CELLAVISION

AGM May 8, 2019

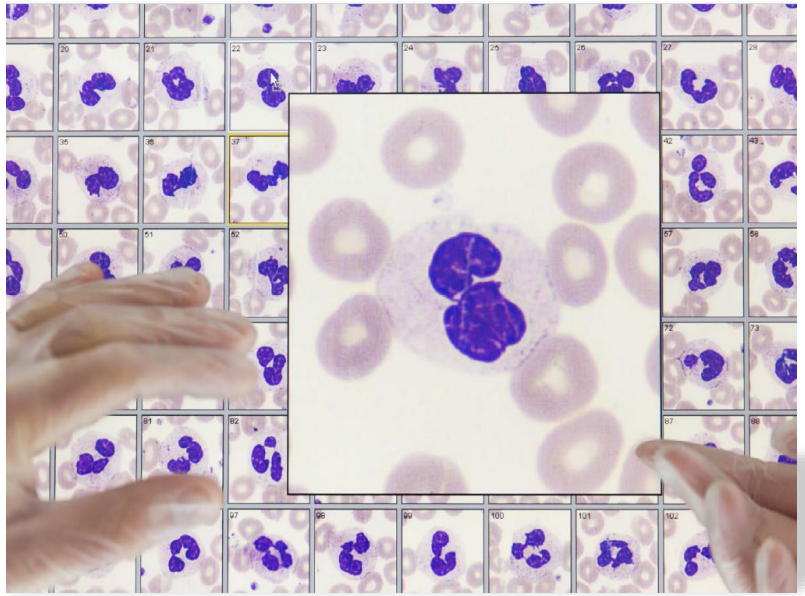
Zlatko Rihter
President and Chief Executive Officer

CellaVision in short

Creating Value in Healthcare

Our vision is to be a leader in global digitalization and automation of blood analyses for both the human and veterinary segments.

Our method contributes to improved patient diagnostics, streamlining and reduced healthcare costs.



In other words: **Our mission is to replace traditional microscopes in laboratories.**

World Leading Supplier of Digital Solutions for Blood and Body Fluid Analysis

17.000
LARGE LABS

2.5 billions blood samples p.a

Cell counters & Slide and Stain makers

15%

~**380** millions samples p.a

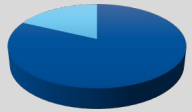
DIGITAL MICROSCOPY

CELLAVISION PENETRATION

18%*
in the large labs segment

*) end of 2018

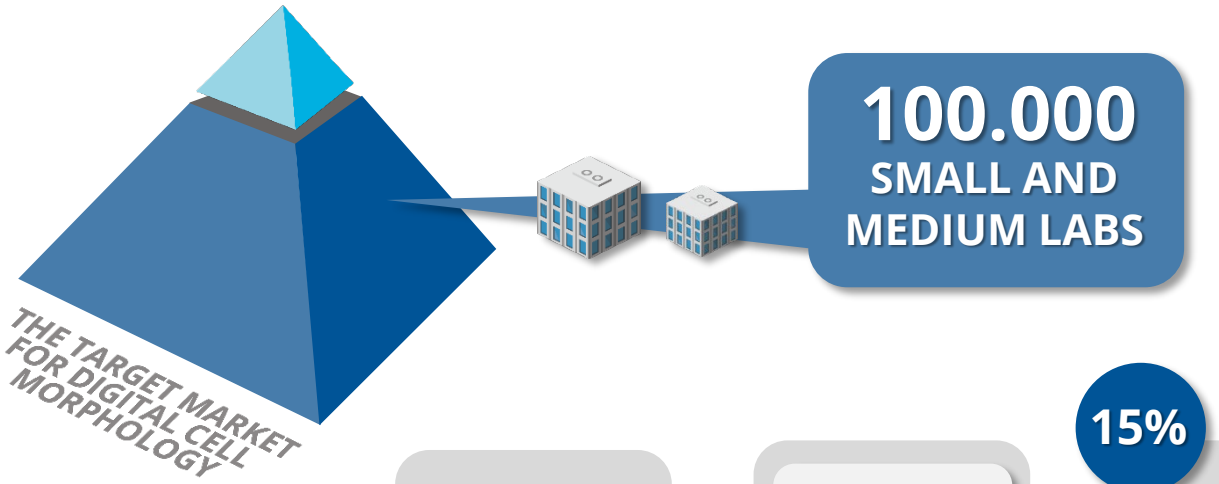
MANUAL MICROSCOPY



82% of the large hematology laboratories world wide use a **manual microscope**

"CellaVision is creating a new global standard for microscopy in the field of hematology"

World Leading Supplier of Digital Solutions for Blood and Body Fluid Analysis



1.5 billions blood samples p.a

Cell counters & Slide and Stain makers

15%

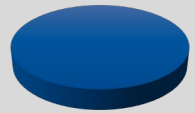
~**220** millions samples p.a

DIGITAL MICROSCOPY

CELLAVISION PENETRATION

0%*
in the small and medium labs segment
*) end of 2018

MANUAL MICROSCOPY

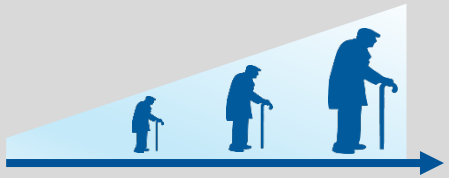


100% of the small and medium hematology laboratories world wide use a **manual microscope**

"CellaVision is creating a new global standard for microscopy in the field of hematology"

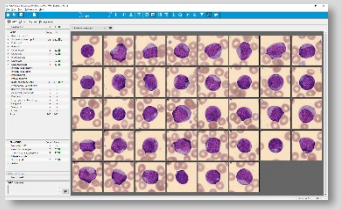
Market Drivers and Benefits of Digital Microscopy

DEMOGRAPHY



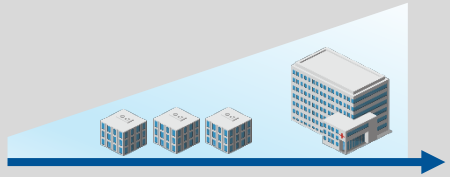
- Ageing population
- Increased prosperity
- Increasing number of blood samples

DEMAND FOR EFFICIENCY



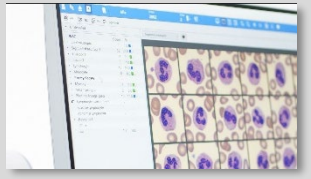
- Labor shortage of biomedical scientists
- Reduced health care spending

CONSOLIDATION & STANDARDIZATON



- Consolidation of laboratories
- Focus on standardization and efficiency

PATIENT VALUE



- Patients are diagnosed faster **(6,5 to 1,5 hours)**
- Treatment is initiated quicker **(5 hours saving)**
- Digital cell images can be stored and patients monitored during treatment **(no storage limit)**
- Remote expert assistance **(access anywhere anytime)**

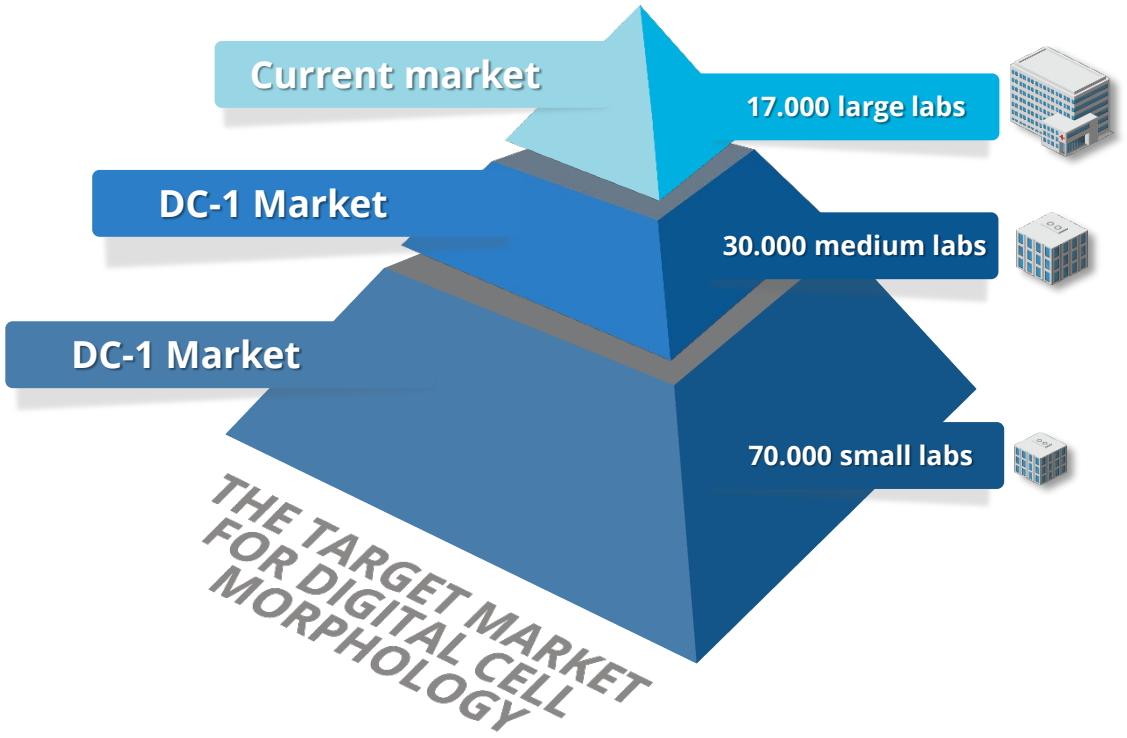
HIGHER QUALITY

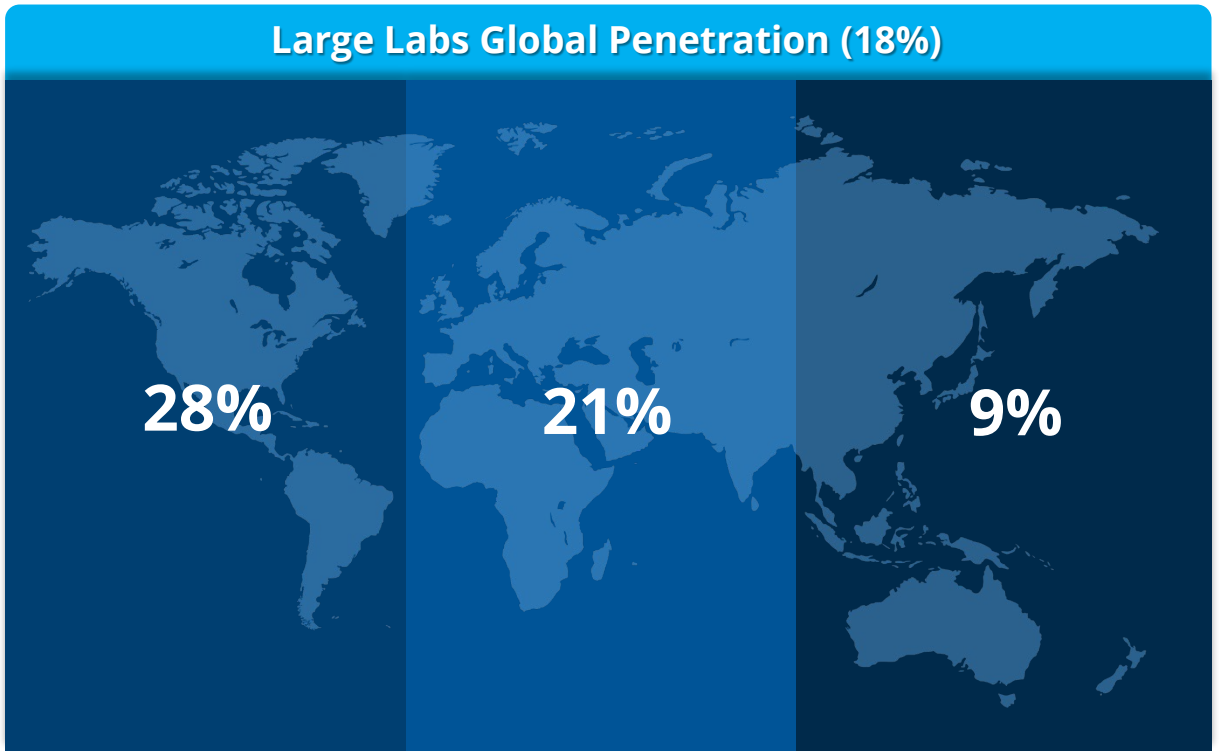
- Security and traceability in the test results **(all data logged)**
- Cells on a screen are optimal for knowledge sharing **(unlimited viewers)**
- CellaVision classifies cells automatically **(all relevant cells)**

COST EFFICIENCY

- Enables lab chain collaboration by connectivity **(unlimited number of labs)**
- Freeing up resources **(saves 2 jobs)**
- Saves time (**50% of manual analysis time)**
- Improved staff ergonomics **(reduction of sick leave)**

Human Laboratory Segment – CellaVision Core Market





Overall hematology market value of SEK >35 billion (CAGR of 4-5%)

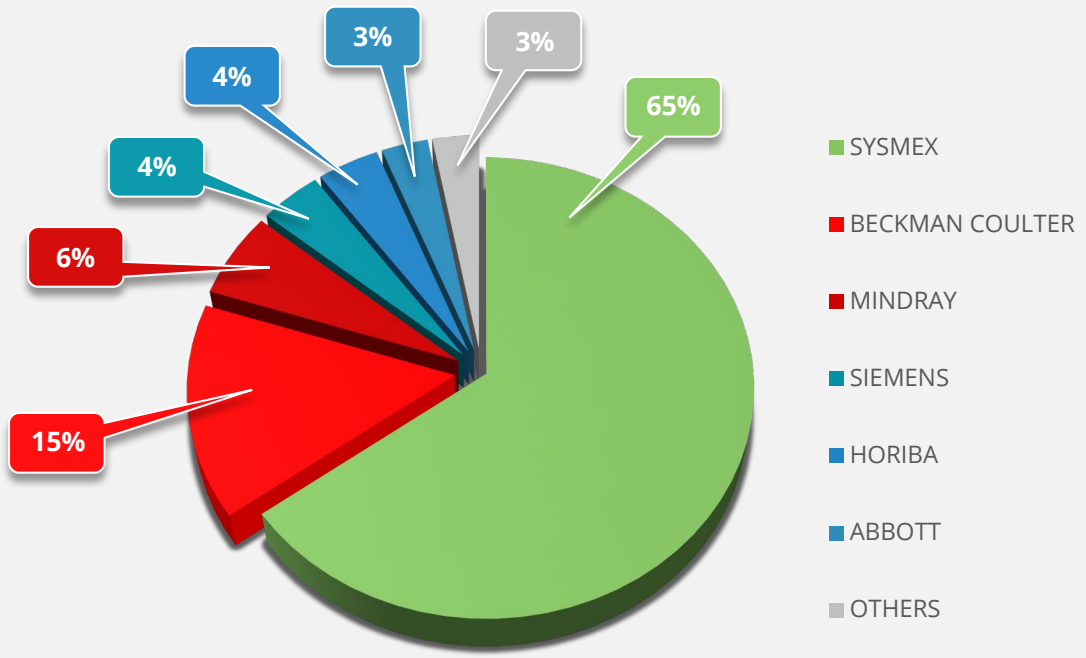
Commercial Operations through an Indirect Business Model

The CellaVision indirect model is based upon global distribution partners that offer a complete product range for hematology labs. The distributors takes responsibility for installations and after sales service

Market support offices in 17 markets and presence in more than 30 countries; USA, Canada, Brazil, Mexico, the Nordic countries, France, DACH, UK/Ireland, Middle East, China, Iberia, Italy, South Korea, Japan, Oceania, India and South East Asia

Manufacturing outsourced to Kitron AB, Sweden

HQ in Sweden (Lund), >120 employees world wide



Commercial Operations through an Indirect Business Model

CellaVision Scalable Business model: **Focus on Core Function and Strong Partnership**

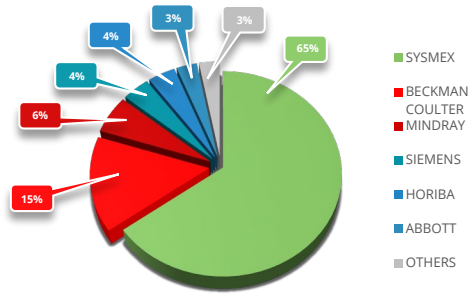
INNOVATION	MANUFACTURING	MARKET SUPPORT	SALES & DISTRIBUTION	BLOOD ANALYSIS
CELLAVISION CORE	*PARTNERSHIP*	*CELLAVISION CORE*	*PARTNERSHIP*	*END CUSTOMER*

The CellaVision indirect model is based on global distribution partners that offer a complete product range for hematology labs

CellaVision partners cover 100% of large labs and >80% of small- and medium sized labs

The distributors take responsibility for installations and after sales service

Large Laboratories Hematology market



sysmex BECKMAN COULTER mindray SIEMENS HORIBA Abbott A Promise for Life NIHON KOHDEN Boule BIOspecifix

CellaVision – The Strategic Agenda

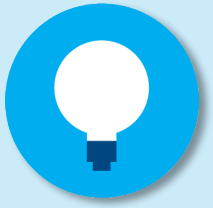
1
GEOGRAPHIC EXPANSION

2
SEGMENT EXPANSION

CellaVisions financial target is to increase sales yearly over an economic cycle by an average of at least...

15%
ORGANIC GROWTH

3
INNOVATION



CellaVisions financial target is that the operating margin over an economic cycle is to exceed...

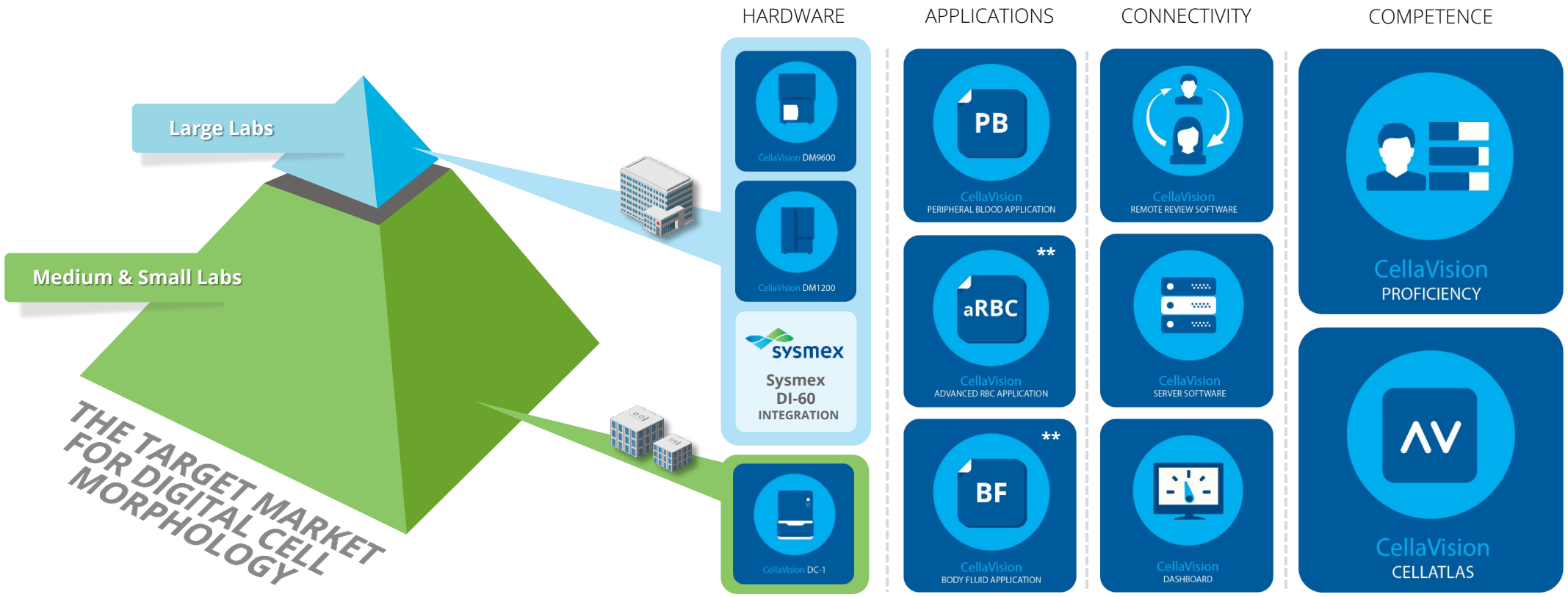
20%
PROFITABILITY

4
STREAMLINED SUPPLY CHAIN

5
DEVELOPED PARTNERSHIP

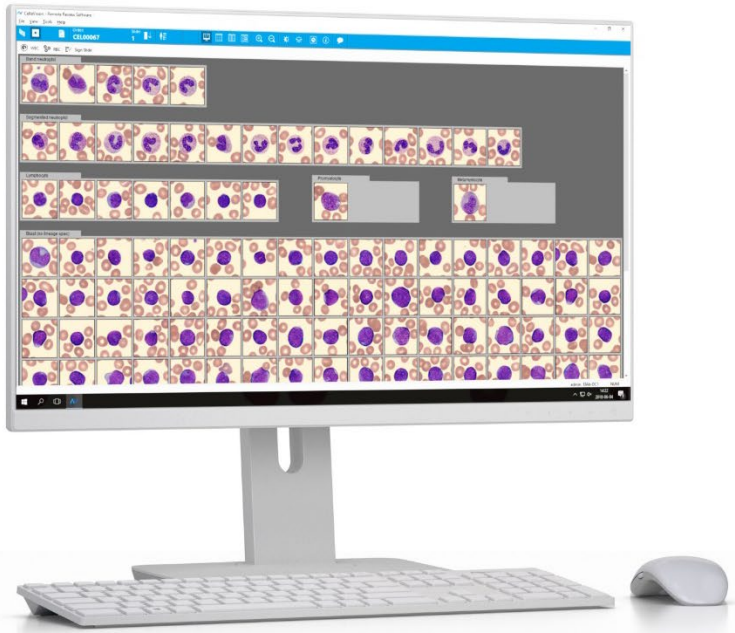
The CellaVision portfolio and CellaVision® DC-1

Extending the CellaVision Portfolio to cover all lab segments

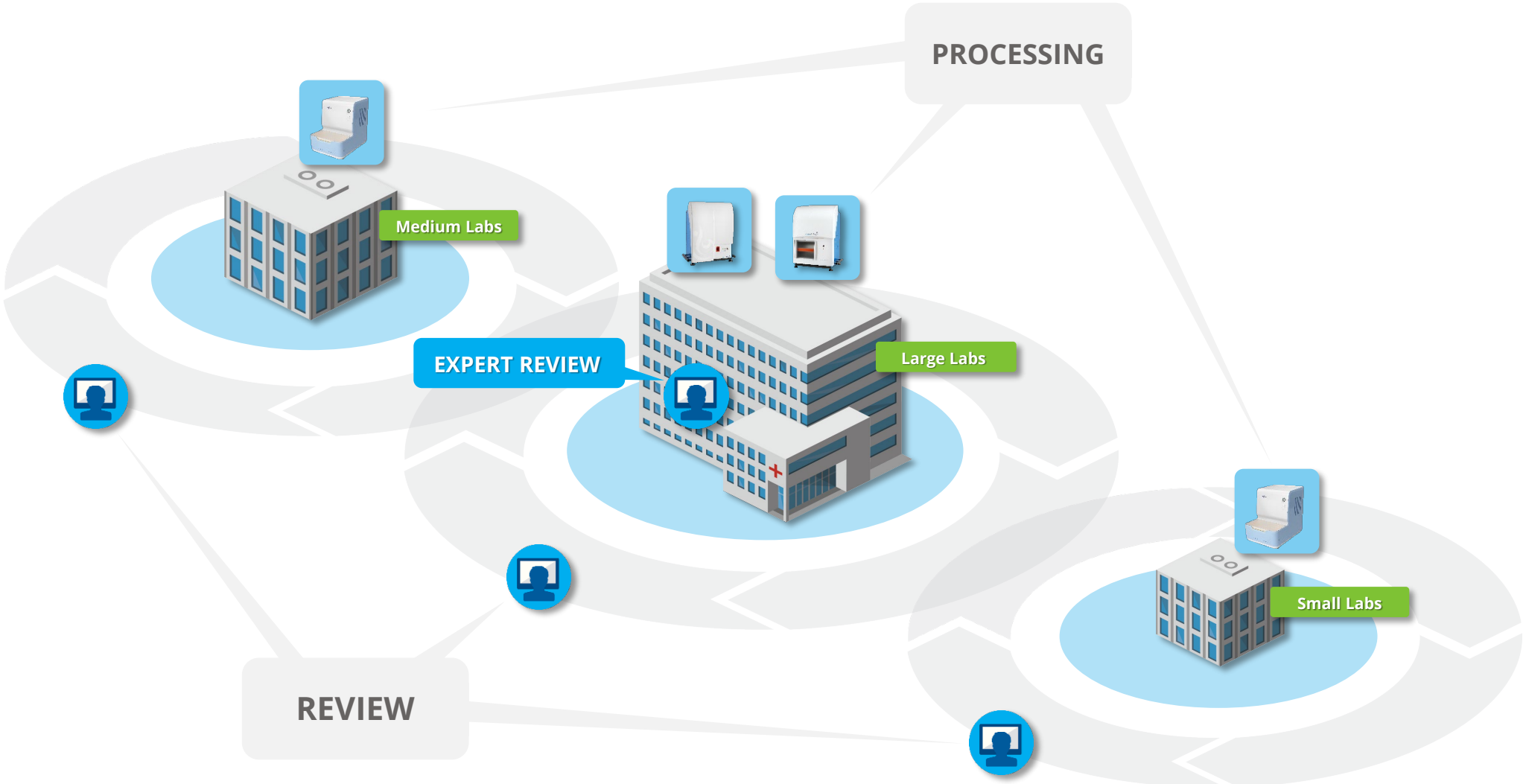


** Not available on CellaVision® DC-1
(Human and vet variants will be available for all platforms)

CellaVision® DC-1



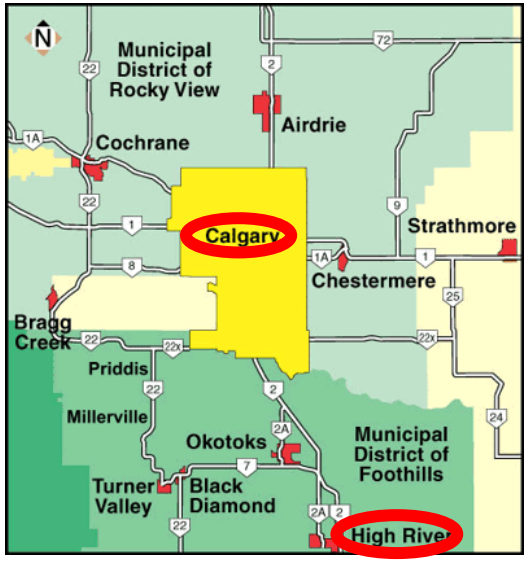
Primary Initial Target Market for CellaVision® DC-1: Hematology Laboratory Chain Networks



First White Paper for CellaVision® DC-1 in a laboratory network published
- Sample Review Time reduced by 50% and Turn around time reduced by 94%!

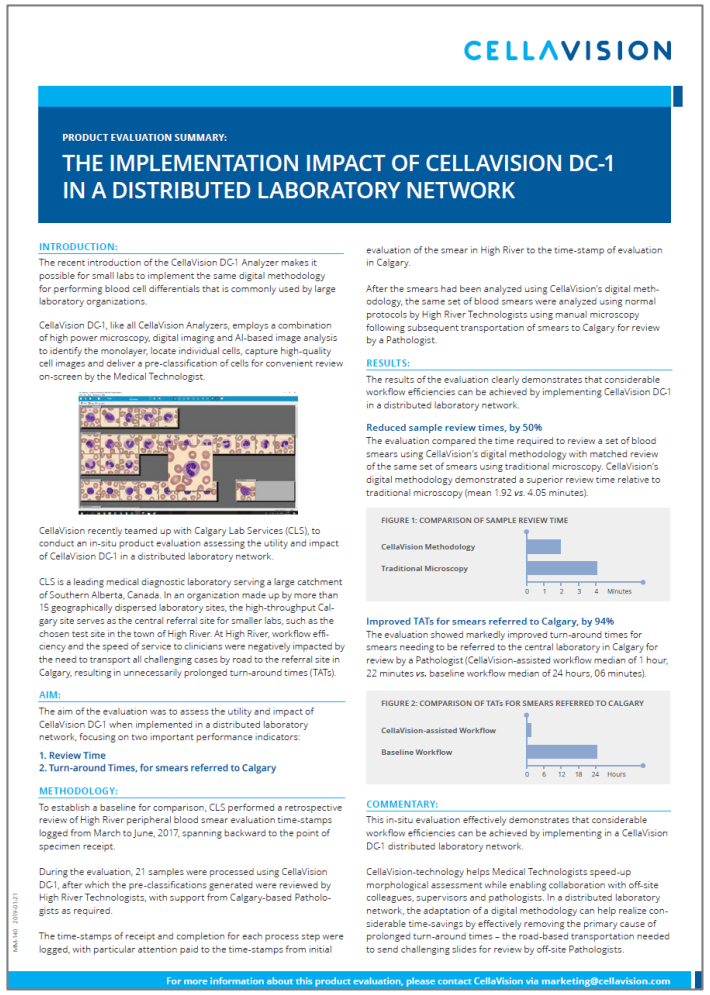
CELLAVISION

Calgary area in Canada



Calgary (Large lab): CellaVision large system
High River (Small lab) : CellaVision® DC-1

65 km distance or 45 minutes by car



CELLAVISION

PRODUCT EVALUATION SUMMARY:

THE IMPLEMENTATION IMPACT OF CELLAVISION DC-1 IN A DISTRIBUTED LABORATORY NETWORK

INTRODUCTION:

The recent introduction of the CellaVision DC-1 Analyzer makes it possible for small labs to implement the same digital methodology for performing blood cell differentials that is commonly used by large laboratory organizations.

CellaVision DC-1, like all CellaVision Analyzers, employs a combination of high power microscopy, digital imaging and AI-based image analysis to identify the monolayer, locate individual cells, capture high-quality cell images and deliver a pre-classification of cells for convenient review on-screen by the Medical Technologist.

CellaVision recently teamed up with Calgary Lab Services (CLS), to conduct an in-situ product evaluation assessing the utility and impact of CellaVision DC-1 in a distributed laboratory network.

CLS is a leading medical diagnostic laboratory serving a large catchment of Southern Alberta, Canada. In an organization made up by more than 15 geographically dispersed laboratory sites, the high-throughput Calgary site serves as the central referral site for smaller labs, such as the chosen test site in the town of High River. At High River, workflow efficiency and the speed of service to clinicians were negatively impacted by the need to transport all challenging cases by road to the referral site in Calgary, resulting in unnecessarily prolonged turn-around times (TATs).

AIM:

The aim of the evaluation was to assess the utility and impact of CellaVision DC-1 when implemented in a distributed laboratory network, focusing on two important performance indicators:

1. Review Time
2. Turn-around Times, for smears referred to Calgary

METHODOLOGY:

To establish a baseline for comparison, CLS performed a retrospective review of High River peripheral blood smear evaluation time-stamps logged from March to June, 2017, spanning backward to the point of specimen receipt.

During the evaluation, 21 samples were processed using CellaVision DC-1, after which the pre-classifications generated were reviewed by High River Technologists, with support from Calgary-based Pathologists as required.

The time-stamps of receipt and completion for each process step were logged, with particular attention paid to the time-stamps from initial evaluation of the smear in High River to the time-stamp of evaluation in Calgary.

After the smears had been analyzed using CellaVision's digital methodology, the same set of blood smears were analyzed using normal protocols by High River Technologists using manual microscopy following subsequent transportation of smears to Calgary for review by a Pathologist.

RESULTS:

The results of the evaluation clearly demonstrates that considerable workflow efficiencies can be achieved by implementing CellaVision DC-1 in a distributed laboratory network.

Reduced sample review times, by 50%

The evaluation compared the time required to review a set of blood smears using CellaVision's digital methodology with matched review of the same set of smears using traditional microscopy. CellaVision's digital methodology demonstrated a superior review time relative to traditional microscopy (mean 1.92 *vs.* 4.05 minutes).

FIGURE 1: COMPARISON OF SAMPLE REVIEW TIME

CellaVision Methodology

Traditional Microscopy

0 1 2 3 4 Minutes

Improved TATs for smears referred to Calgary, by 94%

The evaluation showed markedly improved turn-around times for smears needing to be referred to the central laboratory in Calgary for review by a Pathologist (CellaVision-assisted workflow median of 1 hour, 22 minutes *vs.* baseline workflow median of 24 hours, 06 minutes).

FIGURE 2: COMPARISON OF TATs FOR SMEARS REFERRED TO CALGARY

CellaVision-assisted Workflow

Baseline Workflow

0 6 12 18 24 Hours

COMMENTARY:

This in-situ evaluation effectively demonstrates that considerable workflow efficiencies can be achieved by implementing in a CellaVision DC-1 distributed laboratory network.

CellaVision-technology helps Medical Technologists speed-up morphological assessment while enabling collaboration with off-site colleagues, supervisors and pathologists. In a distributed laboratory network, the adaptation of a digital methodology can help realize considerable time-savings by effectively removing the primary cause of prolonged turn-around times – the road-based transportation needed to send challenging slides for review by off-site Pathologists.

For more information about this product evaluation, please contact CellaVision via marketing@cellavision.com

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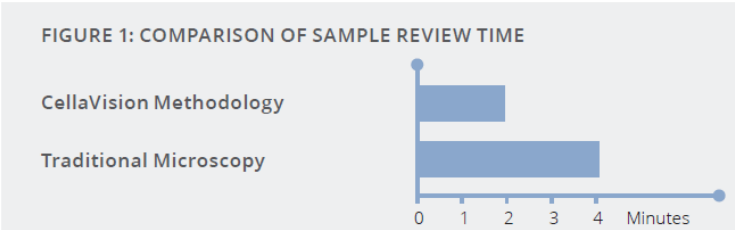

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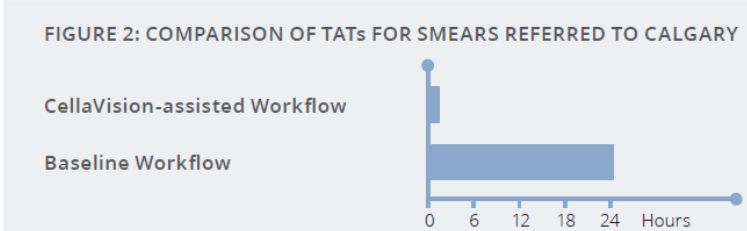


Swedish Artificial Intelligence Society (SAIS) I have awarded two CellaVision talents for the best 2019 Master Thesis

SAIS 2019 Master's Thesis Award

The winners of this year's award are:
Jesper Jönsson and Emmy Sjöstrand, Lund University

With the motivation:
The award goes to Jesper Jönsson and Emmy Sjöstrand, Lund University, for their thesis entitled "Cell Image Transformation Using Deep Learning". The thesis was performed at a company developing digital microscopes. In this context it is important that the digital images of, for instance, blood cells are of high quality and that they look as they would in a traditional microscope, regardless of the digital microscope used. The thesis explored several methods using deep learning, conditional GANs and circular GANs, to transform images from one system to another. The results show much promise and will be used by the company in the future. The results also have a great future potential as a building block to solve several other fundamental image classification and image recognition problems. It is hence a thesis studying a very relevant AI problem, and a presentation of it at the SAIS Workshop will provide great insights for further discussions, especially among researchers working in the areas of image recognition, segmentation, and classification.

Jesper Jönsson and Emmy Sjöstrand

Q1 2019 financials and financial calendar 2019

First quarter highlights: Overall organic growth +31% (+3% Fx effect)

Americas (28%)

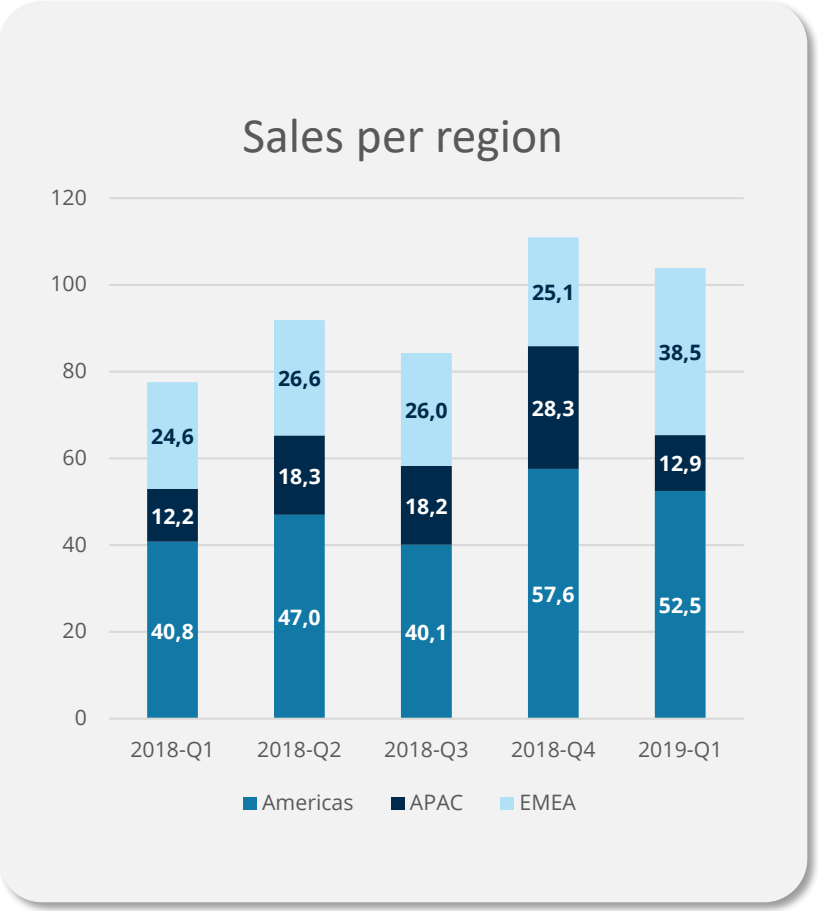
- Strong development with a continuous strong underlying customer demand both in USA and Canada and we now see an emerging replacement market. Digital microscopy can now be considered as the golden standard
- Customer demand for Brazil has increased and it is clear that the company's local presence in the country makes a difference.

APAC (6%)

- A continued growth trend in APAC with good results from China and Japan and high market activities in other parts of APAC.
- Sales is expected to pick up in Australia during the coming years.

EMEA (57%)

- Consistent investment in local market support continues to give good results and France is a recent success case and currently the number 3 market in sales.
- Market support functions for Italy and Iberia operational during the first quarter 2019.



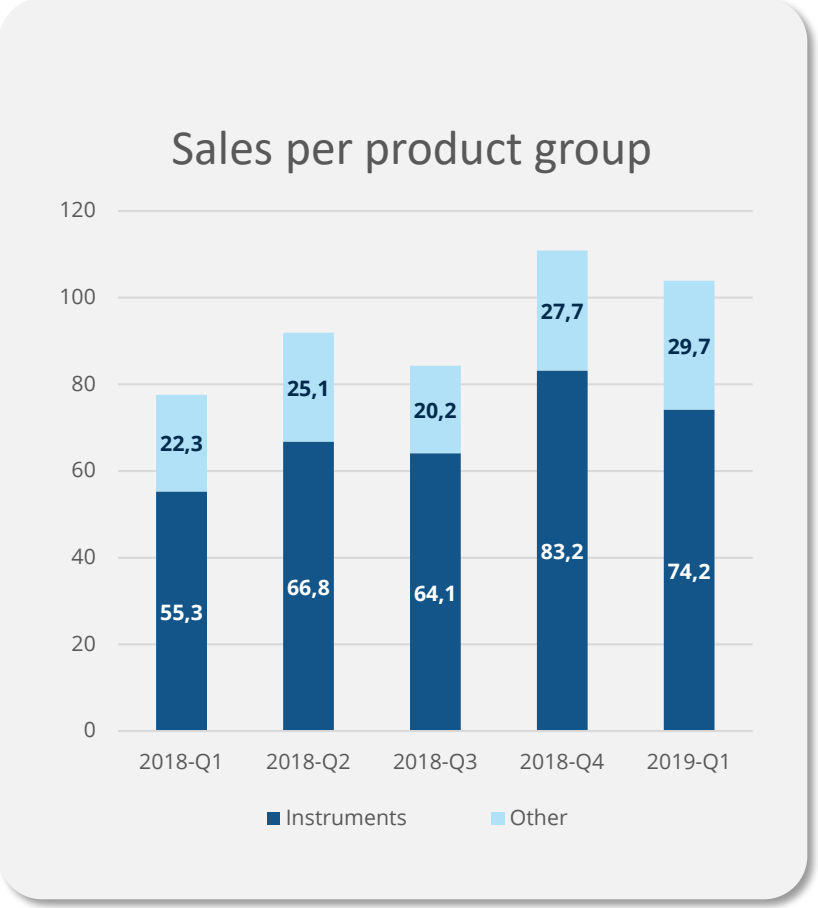
First quarter highlights: DC-1 is now being commercialized

CellaVision® DC-1 launch

- The target group for the CellaVision® DC-1 is small and mid-size clinical laboratories that until now have not had access to digital solutions for in-depth blood cell analysis.
- The new market segment consists of approximately 100,000 small and medium-sized laboratories.
- Long term, the market can prove to be on par with, or even larger than, the current market for large laboratories that CellaVision address today.
- The CellaVision® DC-1 was launched at MEDLAB in Dubai and is since February commercially available for the markets accepting the CE mark.
- First CellaVision® DC-1 systems have been delivered to customer and production is currently being ramped up according to plan
- During 2019 CellaVision will apply for registration required to sell the products in other markets and also execute clinical studies for FDA 510k (USA) and CFDA (China) submissions.
- The CellaVision® DC-1 will be sold through the company's global distributor network.

Acceleration of innovation pipeline requires highly skilled engineers

- Increased investment ambitions into innovation capabilities by acceleration in hiring of engineers in Lund



Financial Development

(MSEK)	Q1 18	Q2 18	Q3 18	Q4 18	Q1 19
Net sales	77,6	91,9	84,3	111,0	103,9
Growth	-17%	17%	37%	46%	34%
Gross margin	74,4%	75,1%	73,8%	73,9%	74,1%
Operating expenses/sales	45%	41%	49%	42%	41%
Operating profit	23,2	31,6	21,0	35,8	34,9

Key insights first quarter

- **Net sales** of 103,9 MSEK (77,6) +34%
- **Gross margin** 74,1% (74,4)
- **Operating expenses** under control. Capitalized R&D expenses low due to DC-1 project finalization.
- **Operating profit** 34,9 MSEK (23,2) and operating margin 33,6% (29,9)

Further comments on finance 2019 – Q1

Sales

- 31% organic growth (+3% FX effect).

Expenses

- Sales and marketing +18%. In line with geographical expansion strategy.
- Administrative expenses +8%
- R&D expenses +47%. High focus on innovation. Low ratio of capitalized R&D.

Development projects

- Capitalized R&D 4,1 (6,5) -37%. New technology platform for analyzers intended for small and mid-size laboratories in final phase.

Cash flow

- 45,3 (-2,4) High accounts receivable in 2018-Q4 back to normal in 2019-Q1.

(MSEK)	Jan-Mar 2019	Jan-Mar 2018
Net sales	103,9	77,6
Cost of goods sold	-26,9	-19,9
Gross profit	**77,0**	**57,7**
Sales and marketing expenses	-21,7	-18,4
Administration expenses	-9,2	-8,5
R&D expenses	-11,2	-7,6
Total expenses	**-42,1**	**-34,5**
Operating profit	**34,9**	**23,2**

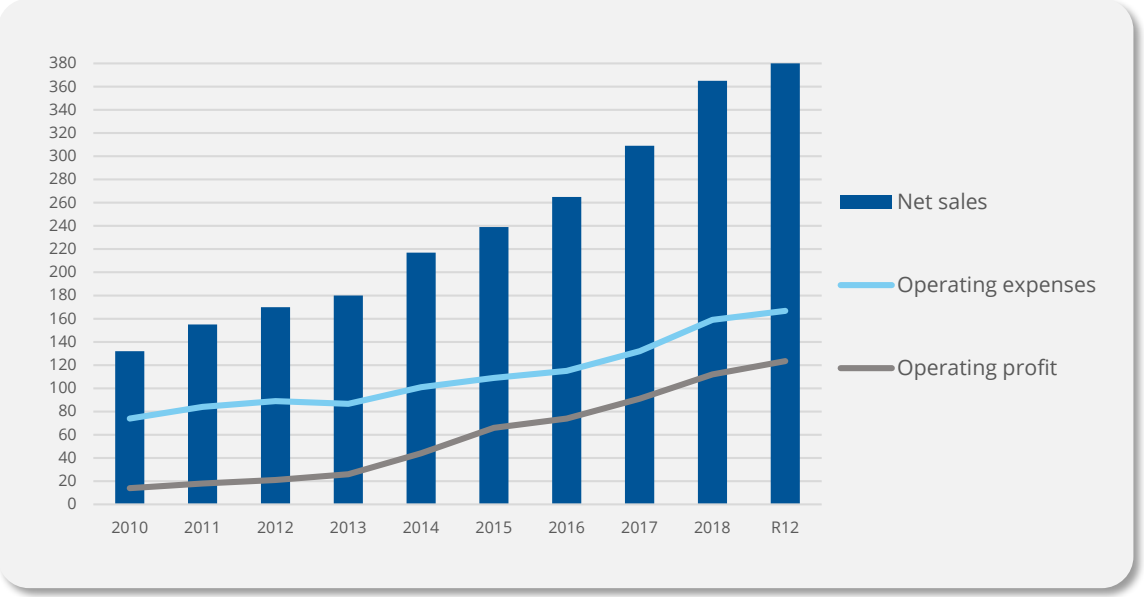
Financial Development

(MSEK)	2014	2015	2016	2017	2018	R12
Net sales	216,9	239,0	265,0	309,3	364,8	391,1
Growth	21%	10%	11%	17%	18%	33%
Gross margin	67%	73%	71%	72%	74%	74%
Operating expenses/sales	47%	46%	43%	43%	44%	43%
Operating profit	42,8	65,5	74,2	90,9	111,6	123,4

Financial targets
(over economic life cycle)

- 15% sales growth
- 20% operating margin

Share price: SEK 289,00*
Num. Shares: 23,85 million
Market Cap: 7,1 BSEK



* 2019-04-15

Financial calendar

Annual General Meeting	8 May
Interim Report Jan-June	16 July
Interim Report Jan-Sept	23 October
Year-end bulletin 2019	5 February 2020

THANK YOU