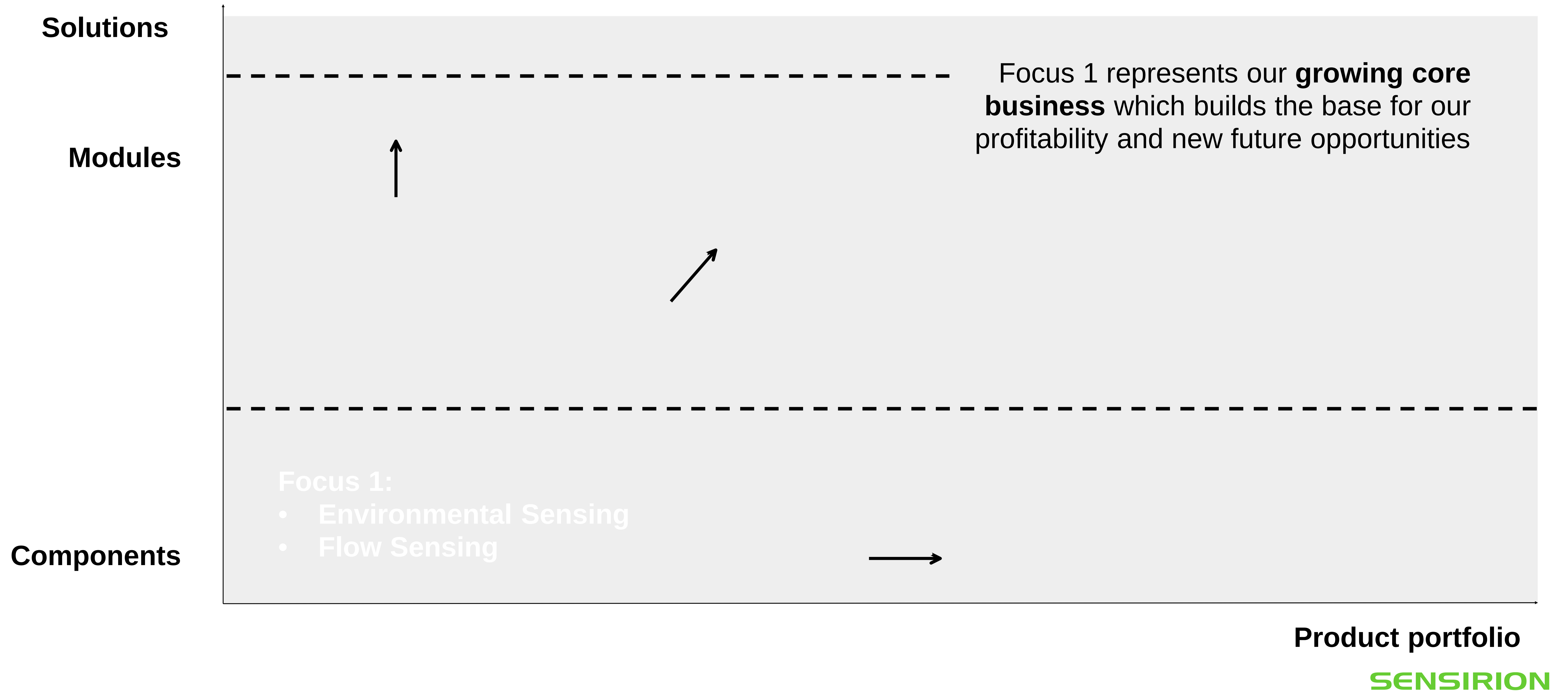
Drive and expand our strong market position in our core markets of environmental and flow sensing



Foundation

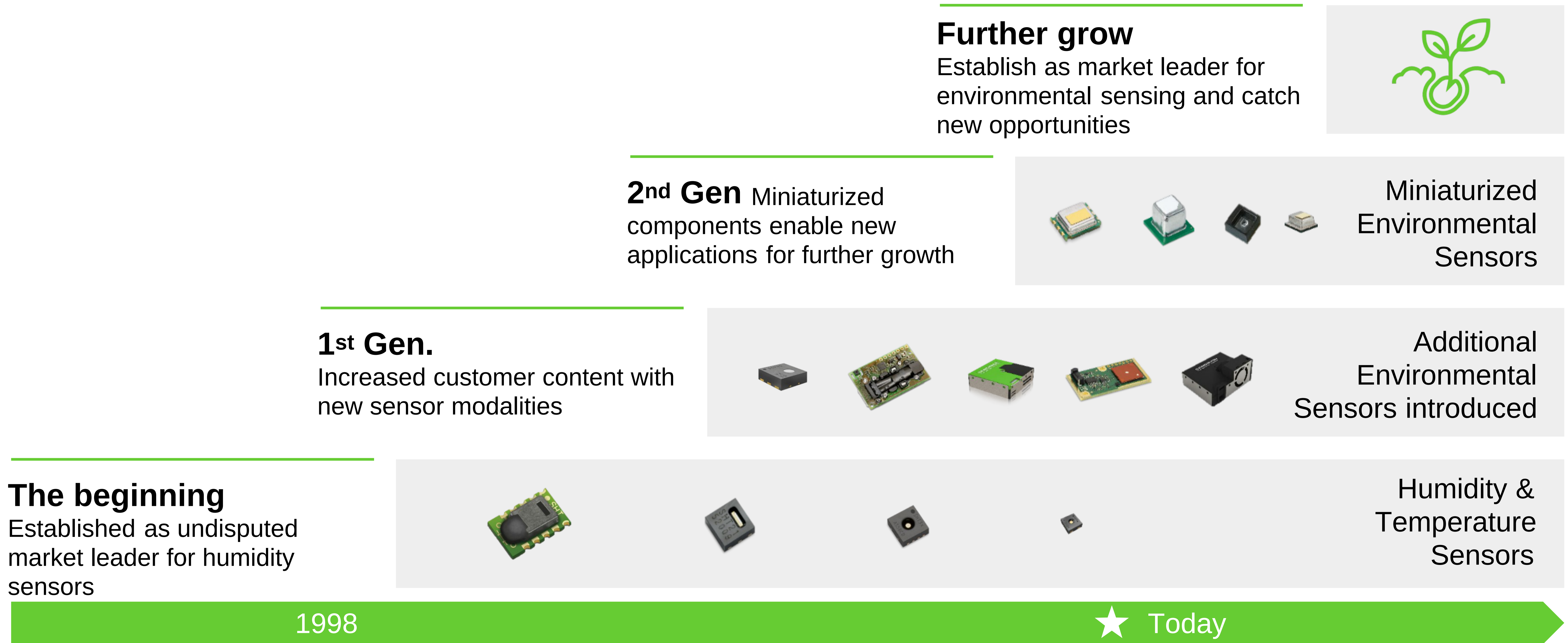
“SensiSpirit”: unique culture of innovation and entrepreneurship

Drive and expand our strong market position in our core markets



Evolution of environmental sensing

Based on our humidity business we evolved Top-2 for environmental sensing

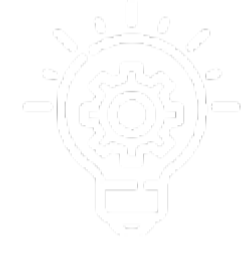


Humidity sensing

Gaining market share in a growing market

Market

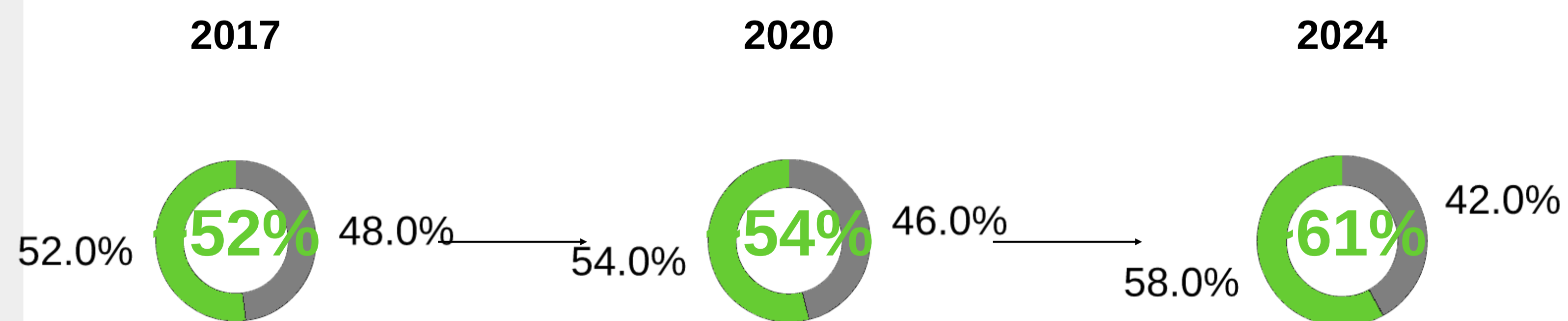
- Dominating the humidity market due to long-lasting customer relationships with all major players
- Consolidating market with single digit growth
- Some competitors (e.g. ST, Denso, Alps, etc.) exiting the humidity market



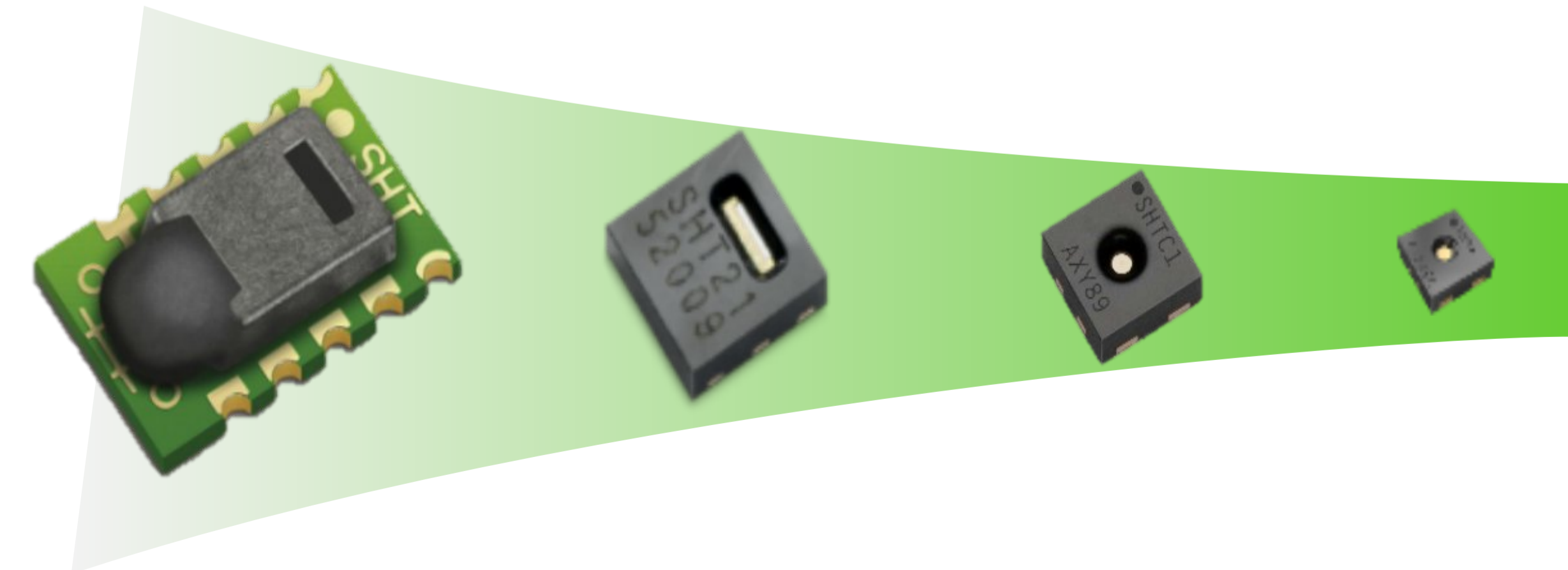
Continuous innovation with our new 4th generation

- 70% smaller sensor volume optimizes costs and raises market entry barriers
- Top performance and cost efficiency open new applications in elastic markets
- Enable premium applications with individual calibration certificates and market specialization

Sensirion's global RHT market share



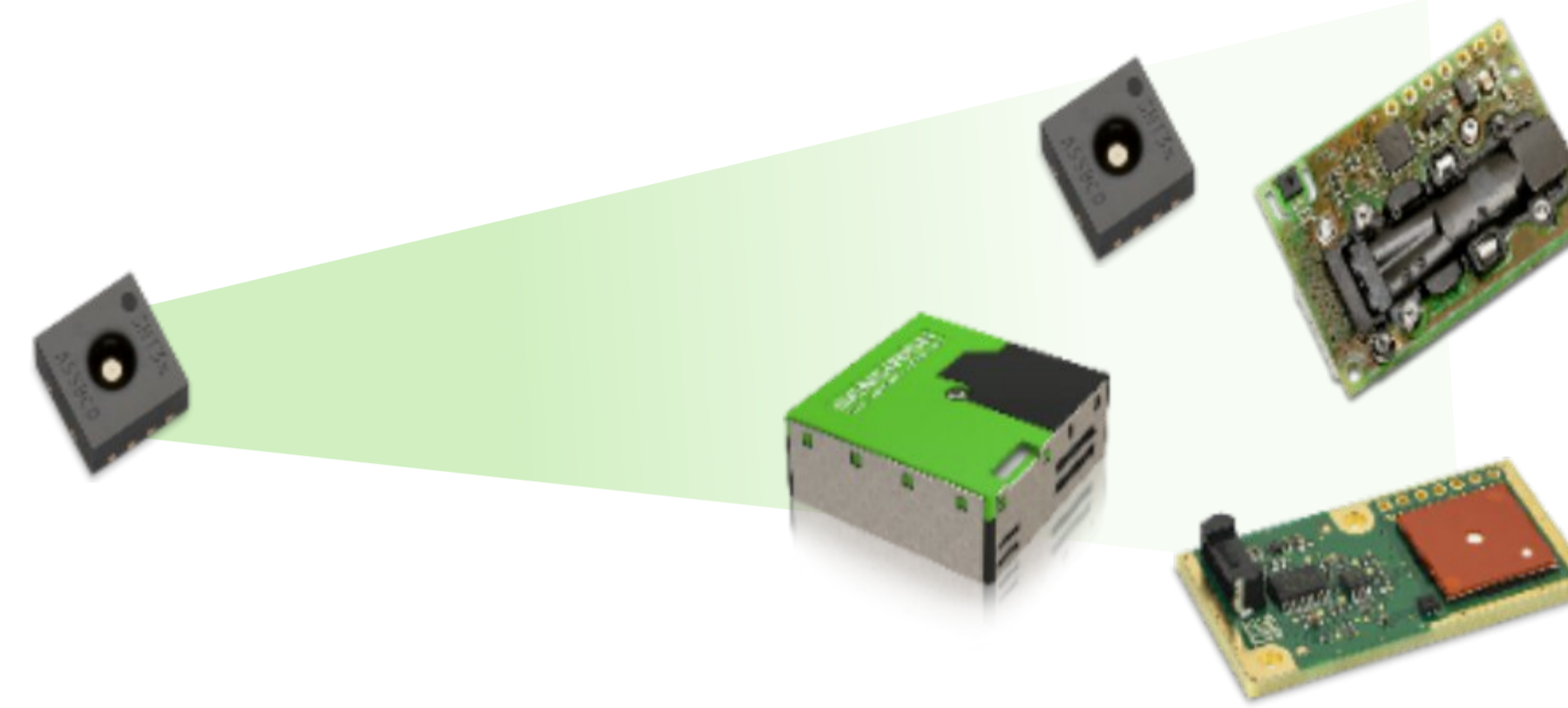
Evolution of 4th humidity generations



Environmental sensing

Be the one-stop-shop for environmental sensing

1st Product generation:
Develop new sensor modalities for our existing customer base



Priority

Time-to-market - “Fast market entry with innovation light”.



Goal

Test the market and gain market share quickly.

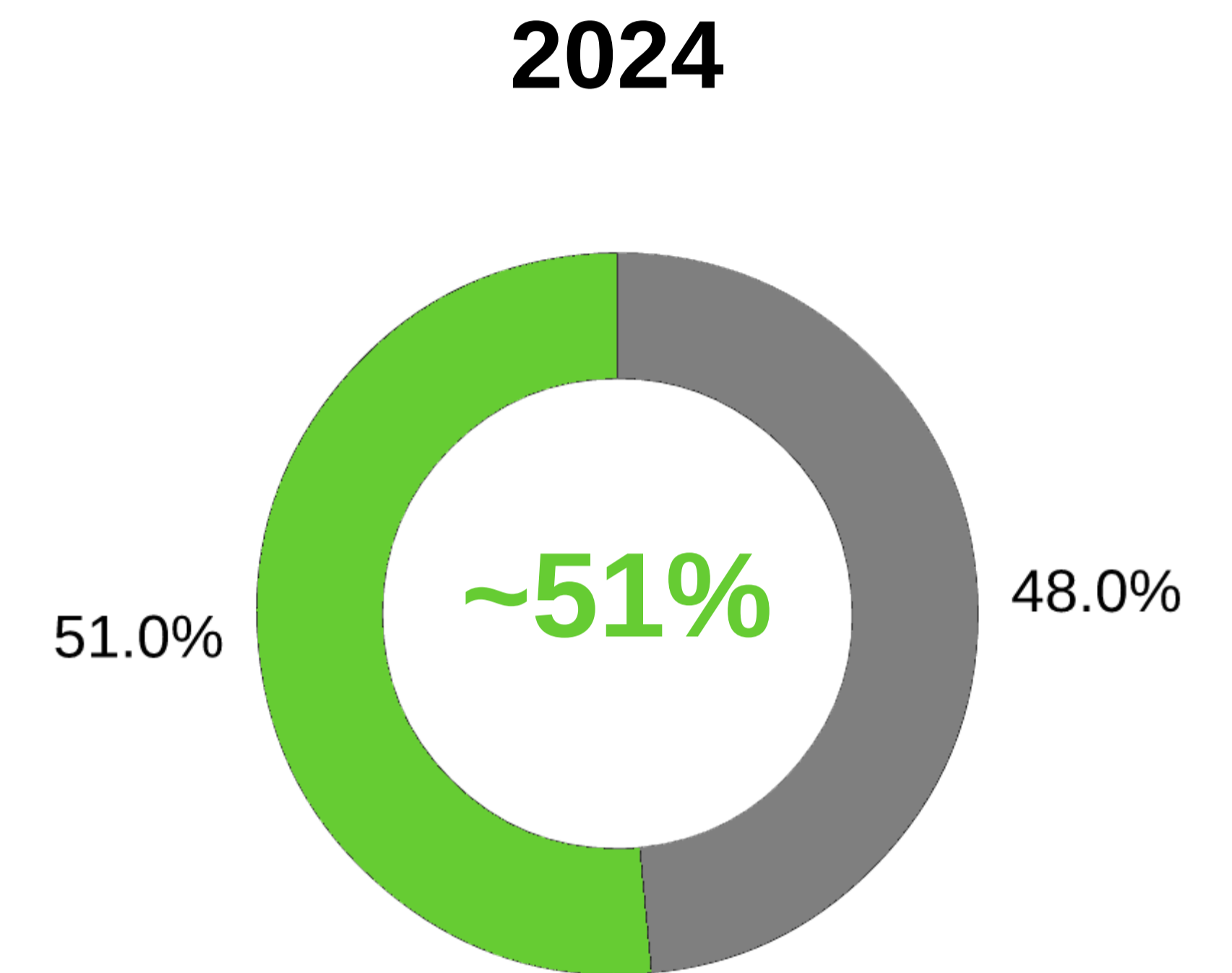


Approach

Use existing technology platforms to accelerate development.

Example Application: Air Purifier

Reached market share of ~51% for “smart” Air Purifier in 4 years



Humidity



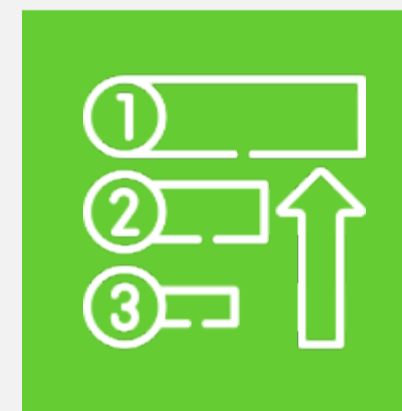
Humidity, VOC, PM2.5,
Formaldehyde, CO2

Growth by miniaturization

Bring Sensirion's technical competitive advantage into play

2nd Product generation:

“Miniaturization unlocks new applications and drives volumes”



Priority: Decreased size and improved cost-structure opens new market opportunities



Goal: Providing industry-first sensor modalities gives Sensirion the advantage of the economy of scale

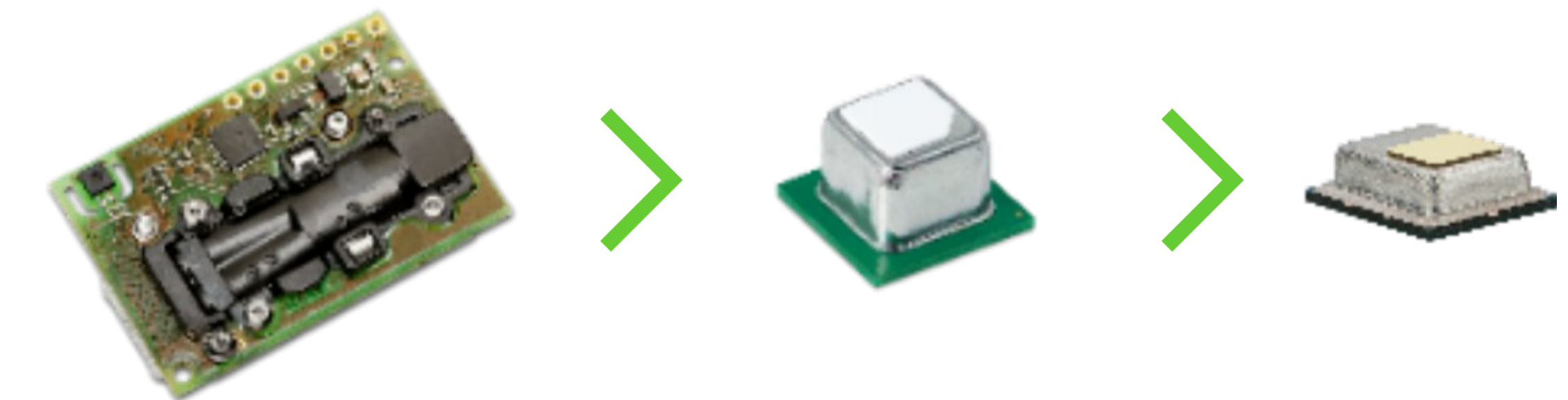


Approach: Leverage high-volume component competence and market know how for dedicated miniaturization development

1st Gen:
established

2nd Gen:
Start of production
in 2025

Carbon dioxide



Particulate matter



Formaldehyde

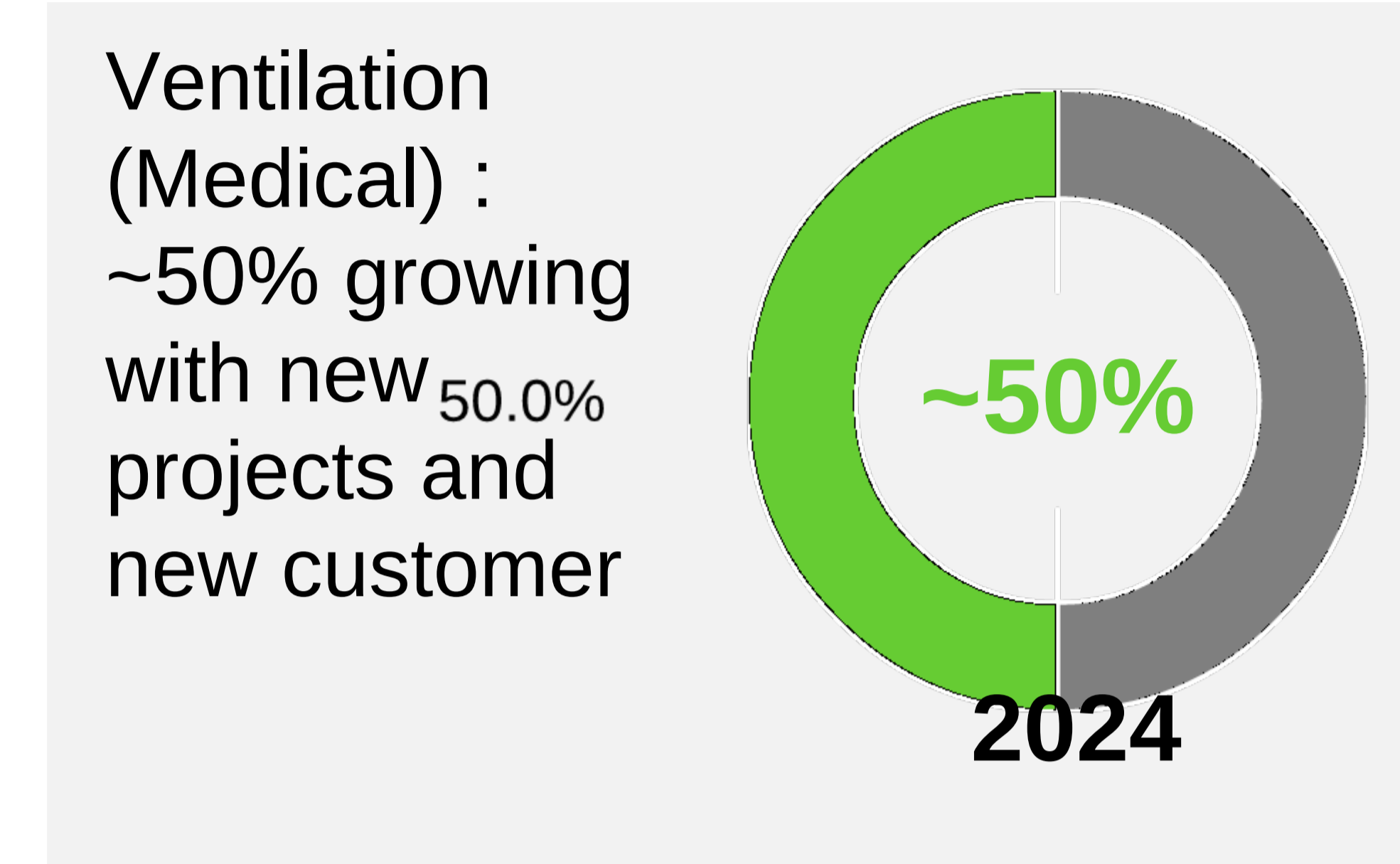
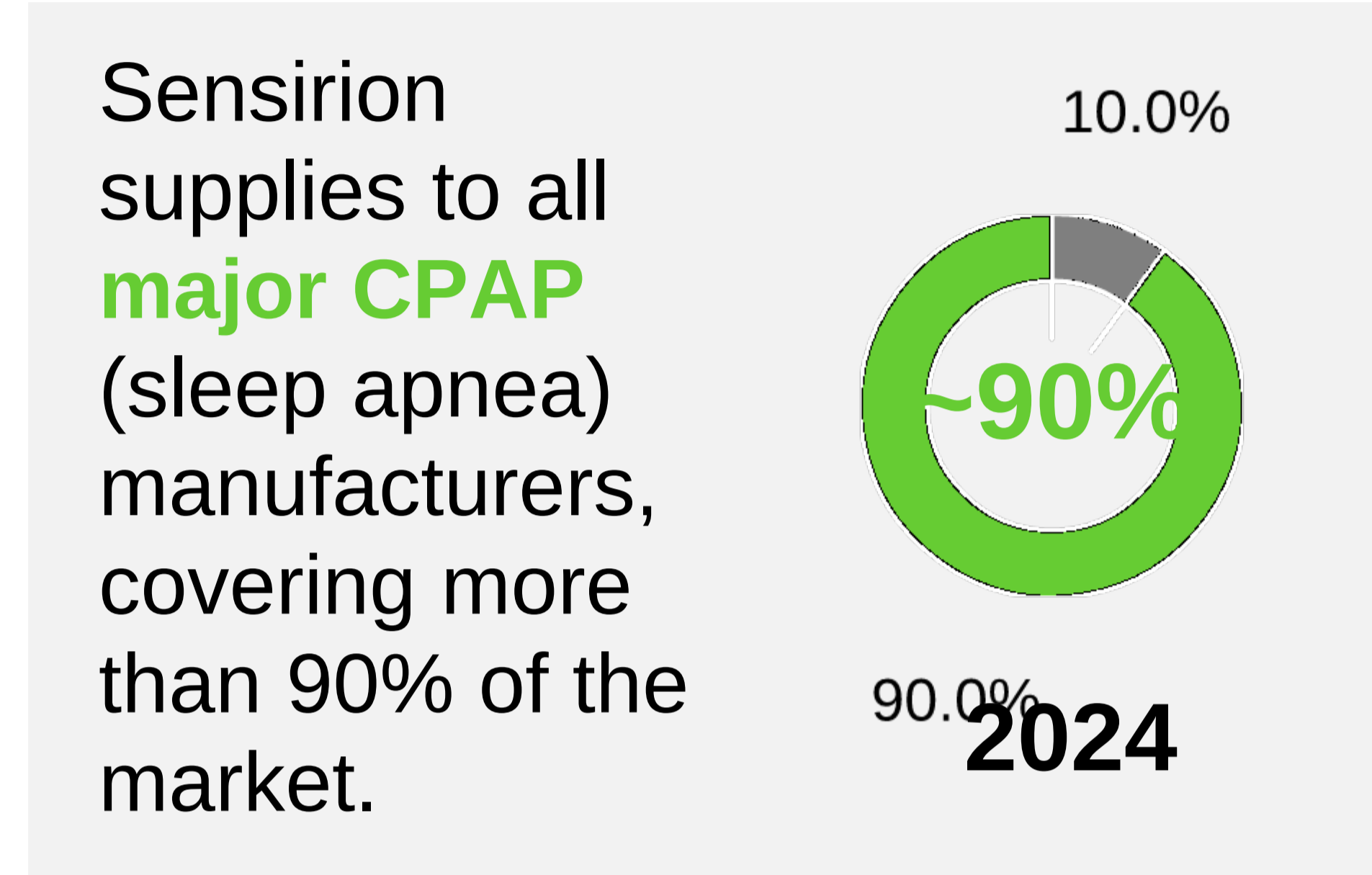


Flow sensing

Stronger than before the COVID pandemic

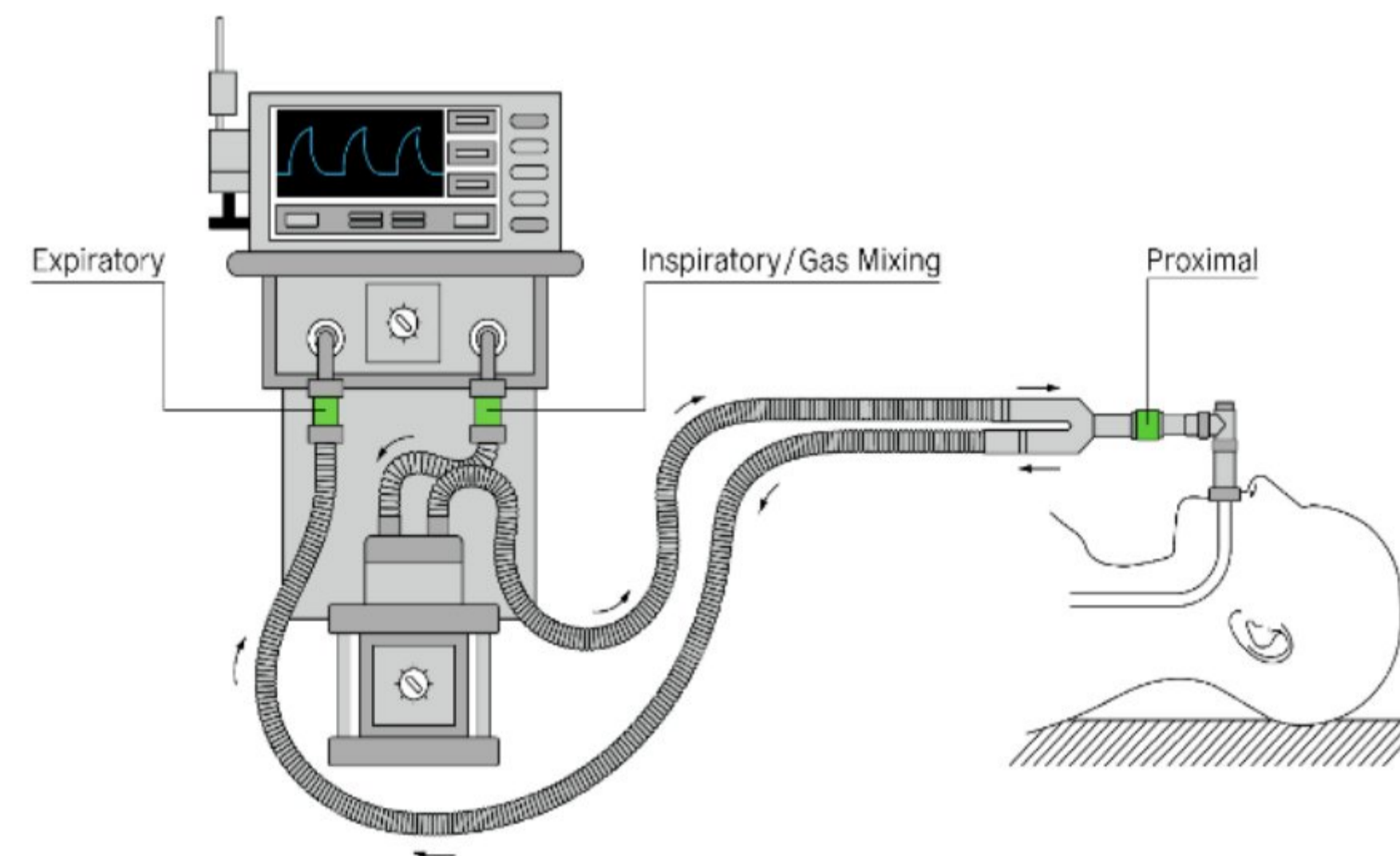
Flow Market

- The flow sensor market is very fragmented
- Sensirion has a **high market share in certain flow applications**, e.g. CPAP devices (Continuous Positive Air Pressure)



Medical applications: stronger than before

Our ability to deliver flow sensors during the COVID pandemic increased our overall visibility and allowed us to sustainably expand our customer base.



Entering new applications such as NO-dosing or heart-lung machines enable additional future growth in the medical market

Growth along three strategic foci

Our new strategic foci



Strategic focus 3

Lay the technological foundation for long-term growth



Strategic focus 2

Go beyond our core to foster additional growth opportunities in adjacent market fields



Strategic focus 1

Drive and expand our strong market position in our core markets of environmental and flow sensing

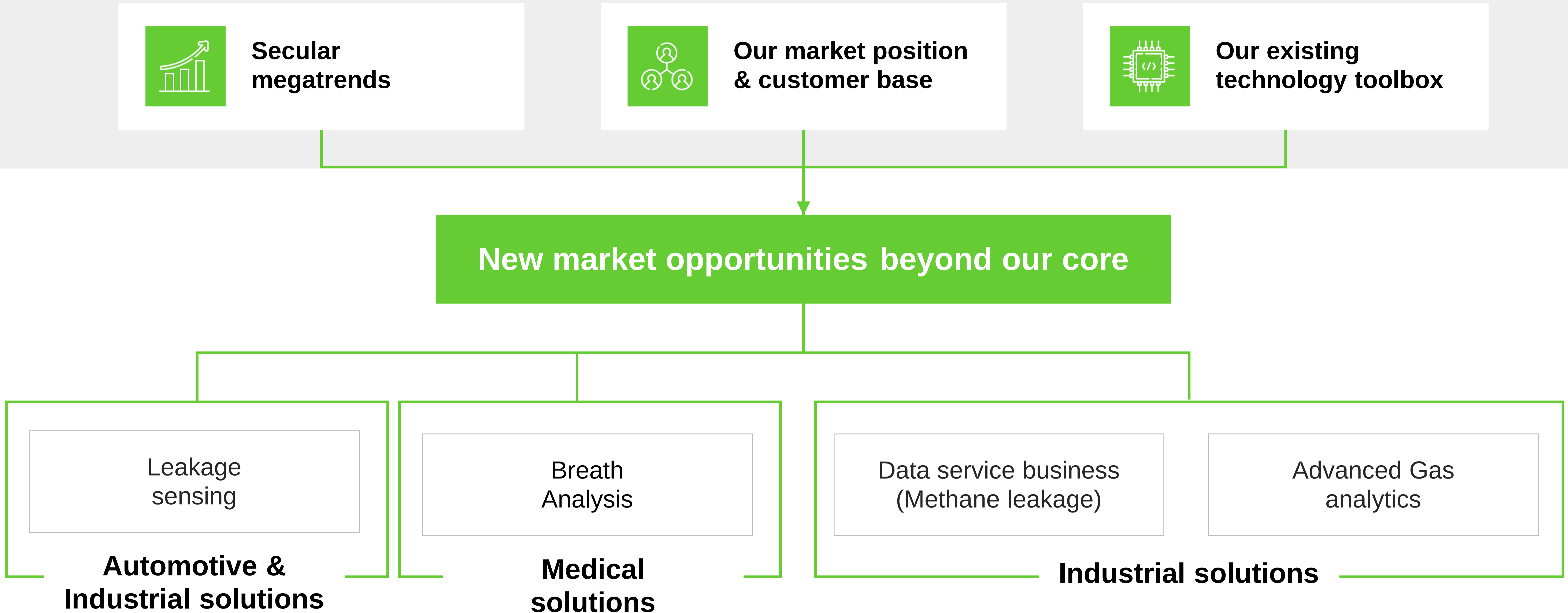


Foundation

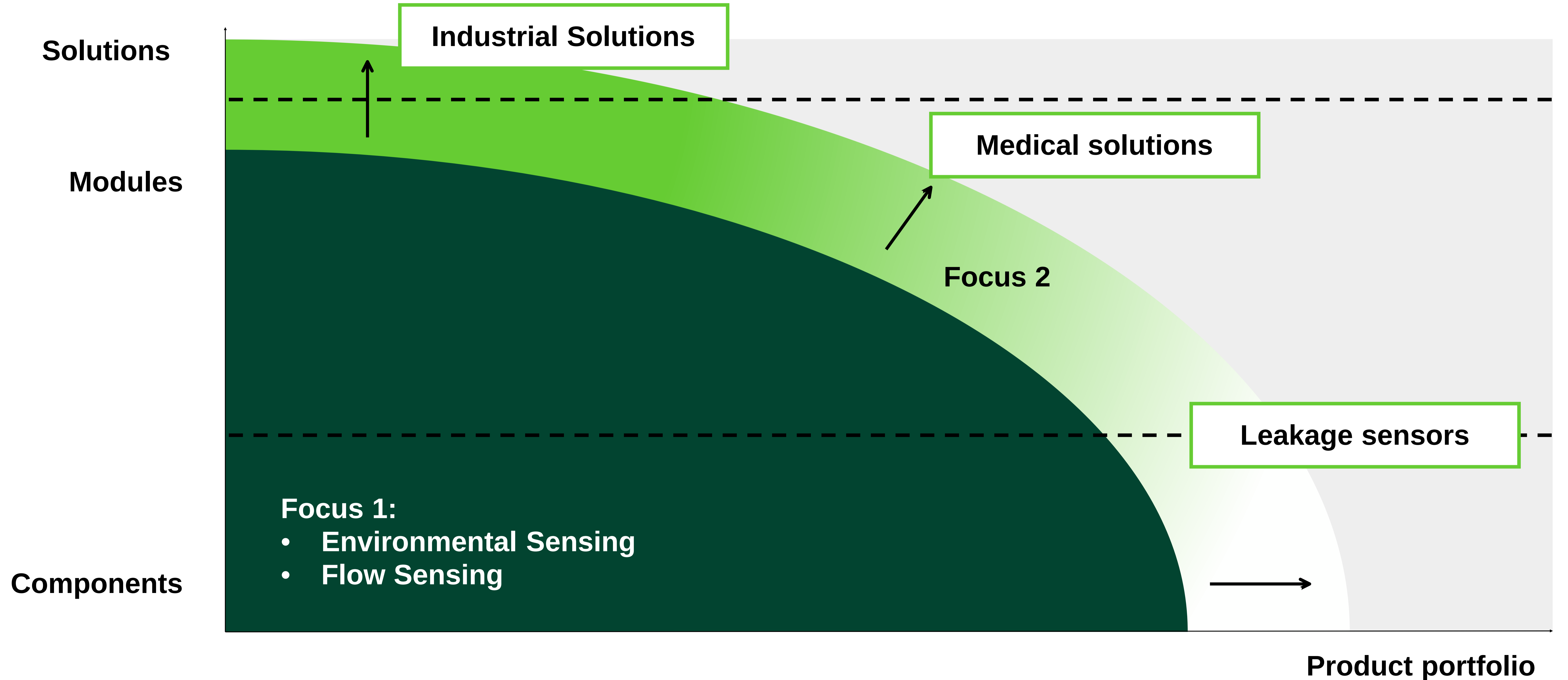
“SensiSpirit”: unique culture of innovation and entrepreneurship

Focus 2: Megatrends drive additional growth potential

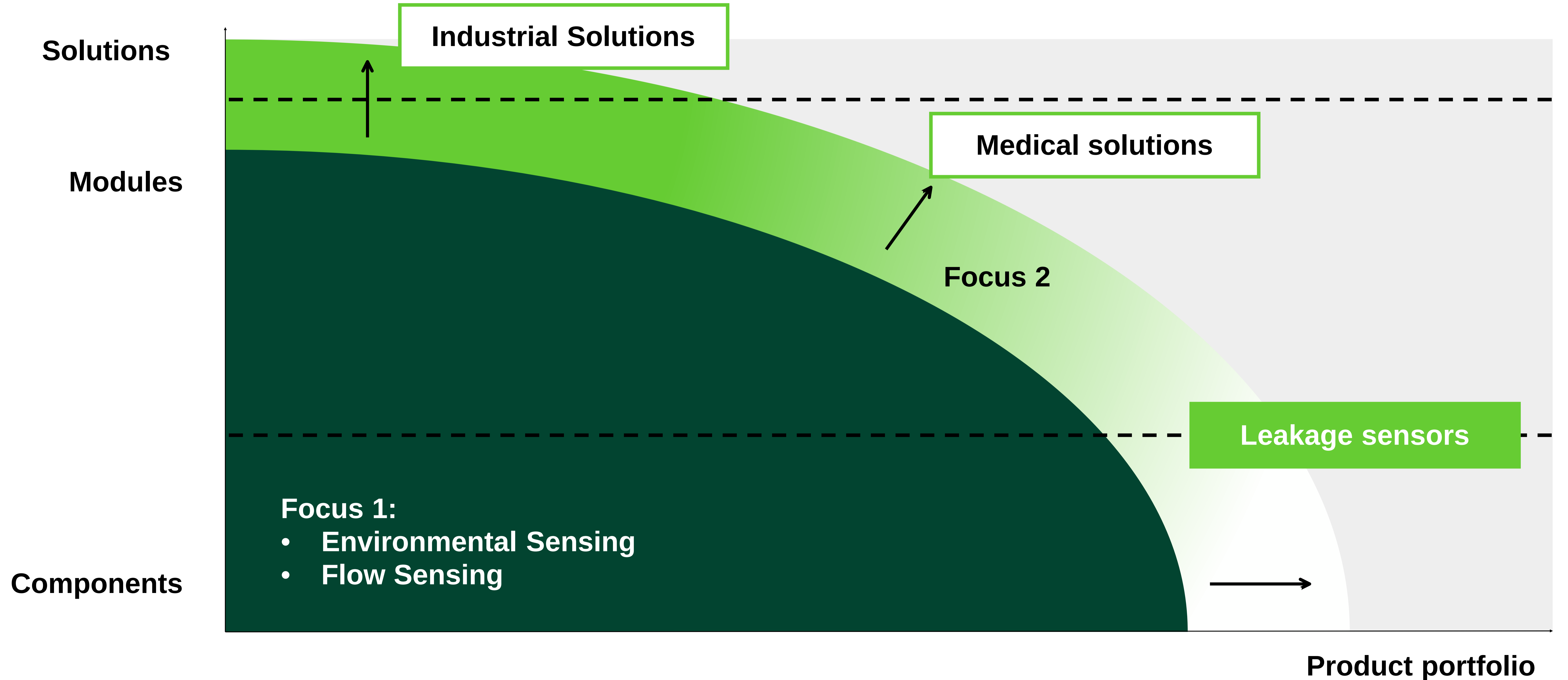
Leverage our strong market and technology leadership in our core business to expand the market.



Go beyond our core to foster additional growth opportunities

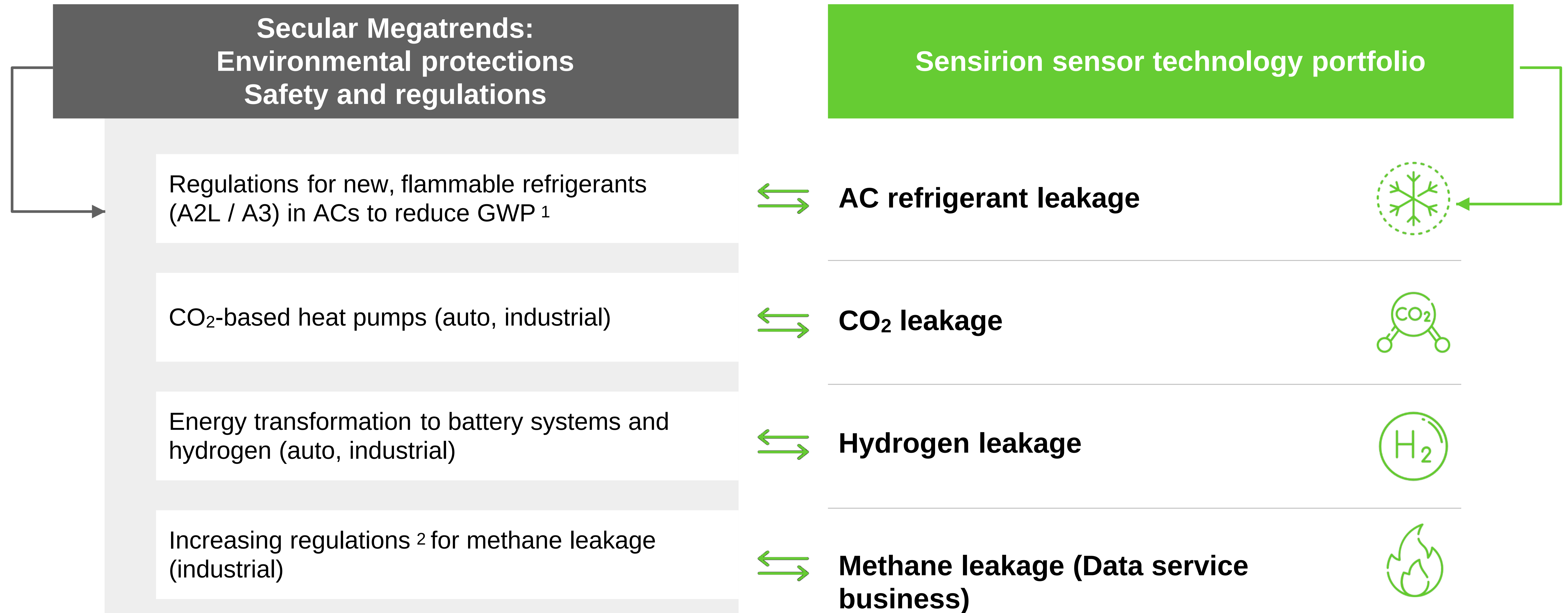


Go beyond our core to foster additional growth opportunities



“Make the difference” in leakage sensing

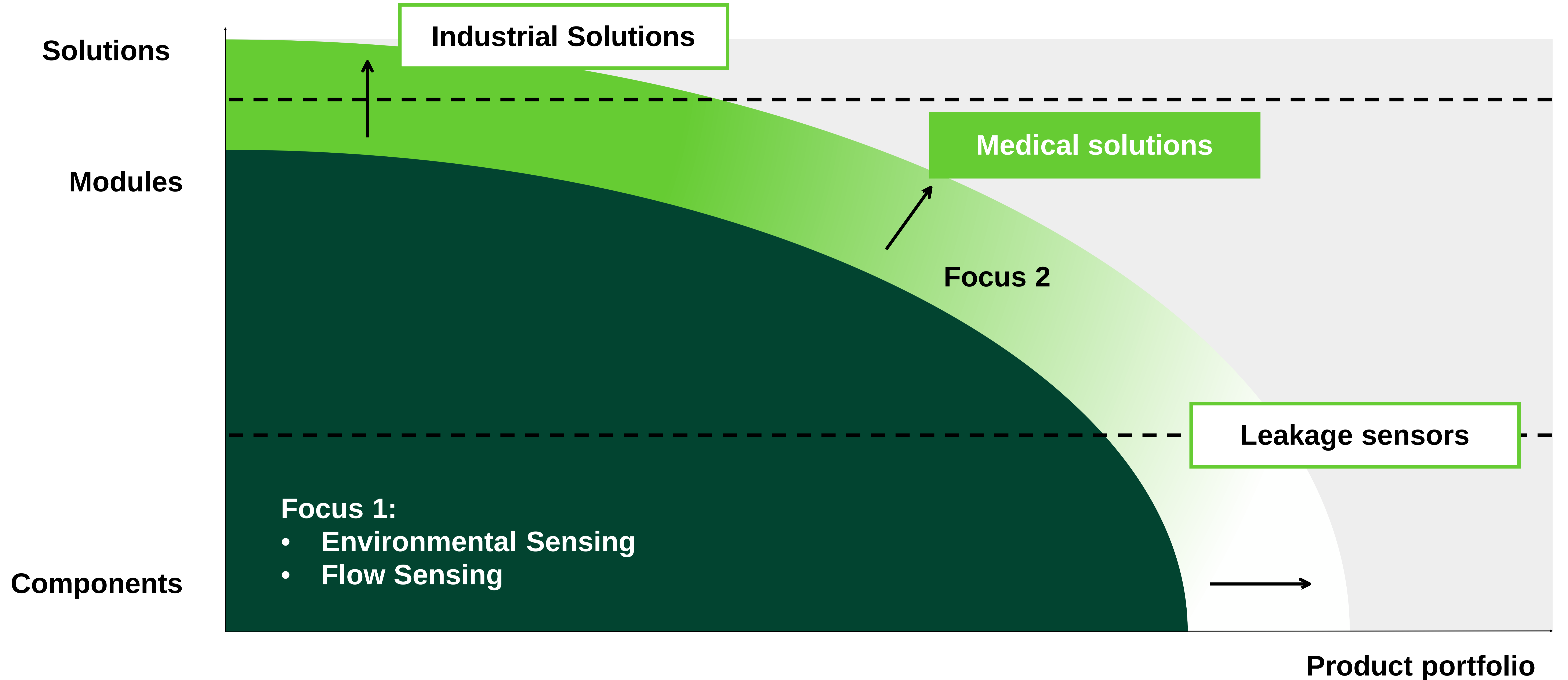
Become the leader in the emerging market for leak detection solutions in all markets



¹GWP = global warming potential: the new refrigerants (e.g. R32) have a significantly lower GWP compared to common refrigerants

²Methane Emissions Reduction Program was created under the Inflation Reduction Act of 2022 to reduce methane emission from the oil and gas sector

Go beyond our core to foster additional growth opportunities



Advanced Medical solutions

“Make the difference” in sensor technology, application expertise and algorithms

Business rationale

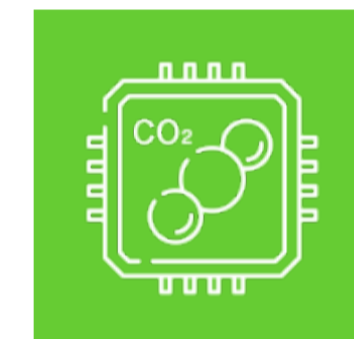
Next level of medical breath products: combining flow and gas analysis technologies to increase treatment safety and efficiency

Sensirion's favorable position



Breath flow

- Dominant market position (#1 in CPAP & Ventilation)
- Superior technology
- Deep application knowhow



Gas analysis technology

- Comprehensive technology toolbox
- Among Top-2 in environmental sensing
- Field-proven and miniaturized



Customer base

- Broad existing customer base
- Long-term and trustful relationship with major medical players

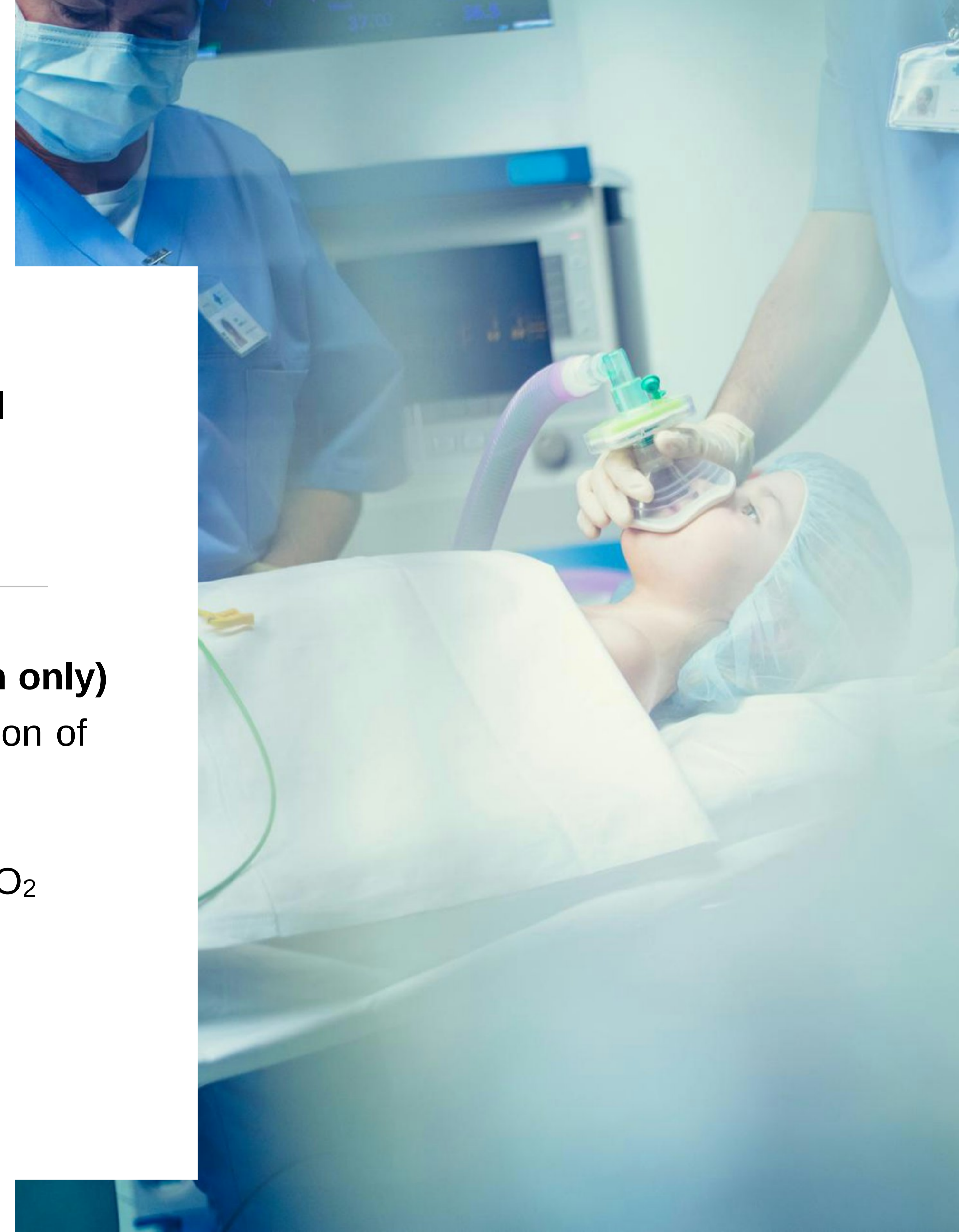


Algorithm

- Deep application know-how

Medical solutions

Combining flow and gas technologies for medical applications



Major supporting megatrends
Health and aging society



Addressable market potential
≈100+ MCHF (in some years)

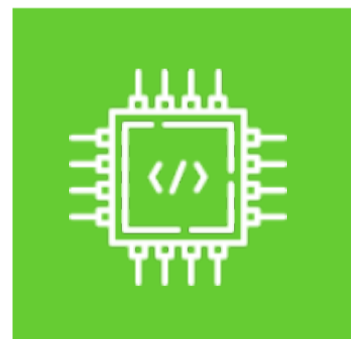


Business rationale
Next level of medical breath products: combining flow and gas detection technologies to increase treatment safety and efficiency.



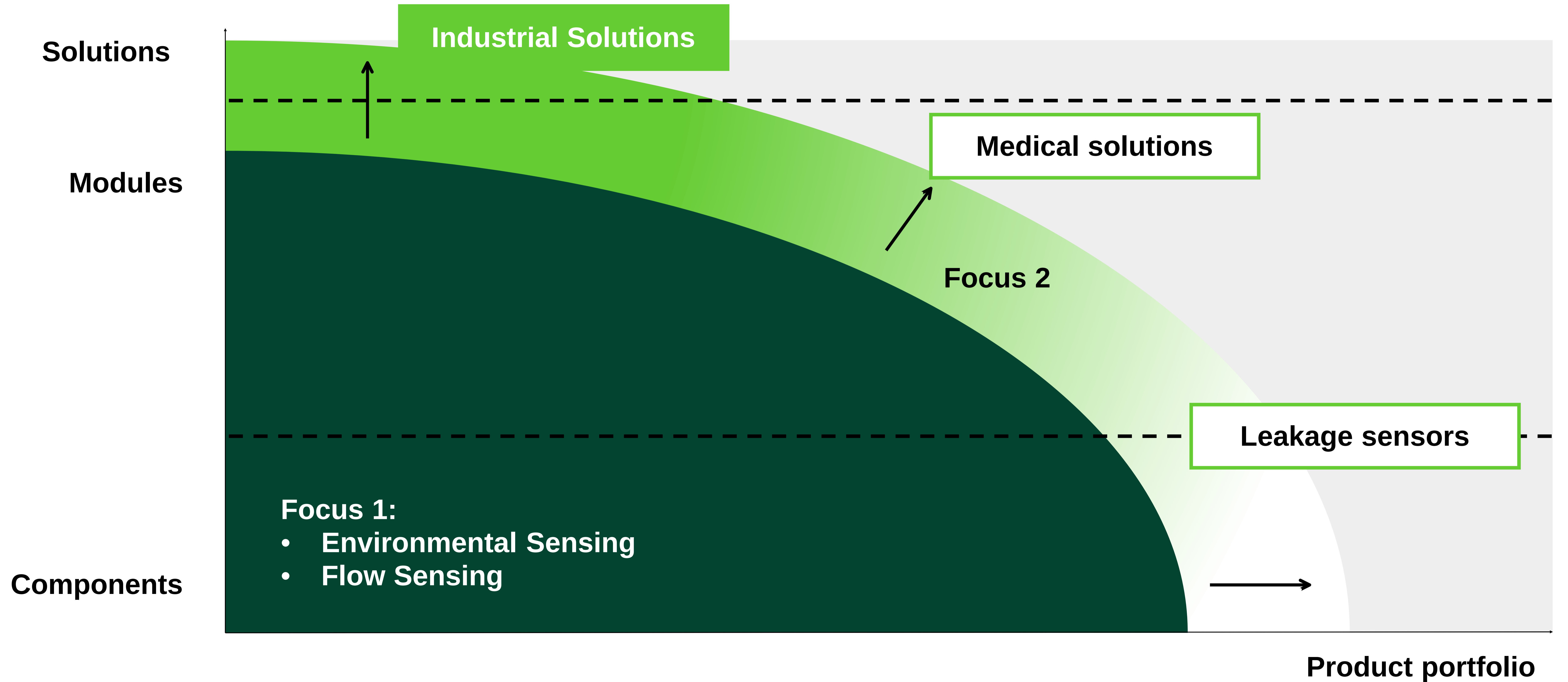
Target applications (selection only)

- Smart resuscitation: combination of flow and CO₂ (emergency)
- Respiration exchange rate: combination of flow, CO₂ and O₂



Technologies applied
Flow technology combined with CO₂ and O₂ sensing

Go beyond our core to foster additional growth opportunities



Industrial solutions

“Make the difference” in sensor technology, application expertise and algorithms

Business rationale

Leverage our sensor technologies and application know-how for high-end industrial monitoring solutions, driven by secular megatrends.

Target applications we are working on (selection only)

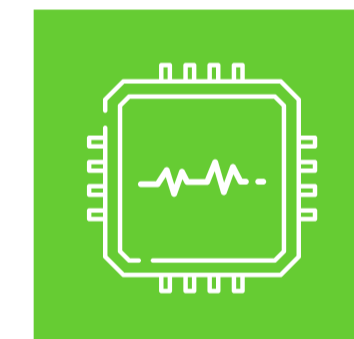
- Continuous Methane leakage detection for oil & gas industry
- Advanced gas analytics by gas chromatography

Sensirion's favorable position



Sensirion's gas analysis technology

- Comprehensive technology toolbox
- Field-proven and miniaturized



Qmicro's GC technology

- Acquired in 2021
- Superior gas chromatography technology
- Deep application-know-how by Qmicro's founders



Algorithm

- Deep application know-how



Market synergies

- Leverage our strong position in gasmetering
- Application synergies with flow applications

Methane leakage monitoring

Where technology helps to protect the climate



Methane accounts for **about 16% of all global emissions** ¹
Methane is $\approx 84x$ more potent than CO₂ ^{1,2}



Almost **15% of the methane** emitted by the energy sector is caused by **unintentionally leaked natural gas**.



Investors, governments & buyers are **increasingly demanding action** from operators to comply with recent regulations in US and EU



- **>50'000 active high production wells** ³ in US
- **>5'000 mid-stream sites** in US
- **Addressable market potential: 100+ MCHF**

¹ International Energy Agency IEA "Global Methane Tracker 2024"

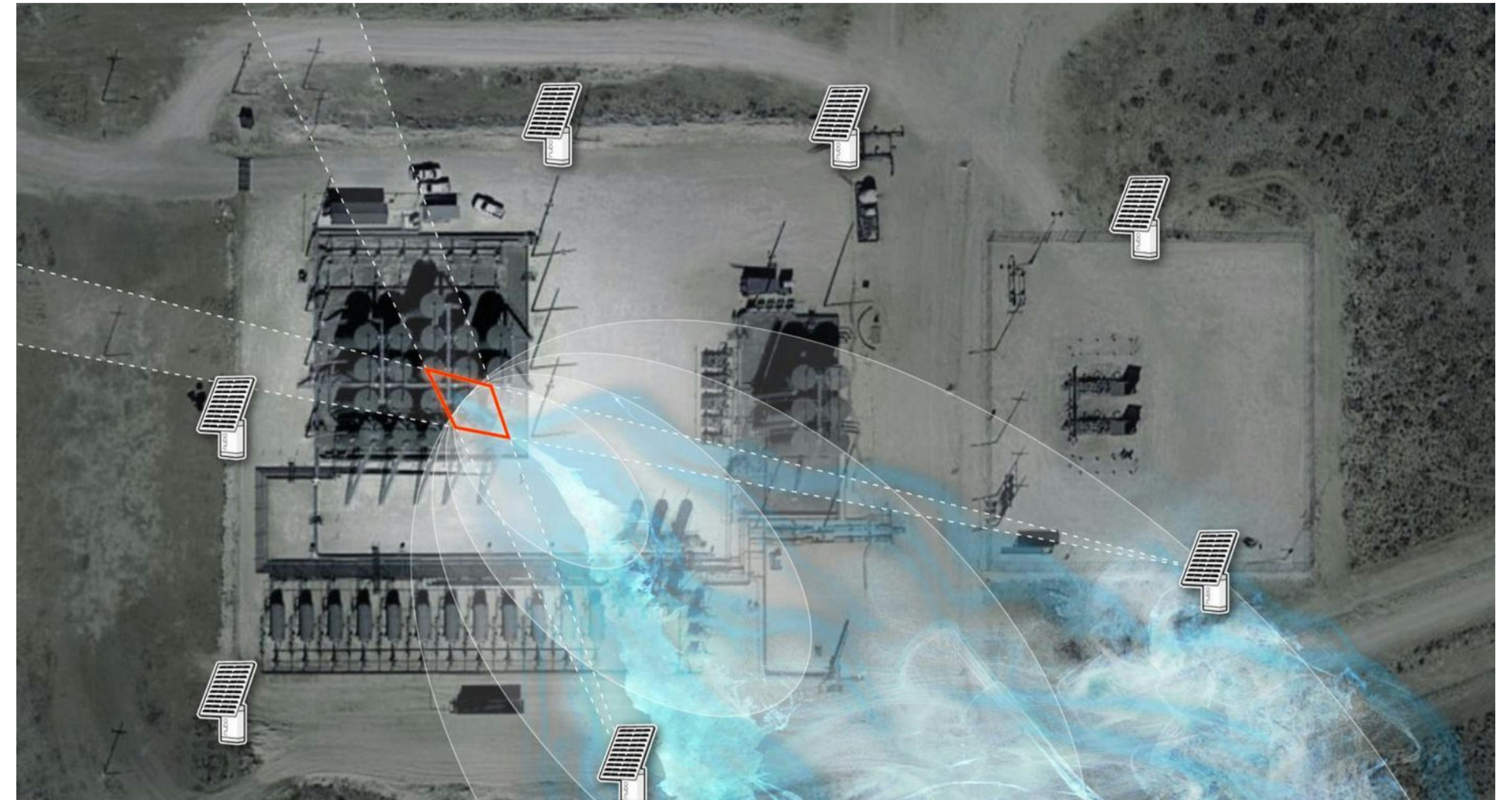
² based on global warming potential of methane over 20-year-timeframe (GWP20)

³ US Energy Information Administration (EIA), high production wells > 100 BOE/d



Our solution: Nubo Sphere

End-to-end continuous methane emissions monitoring solution



Leak detection and repair



Emissions quantification,
reporting and reconciliation



Alerting; Emission localization
and quantification



Continuous monitoring enables
fast reaction time and a complete
picture of emissions

Growth along four strategic foci

Our new strategic foci



Strategic focus 3

Lay the technological foundation for long-term growth



Strategic focus 2

Go beyond our core to foster additional growth opportunities in adjacent market fields



Strategic focus 1

Drive and expand our strong market position in our core markets of environmental and flow sensing

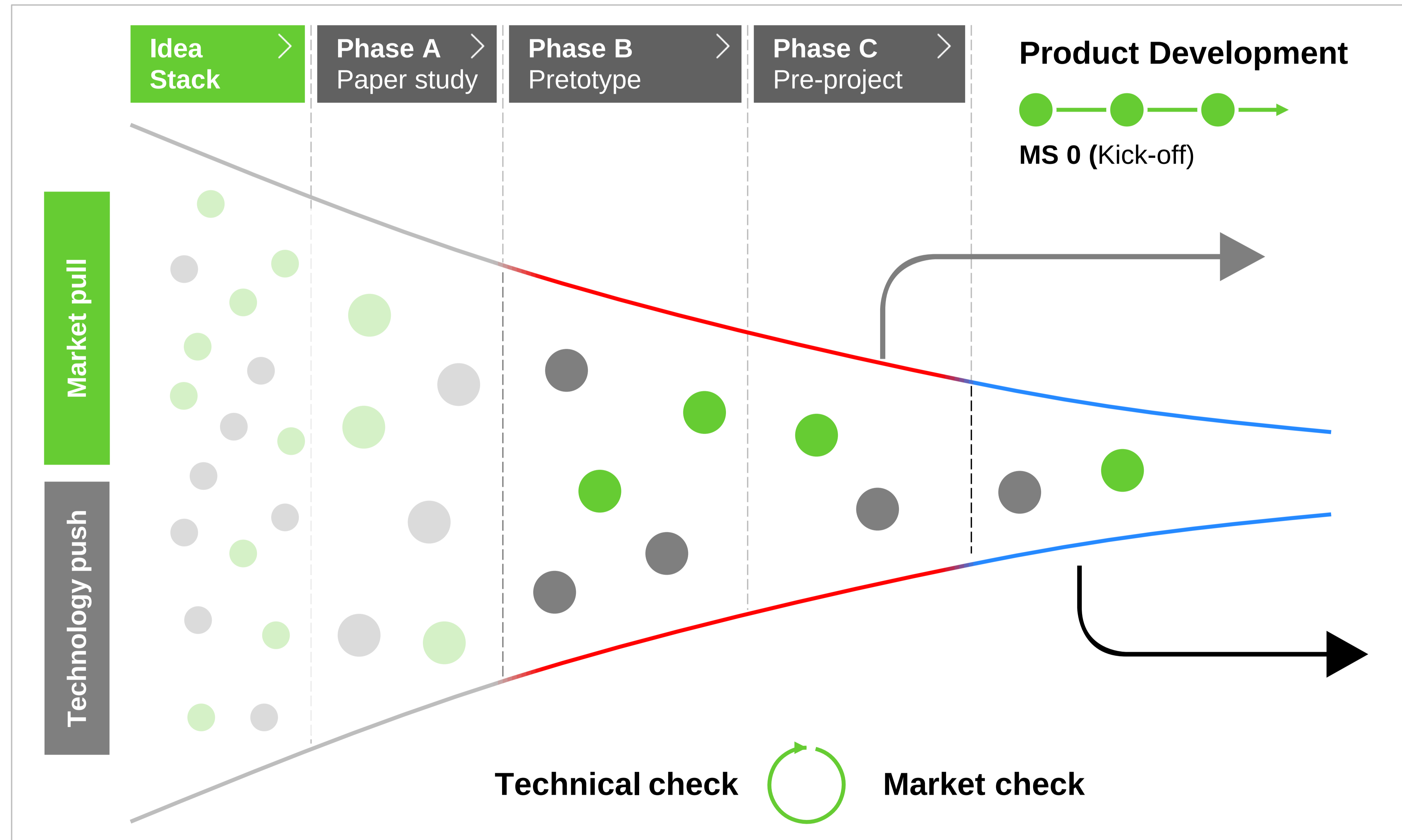


Foundation

“SensiSpirit”: unique culture of innovation and entrepreneurship

Our innovation is embedded in a structured process

We have a full pipeline of new product ideas at different stages of maturity



Several projects in phases B and C

- Currently, several promising product ideas are in phase B (pretotype) and phase C (pre-project).
- It is too early to disclose due to competition and M&A reasons.



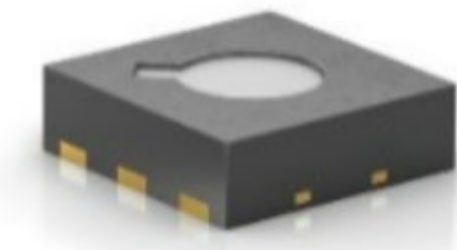
New product ideas in first development stage

- Medical solutions projects
- Industrial solutions projects
- Furthermore, we are working on advanced spectroscopic technologies based on low-cost IR laser systems

Focus 3 topics drive new product innovations

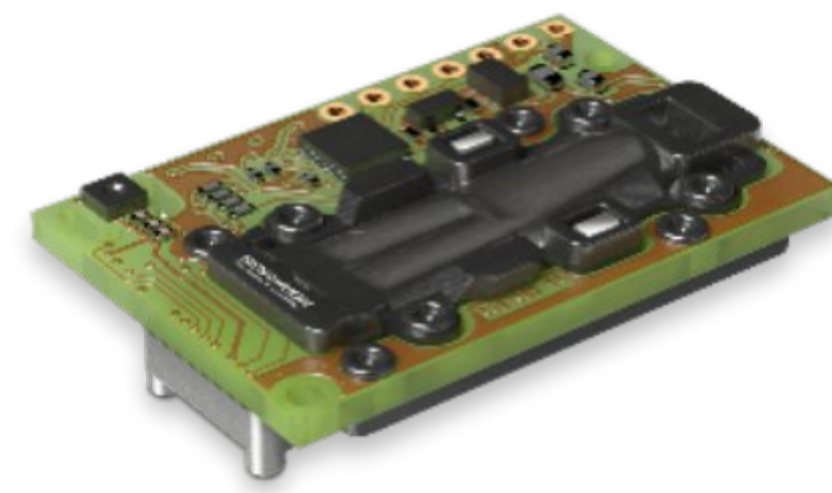
Numerous products were initially kicked-off by focus-3 initiatives

MOX multi-pixel gas



2017¹

CO₂
1st Generation



2018



Particulate
matter PM2.5

2020



Electrochemical
(formaldehyde)

Photoacoustic CO₂
2nd generation



2021

A2L leakage detection



2024



2022



Methane detection

1) Year of product launch

WRAP-UP & MID-TERM GUIDANCE



SENSIRION

Summary: growth along three strategic foci

Strategic foci



Strategic Focus 3

Develop technologies for long-term growth



Strategic Focus 2

Become market leader for the entire environmental market



Strategic Focus 1

Drive and expand our strong market position in our core markets of environmental and flow sensing



Foundation

“SensiSpirit”: unique culture of innovation and entrepreneurship

Sensirion strategically well positioned

- to drive innovation and technology developments to address future megatrends
 - to secure long-term sustainable company growth
-
- to become the leader in the emerging market for leak detection solutions
 - to become a solution provider for selected focus applications in medical and industrial markets
-
- to monetize our brand-new portfolio of miniaturized environmental sensors and to enable new growing applications
 - to leverage our technology platforms and to react fast to future opportunities
-
- to attract and retain the best people based on an exceptional and award-winning culture

Confirmed mid-term guidance for next cycle



We see **many promising additional business fields** in all three strategic foci



We maintain the innovation power with **lower R&D spending of 18-20%** (instead of 22-24%) due to the higher portion of module business



As a result, we expect the average **EBITDA level** to remain stable in the **mid to high teens** over the next medium cycle.

(CHFm)	Avg 2020-2024 ³	Mid-term ¹	Comments
Annual revenue growth rate (CAGR)	~12% ^{1,2}	Low- to mid-teens %	<ul style="list-style-type: none"> ✓ Secular megatrends supports revenue growth ✓ Sensirion aims to grow above market by leveraging its leading technologies and new applications
EBITDA margin	~20% ⁴	Mid- to high-teens %	<ul style="list-style-type: none"> ✓ R&D spending of 18-20% of revenue to support long-term technology development ✓ We keep our conservative accounting principle to expense R&D spending almost fully

¹ At fixed foreign currency exchange rates; mid-term means “averaged target over cycle of 3-5 years” ² Without (with) COVID-19-related ventilator business

³ FY 2024 at mid-point of annual guidance ⁴ adjusted for AiSight one-off impairment and restructuring costs

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