



# SANDVIK MANUFACTURING & MACHINING SOLUTIONS

## SANDVIK CAPITAL MARKETS DAY 2022

**NADINE CRAUWELS**

President, Sandvik Machining Solutions

**CHRISTOPHE SUT**

President, Sandvik Manufacturing Solutions

May 17, 2022



# SANDVIK MANUFACTURING & MACHINING SOLUTIONS

REVENUES SEK

**36.7** bn SEK

ADJ. EBITA MARGIN

**23.1%**

EMPLOYEES

**~20,000**

## DIVISIONS



ADDITIVE  
MANUFACTURING

DESIGN & PLANNING  
AUTOMATION

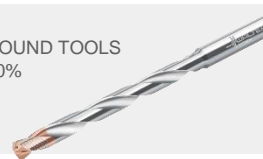
INDUSTRIAL  
METROLOGY

## PRODUCT OFFERINGS

INSERTS  
55%



ROUND TOOLS  
20%



TOOLS  
11%



TOOLING SYSTEMS  
7%



SOFTWARE  
3%



OTHER  
5%



## CUSTOMER SEGMENTS

ENGINEERING  
49%

AUTOMOTIVE  
20%

AEROSPACE  
9%

OTHER  
15%

## GEOGRAPHY

NORTH AMERICA



22%

EUROPE



53%

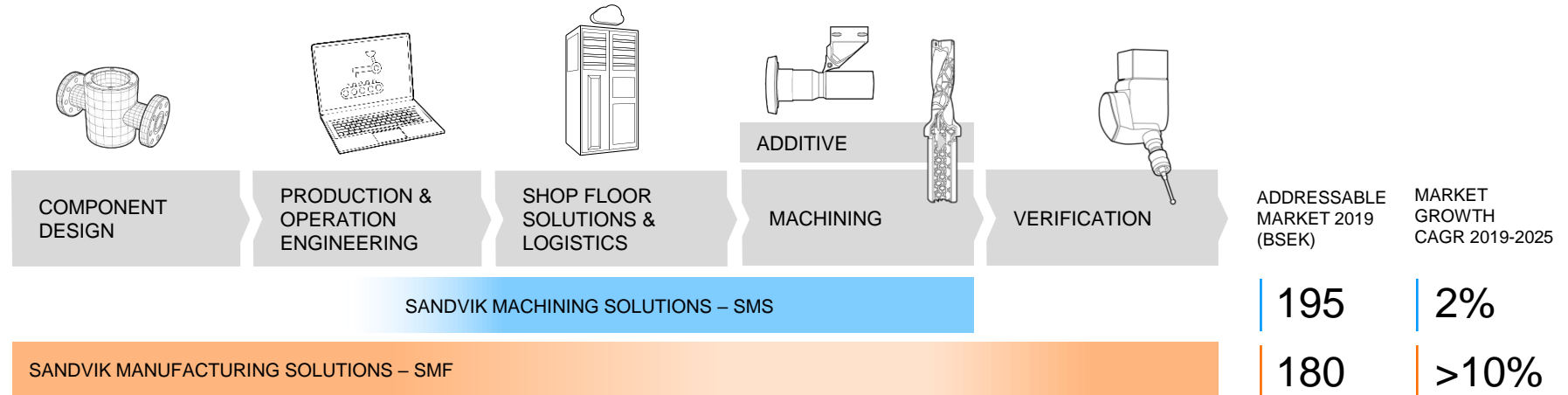
ASIA



21%

# EXPANDING OUR OFFER ABOVE AND BEYOND

TWO BUSINESS AREA SEGMENTS - DIFFERENT OPPORTUNITIES, STRONG SYNERGIES



# SANDVIK MANUFACTURING SOLUTIONS

## SANDVIK CAPITAL MARKETS DAY 2022



# SANDVIK MANUFACTURING SOLUTIONS

PROFORMA 2021

REVENUES

3.1 bn SEK

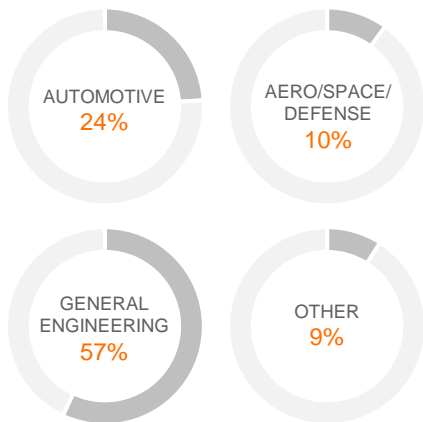
ADJ. EBITA MARGIN

10.4%

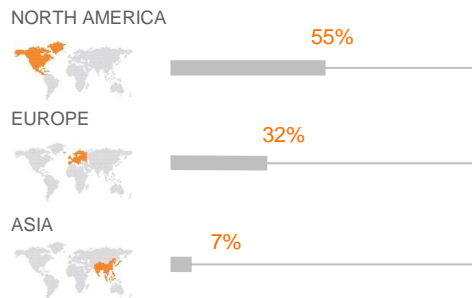
EMPLOYEES

~1,900

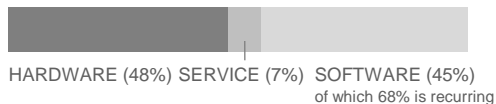
## SEGMENTS



## GEOGRAPHY



## PRODUCTS



## DIVISIONS



DESIGN AND PLANNING  
AUTOMATION

Mastercam

CRIBWISE

tdmsystems

CAMBRIO

comara



INDUSTRIAL  
METROLOGY

metrologic  
group

DWFRITZ  
PRECISION AUTOMATION

ATT Metrology Services

DCS



ADDITIVE  
MANUFACTURING

SANDVIK

OSPREY®

# SET UP FOR GROWTH



## DESIGN & PLANNING AUTOMATION

Base for the accelerated need of automation in the manufacturing process



## ADDITIVE MANUFACTURING

A green technology with double-digit growth in industrialization phase



## INDUSTRIAL METROLOGY

Moving towards real-time decision-making during the machining process

# USD 200 MILLION ACQUIRED IN 2021



**Mastercam**

LEADING CAM SOFTWARE COMPANY (CNC SOFTWARE)

COMPLETED: SEPT 29, 2021

60  
MUSD

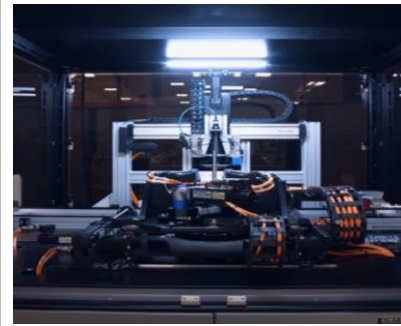


**CAMBRIO**

LEADING CAD/CAM SOFTWARE COMPANY

COMPLETED: OCT 15, 2021

68  
MUSD

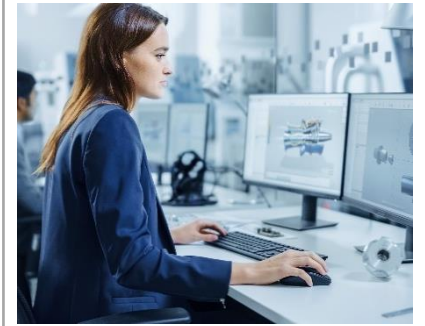


**DWFRITZ**  
PRECISION AUTOMATION

LEADING METROLOGY & AUTOMATION COMPANY

COMPLETED: OCT 1, 2021

78  
MUSD



**DCS**  
ENGINEERING IN NEW DIMENSIONS

LEADING PROVIDER OF QUALITY MANAGEMENT SOFTWARE

COMPLETED: DEC 27, 2021

10  
MUSD

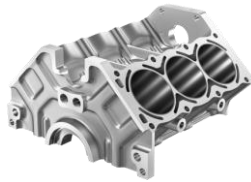
# DEMAND DRIVERS OF GROWTH

THE MARKET IS READY FOR NEW TECHNOLOGIES

CHANGED CUSTOMER  
BEHAVIOR...



...AND DEMANDS ON  
COMPONENTS & ASSEMBLY...



...ENABLED BY  
TECHNOLOGY...



...IN EVER EVOLVING  
INDUSTRIAL LANDSCAPE...





# STRONG UNDERLYING GROWTH

WORLD  
REAL GDP



CAGR  
2019-2025

3%

INDUSTRIAL  
ROBOTICS



CAGR  
2019-2025

6%

COMPUTER AIDED  
MANUFACTURING  
(CAM)



CAGR  
2019-2025

7%

66  
BSEK

22  
BSEK

ADDITIVE



CAGR  
2019-2025

21%

46  
BSEK

9  
BSEK

INDUSTRIAL  
METROLOGY



CAGR  
2019-2025

11%

67  
BSEK

24  
BSEK

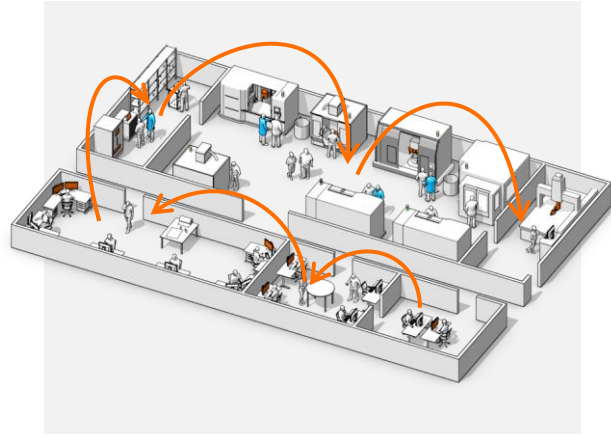
● Addressable market ● Serviceable market

# SHIFT TO GROWTH

## SANDVIK MANUFACTURING SOLUTIONS



We are part of the industry  
we serve....

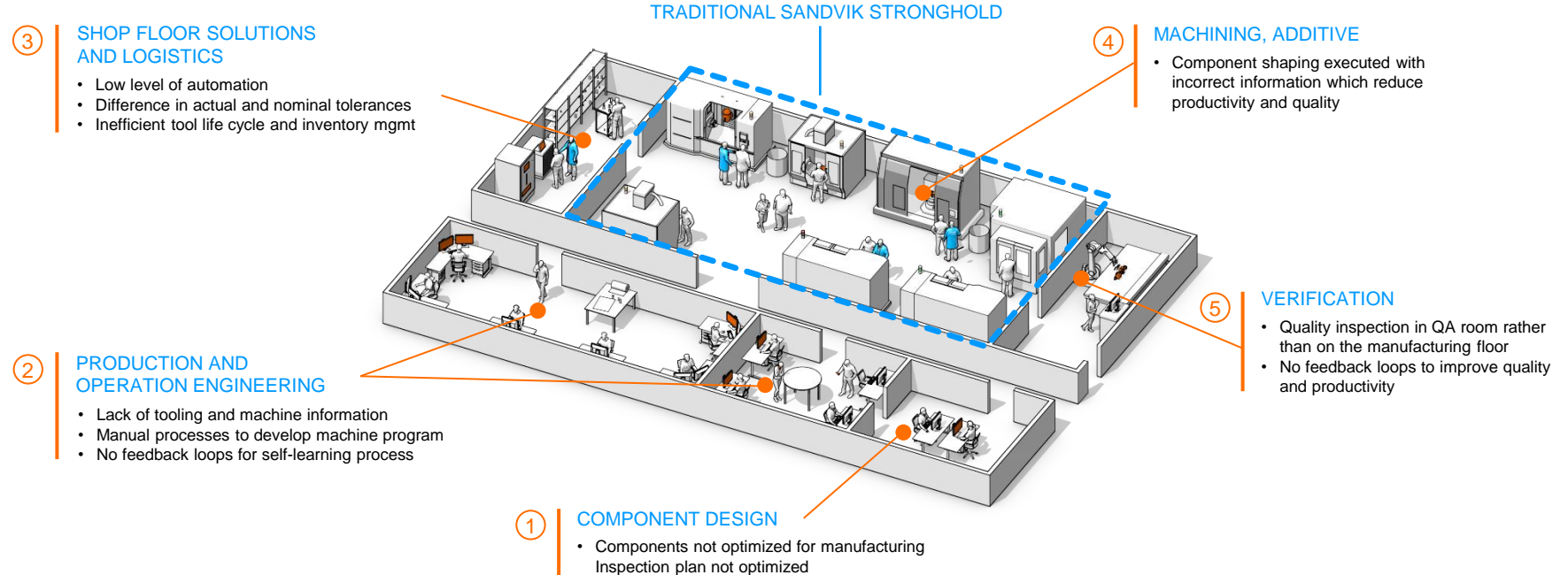


...offering open and agnostic software  
and end-to-end solutions...



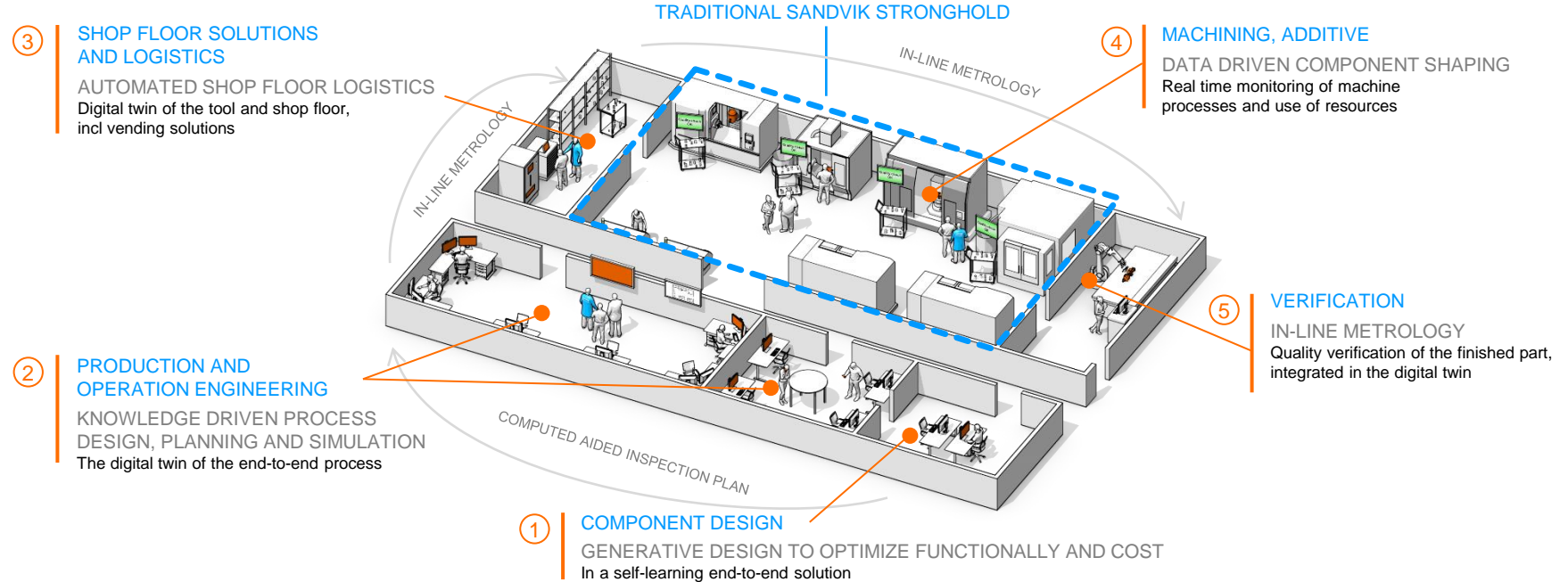
...shaping new markets with  
partners in our collaboration network

# LARGE POTENTIAL TO MAKE COMPONENT MANUFACTURING MORE EFFICIENT



# CLOSING THE LOOP

## ENABLING SCALABLE PROCESS OPTIMIZATION THROUGHOUT THE VALUE CHAIN



# SANDVIK IS BUILDING A COMPREHENSIVE OFFERING FOR THE WORKSHOPS

## ③ SHOP FLOOR SOLUTIONS AND LOGISTICS

**AUTOMATED SHOP FLOOR LOGISTICS**  
 Digital twin of the tool and shop floor, incl vending solutions

**tdmsystems** **CRIBWISE**

## ② PRODUCTION AND OPERATION ENGINEERING

**KNOWLEDGE DRIVEN PROCESS DESIGN, PLANNING AND SIMULATION**  
 The digital twin of the end-to-end process

**Mastercam** **SIGMANEST** **CGTECH**  
**GIBBSCAM** **CIMATRON** **JCAM**

## ① COMPONENT DESIGN

**GENERATIVE DESIGN TO OPTIMIZE FUNCTIONALLY AND COST**  
 In a self-learning end-to-end solution

**CIMATRON** **SIGMANEST** **DCS**

## ④ MACHINING, ADDITIVE

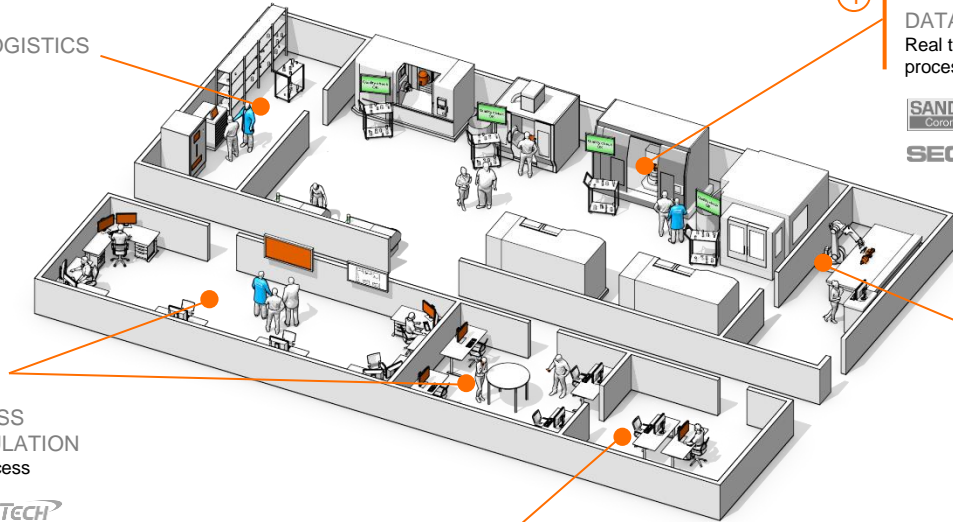
**DATA DRIVEN COMPONENT SHAPING**  
 Real time monitoring of machine processes and use of resources

**SANDVIK** **Coromant** **WALTER** **comara**  
**SECO** **DORMER PRAMET** **SANDVIK** **OSPREY®**

## ⑤ VERIFICATION

**IN-LINE METROLOGY**  
 Quality verification of the finished part, integrated in the digital twin

**metrologic group** **DWFRITZ**  
 PRECISION AUTOMATION  
**ATT Metrology Services** **DCS**



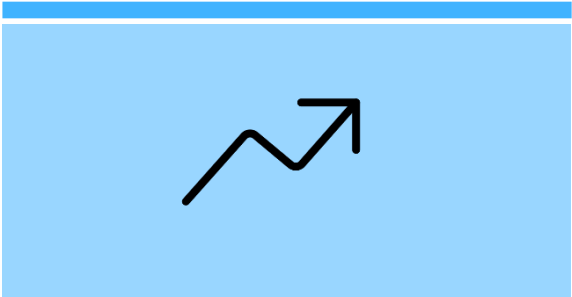
# A STEPWISE APPROACH 2021-2025

ESTABLISH A LEADING POSITION IN KEY MARKET

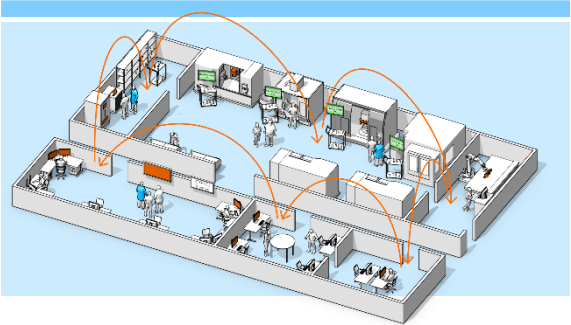
**Mastercam** **tdmsystems** **metrologic group**  
**SIGMANEST** **CRIBWISE**  
**CIMATRON** **comara** **DWFRITZ**  
**GIBBSCAM** **SANDVIK** **DCS** **ATT Metrology Services**

EBITA MARGIN ~10%

ACCELERATE GROWTH ON STRONG ASSETS



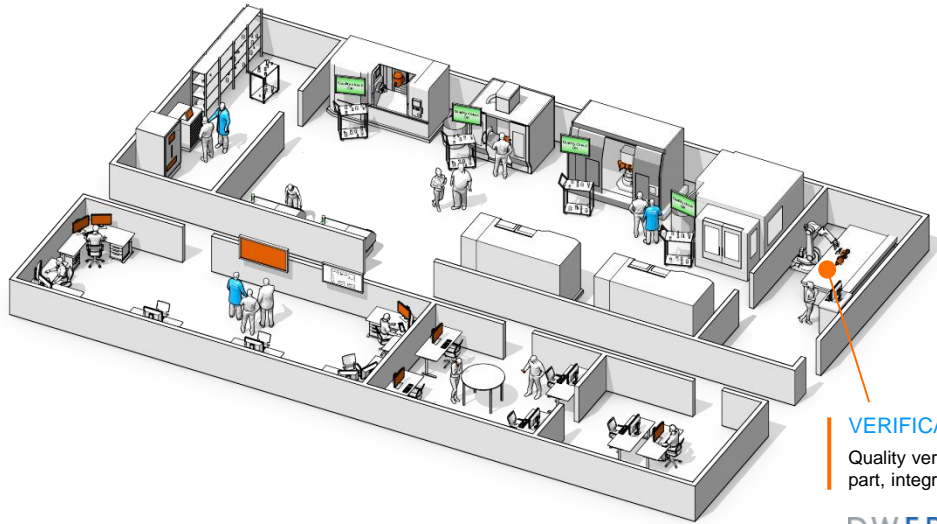
CREATE VALUE AND SYNERGIES



EBITA MARGIN ~20%

# FINE MECHANICAL COMPONENTS

## ZeroTouch® and Metrolog X4®



### VERIFICATION

Quality verification of the finished part, integrated in the digital twin

**DWFRITZ**  
PRECISION AUTOMATION



### CHALLENGE

- Inspection is a bottleneck to ramp up production
- Current solutions too time consuming with low accuracy
- Not connected to the digital manufacturing chain

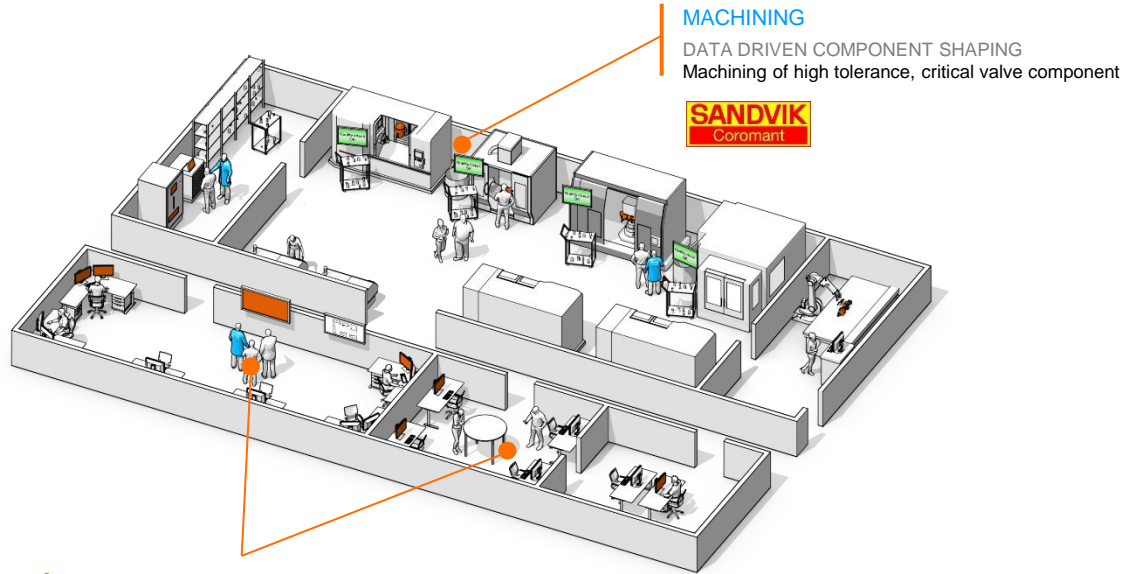
### SOLUTION

- Combining ZeroTouch® with Metrolog X4® gives 10 times faster inspection time
- Measure up to 50 more features using an accurate 3D point cloud solution
- Measurement results integrated in manufacturing intelligence



# NAVAL BALL VALVE CONTRACTOR

## Silent Tools® and Dynamic Motion®



### MACHINING

DATA DRIVEN COMPONENT SHAPING  
Machining of high tolerance, critical valve component



### PRODUCTION AND OPERATION ENGINEERING

KNOWLEDGE DRIVEN PROCESS DESIGN, PLANNING AND SIMULATION  
The digital twin of the end-to-end process

### CHALLENGE

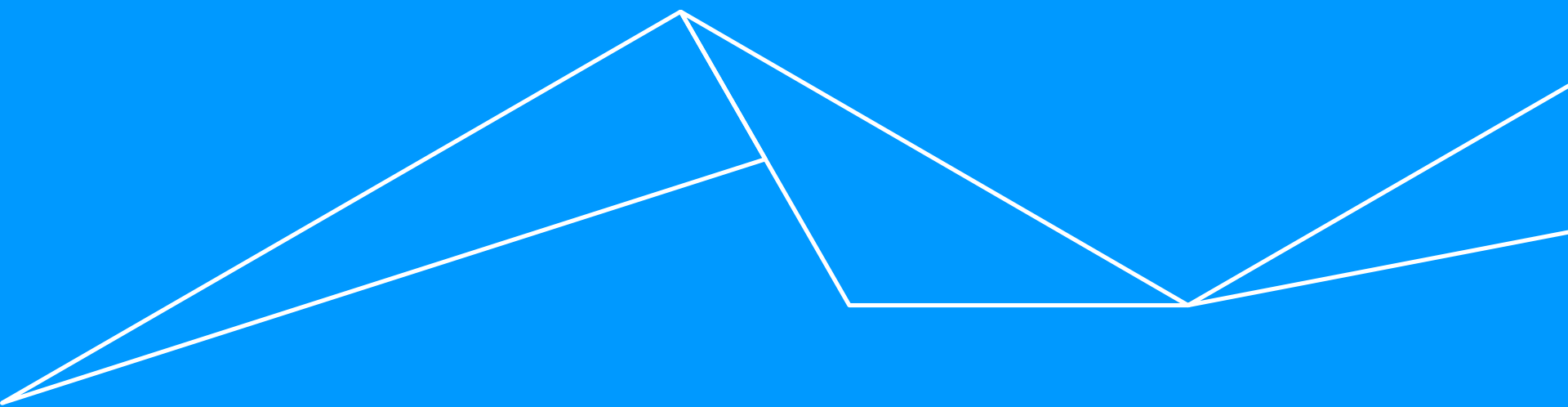
- Current solution took over 140 hours to machine
- Lower quality surface finish than required
- High consumption of tooling

### SOLUTION

- Sandvik Coromant tool dampening technology, high feed insert performance with Mastercam Dynamic Motion® toolpath optimization
- Productivity increased by >3
- Improved tool life over 20%
- Prolonged lifetime of final component





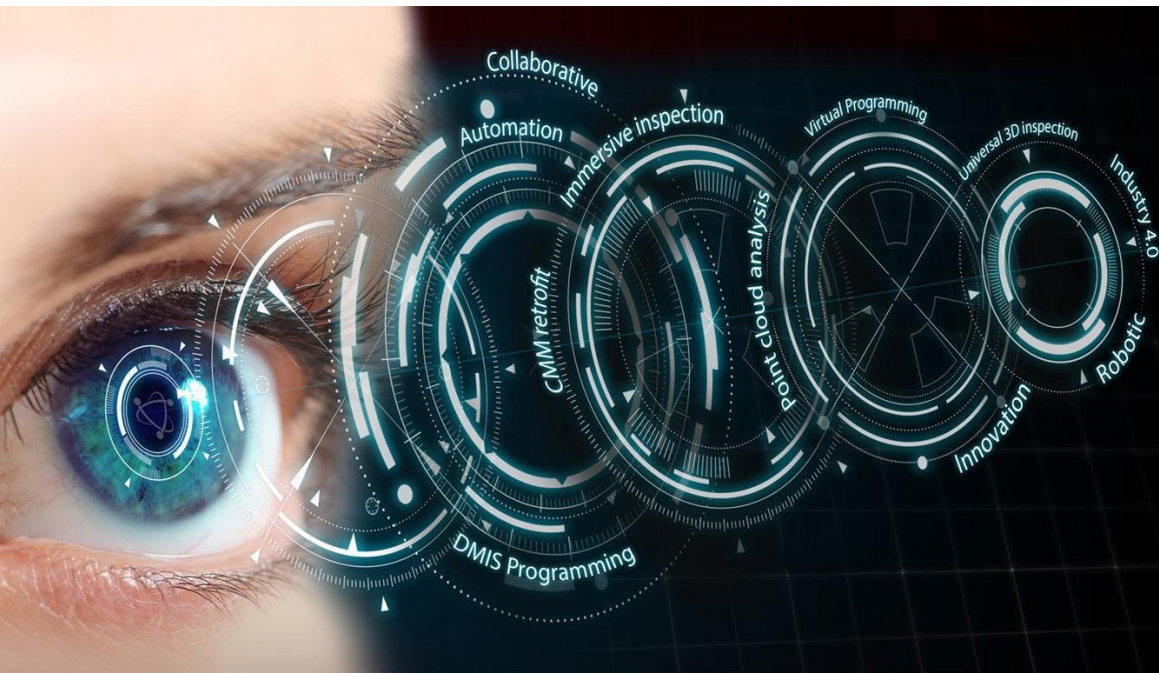


# FINANCIAL TARGETS

# FINANCIAL TARGETS

THE STRATEGY EXECUTION FROM NOW TO 2025

# 2025



# 60%

software

# 6 BSEK

in revenues

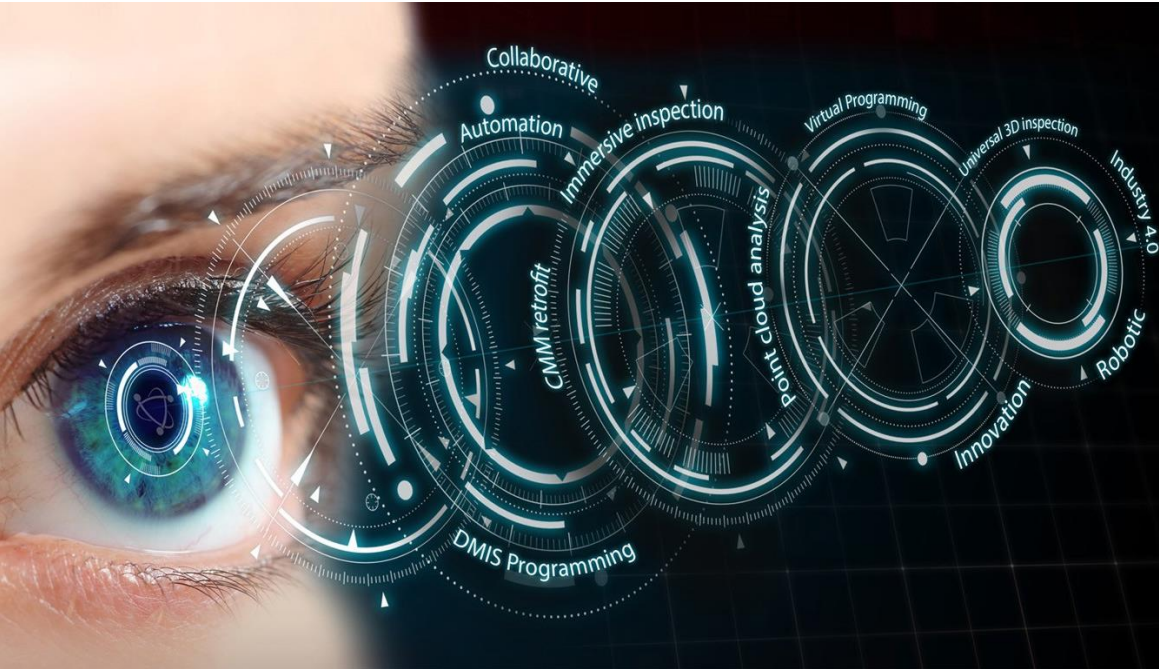
# 20%

EBITA margin



# SUMMARY

## SANDVIK MANUFACTURING SOLUTIONS



- Strong market growth
- Agnostic expansion into digital and emerging technologies with recurring revenues
- Position with strong brands established
- Increase share of software
- We shape new markets and accelerate Sandvik synergies
- 6 BSEK in revenues 2025

# SANDVIK MACHINING SOLUTIONS

## SANDVIK CAPITAL MARKETS DAY 2022



# SHIFT TO GROWTH

Extensive brand portfolio

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The Shift

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Focused growth agenda

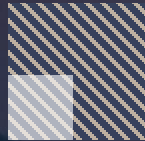
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# RECOVERY CONTINUES IN TOP SEGMENTS (1/2)

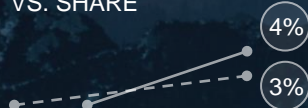


## GENERAL ENGINEERING



44 BSEK

MARKET SIZE VS. SHARE

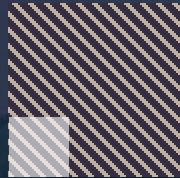


**CAGR**  
2019 / 2021 - 2025

- Components to other industry sectors.
- New machinery to support new manufacturing technologies



## AUTOMOTIVE



54 BSEK

MARKET SIZE VS. SHARE



**CAGR**  
2019 / 2021 - 2025

- Supply issues 2021-23
- Shift to EVs and hybrids, after 2025
- Shift to lightweight materials



## AEROSPACE



22 BSEK

MARKET SIZE VS. SHARE



**CAGR**  
2019 / 2021 - 2025

- Recovery in international travelling
- Asia-Pacific to double fleet long-term
- Long-term growth expected at 2%-levels



## ENERGY



17 BSEK

MARKET SIZE VS. SHARE



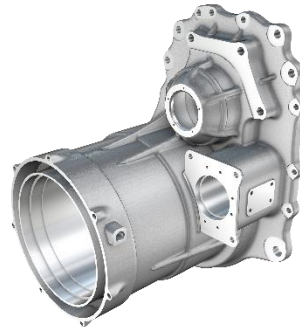
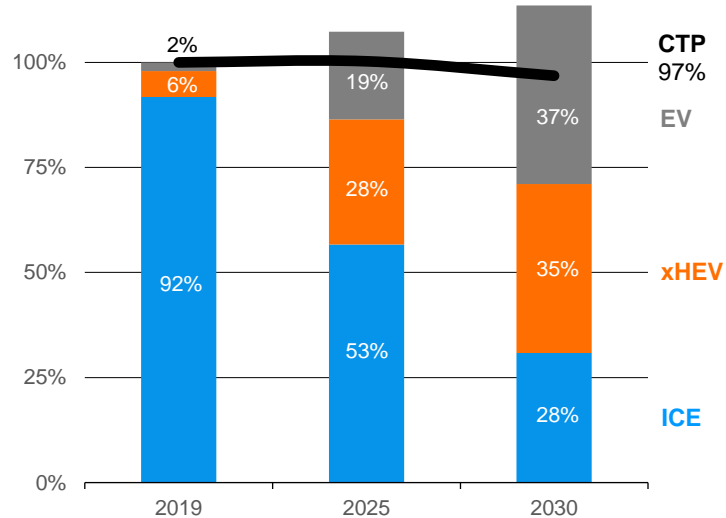
**CAGR**  
2019 / 2021 - 2025

- Low-carbon goals pushing renewables
- Higher industrial activity demands oil
- High activity in power generation

# AUTO MACHINING POTENTIAL FLAT

## VEHICLE VOLUMES GROW AND SHIFT TO ELECTRICAL, MACHINING REMAINS FLAT

Light vehicle volumes and cutting tool potential (CTP), relative 2019



Hybrids and EVs continue growing

In 2030, 65% of cars still have an ICE

Complex powertrains increase machining also in EVs

EV cutting tool potential factor increase from c. 0.4 to c. 0.5

Growth opportunity in aluminum and lightweight materials

Source: Light Vehicle production forecast - IHS Markit April 2022, 2019-2029, Trend extended to 2030; Sandvik analysis

23 (EV = Electric Vehicle - electric motor, xHEV = hybrid electric vehicle - combustion engine + Electric Motor, ICE = internal combustion engine

Note: The cutting tool potential factor of an average ICE vehicle is 1.0, and for an XHEV 1.1

# FAST GROWTH AMONG FURTHER SEGMENTS (2/2)



## MEDICAL

5 BSEK

MARKET SIZE  
VS. SHARE



**CAGR**

2019 / 2021 - 2025

- Demographic shift
- Emerging markets and developing economies
- Increasing personal income and improved standard of living



## ELECTRONICS

7 BSEK

MARKET SIZE  
VS. SHARE



**CAGR**

2019 / 2021 - 2025

- Short product life cycles
- New technologies
- Increased demand to be mobile and connected



## DIE & MOLD

12 BSEK

MARKET SIZE  
VS. SHARE



**CAGR**

2019 / 2021 - 2025

- Strong relationship to automotive component manufacturers
- Fast growing consumer electronics



## OTHER SEGMENTS\*

34 BSEK

MARKET SIZE  
VS. SHARE



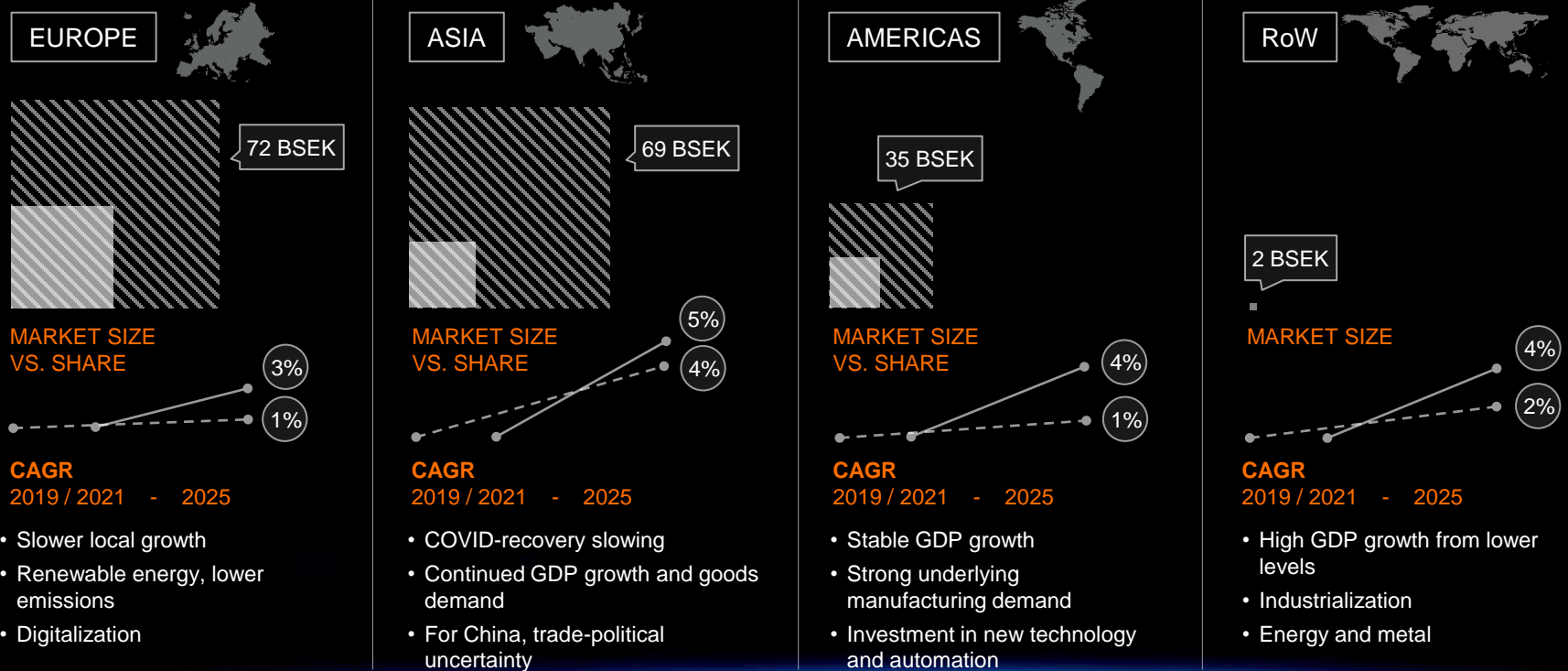
**CAGR**

2019 / 2021 - 2025

- Includes, e.g., Pump & Valve, Rail, Machine Tool Builders, etc.
- Investment in capacity and productivity
- Increased demand of minerals and metals used in eco-friendly products
- Trade and transport



# ASIA CHALLENGES EUROPE, US STRONG



# A GROWING MID-MARKET

High-volume component manufacturing

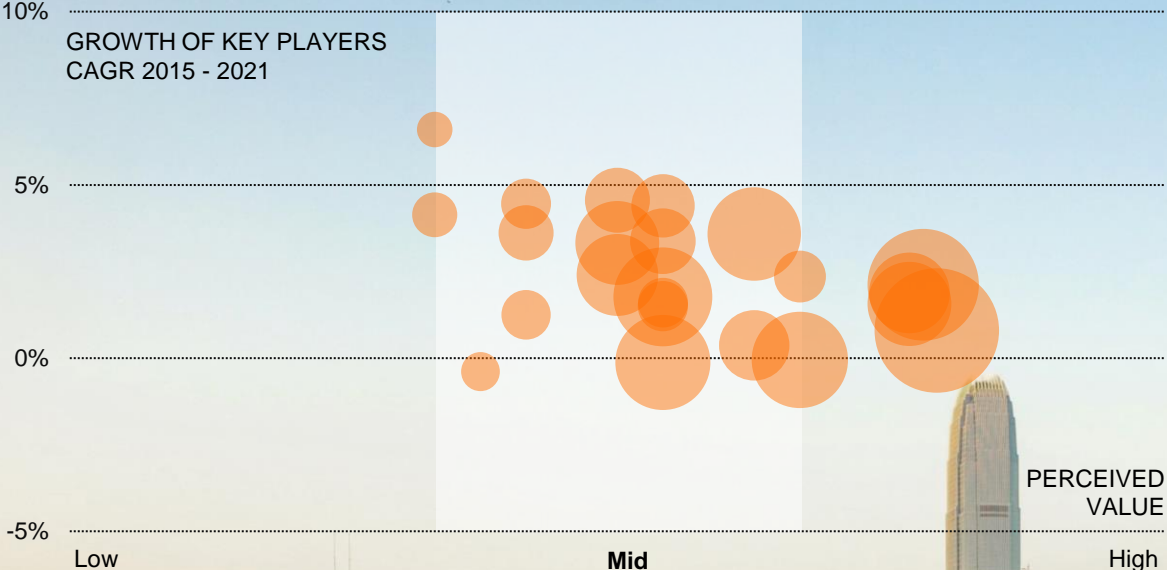
Distributor driven

Online

Fragmented / local

Versatile applications

Asia-Pacific



# SMS GROWTH JOURNEY – SIX FOCUS AREAS

01

Strengthen our position in inserts

02

Take a leading position  
in round tools

03

Become a market  
leader in mid-market

04

Grow outside Europe

05

Master the automotive shift

06

Be the industry leader in expanded  
offer beyond tools

# SMS GROWTH JOURNEY – SIX FOCUS AREAS

01

## Strengthen our position in inserts

Outgrow market  
Value, margin, share

02

## Take a leading position in round tools

Acquisitions  
Offering  
Market access

03

## Become a market leader in mid-market

International channels  
Cross-selling  
Asia

04

## Grow outside Europe

Local premium  
Cross-selling  
Complementarities

05

## Master the automotive shift

Full offering  
Solution partner  
Capabilities

06

## Be the industry leader in expanded offer beyond tools

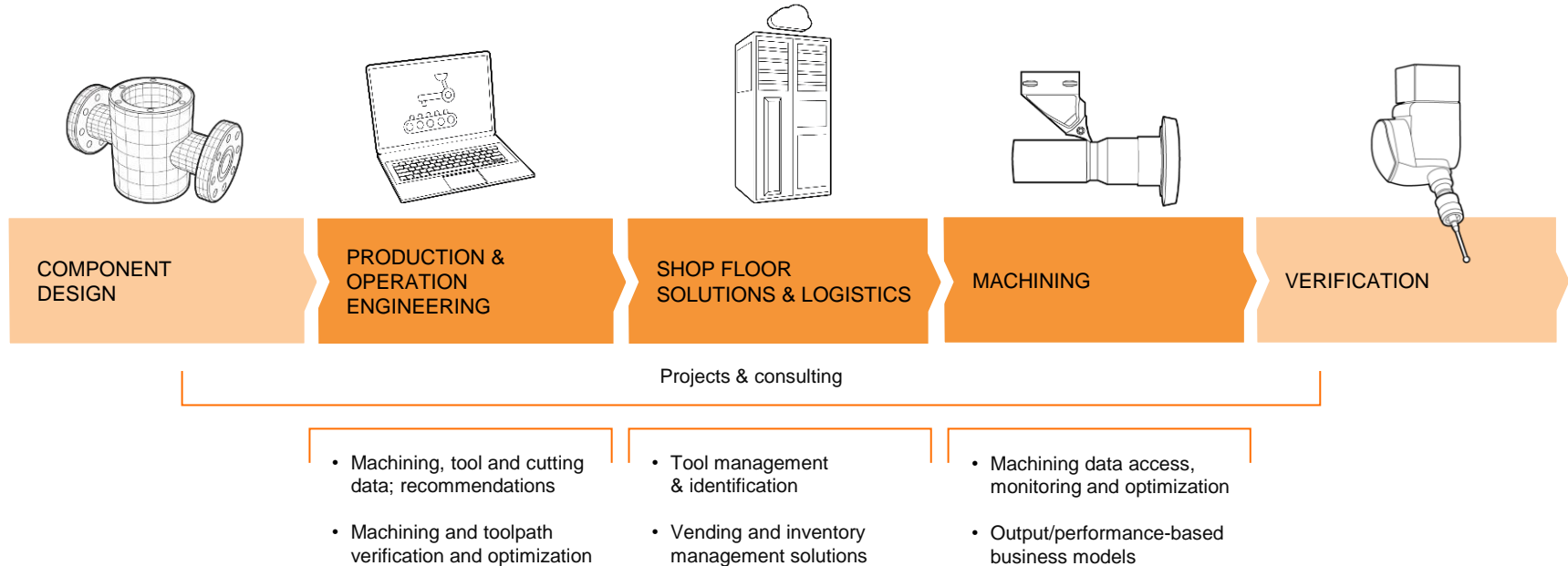
Connected machining  
Lead times, quality, efficiency  
New business models



# MACHINING KNOW-HOW DELIVERED



# MACHINING KNOW-HOW DELIVERED



# MACHINING KNOW-HOW DELIVERED



COMPONENT  
DESIGN

PRODUCTION &  
OPERATION  
ENGINEERING

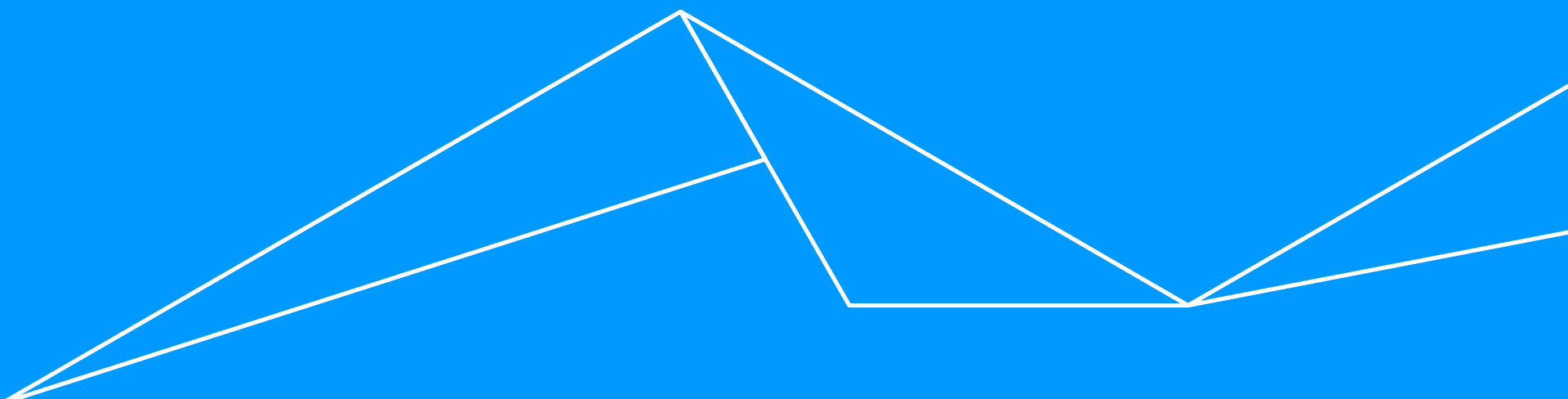
SHOP FLOOR  
SOLUTIONS & LOGISTICS

MACHINING

VERIFICATION

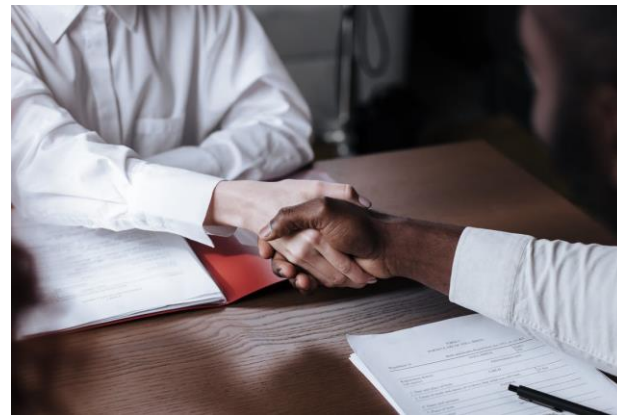
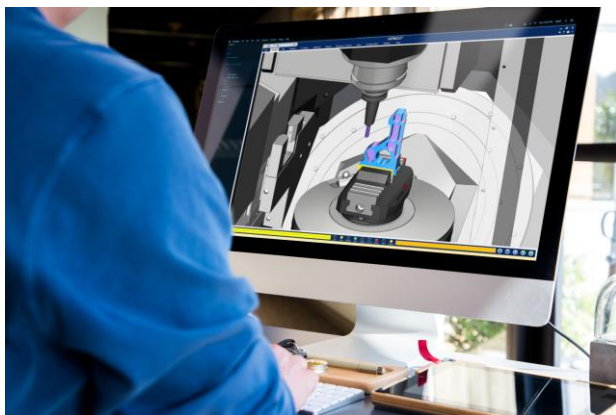
- Efficiency
- Predictability
- Tool choice
- Machining time
- Quality

- Productivity
- Tool life and utilization
- Component and process security
- Capex
- Sustainability



# KEY ACHIEVEMENTS





# WHAT HAVE WE ACHIEVED SO FAR

## EXPANSION IN DIGITAL OFFERING

Strengthened position in toolpath verification and optimization

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Proven customer value and traction

---

New platform technology in tool identification

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## SUSTAINABILITY

CO<sub>2</sub> reductions and green energy

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Waste reduction

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Energy efficiency

---

Safety

---

## M&A

9 acquisitions since end-2018

---

Position in strategic growth areas

---

2.4 BSEK

---

2.300 personnel

---

Increasing pace and size

---

# GROWTH IN ROUND TOOLS

CAPABILITIES AND OFFERING THROUGH ACQUISITIONS



---

Customized PCD and taps

---

General engineering and aero

---

Advanced components and lightweight

MSEK

875

EMPLOYEES

490



---

Premium quality taps

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General engineering and auto

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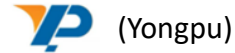
Threading competence

MSEK

200

EMPLOYEES

230



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Local premium – full value chain

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Auto, die & mold, electronics

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Platform for further growth and M&A

MSEK

400

EMPLOYEES

500

# STRONG MOMENTUM IN MID-MARKET

## ACTIONS IN FOUR AREAS DRIVE OUR GROWTH

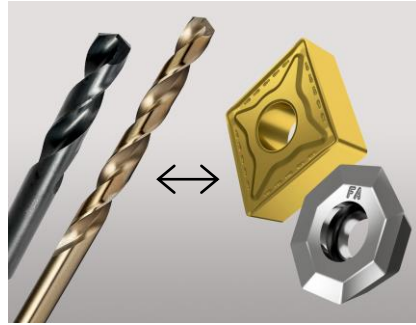
### INTERNATIONAL CHANNELS



**+30-40%**

VS 2020 (TOP CHANNELS)

### CROSS SELLING



**+15-20%**

VS 2020

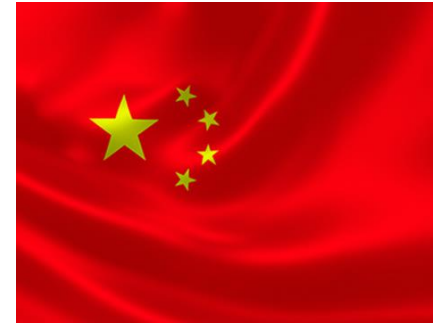
### INDIA GROWTH



**+40-50%**

INDIA VS 2020

### CHINA GROWTH



**+20%**

CHINA VS 2020

# EXPANDED OFFER PROVING ITS VALUE



Machining and toolpath  
verification and optimization

+



Machining, tool and cutting  
data; recommendations

=

Quality verified numerical code

Cycle time -25%

Reduced cost

Optimized process





# NEW TARGETS

# NEW TARGETS

## THE STRATEGY EXECUTION FROM 2019 TO 2025

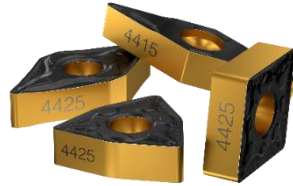
### SHORT TARGET SUMMARY

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#### CORE BUSINESS

**> MARKET GROWTH**  
ORGANIC GROWTH

**~50%**  
FROM M&A



#### REVENUE CAGR

**5%**  
2019 - 2025

**10%**  
2021 - 2025

#### EXPANDED OFFER

**+2 bn SEK**  
IN 2025

### ACTIONS

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Clear focus on growth areas

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Alignment of goals, actions and metrics

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Short feedback loops, agile decision making

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Capability building organically and inorganically

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Continuous optimization of structure and process

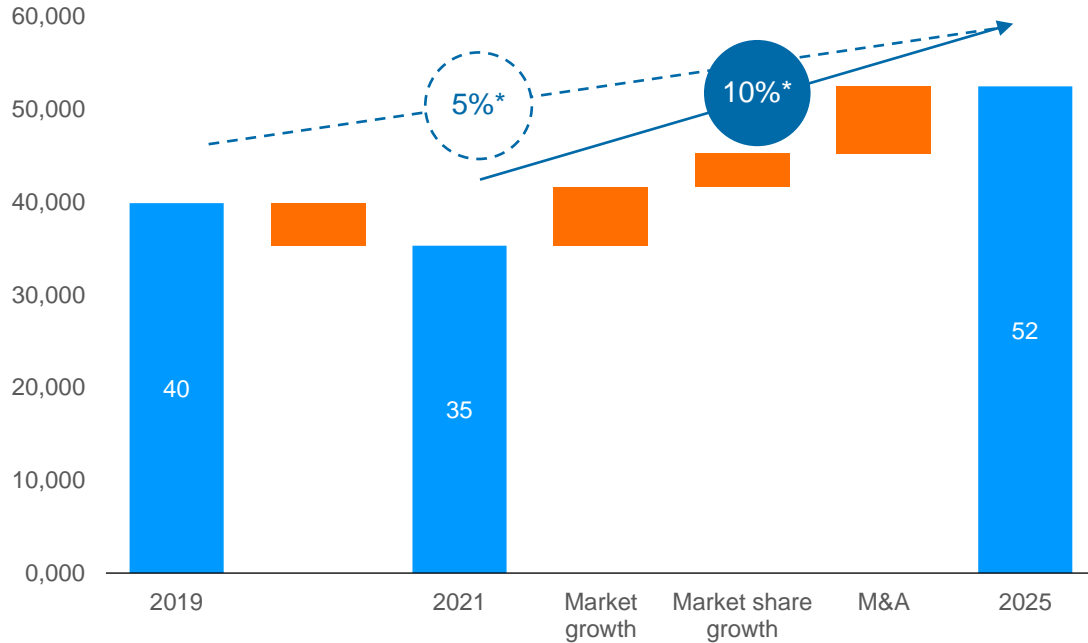
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Innovation to drive value and margins

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# NEW GROWTH TARGETS

REVENUE BSEK





# VISION





SANDVIK MANUFACTURING  
& MACHINING SOLUTIONS

The leader in closed loop  
component manufacturing  
solutions

# UNIQUE MARKET POSITION

SOFTWARE SEATS (SMM)

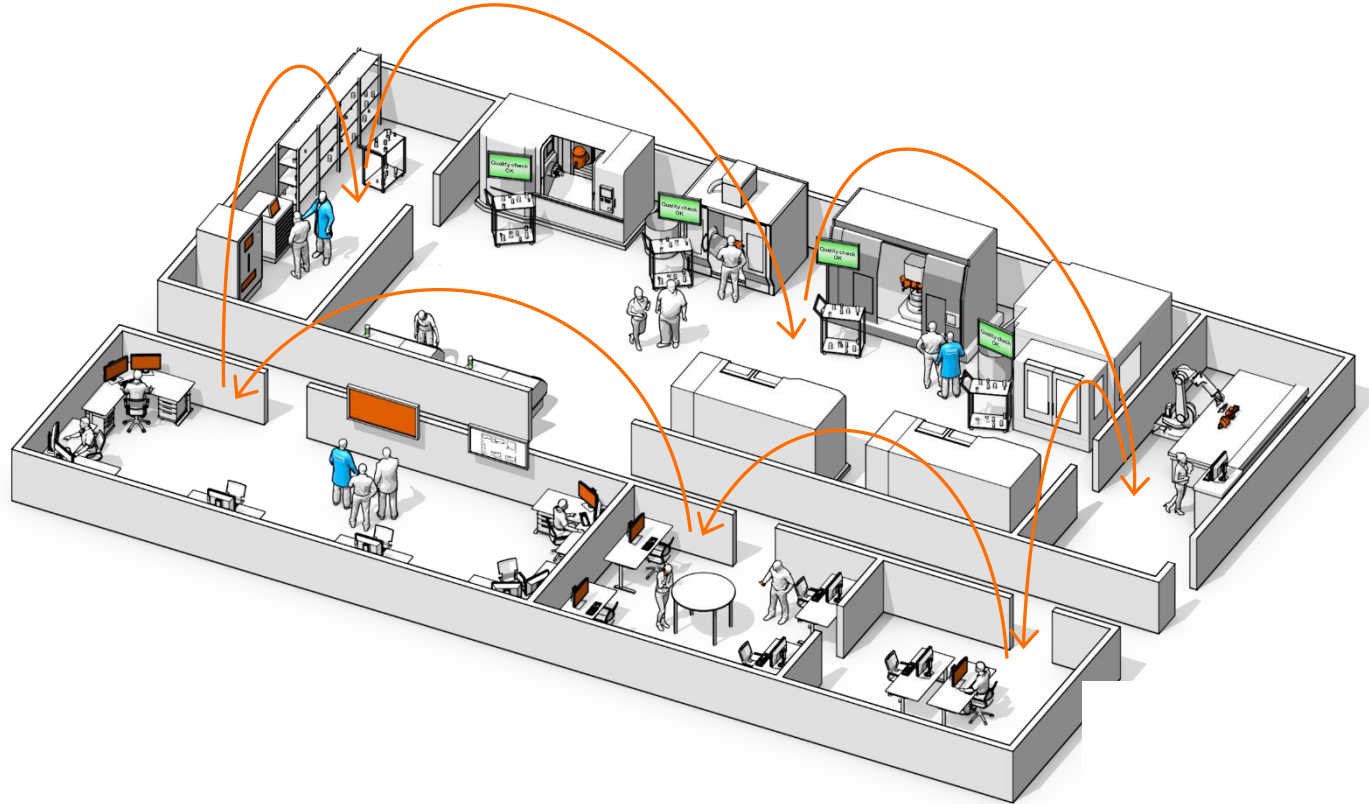
400 000

DIRECT CUSTOMERS (SMS)

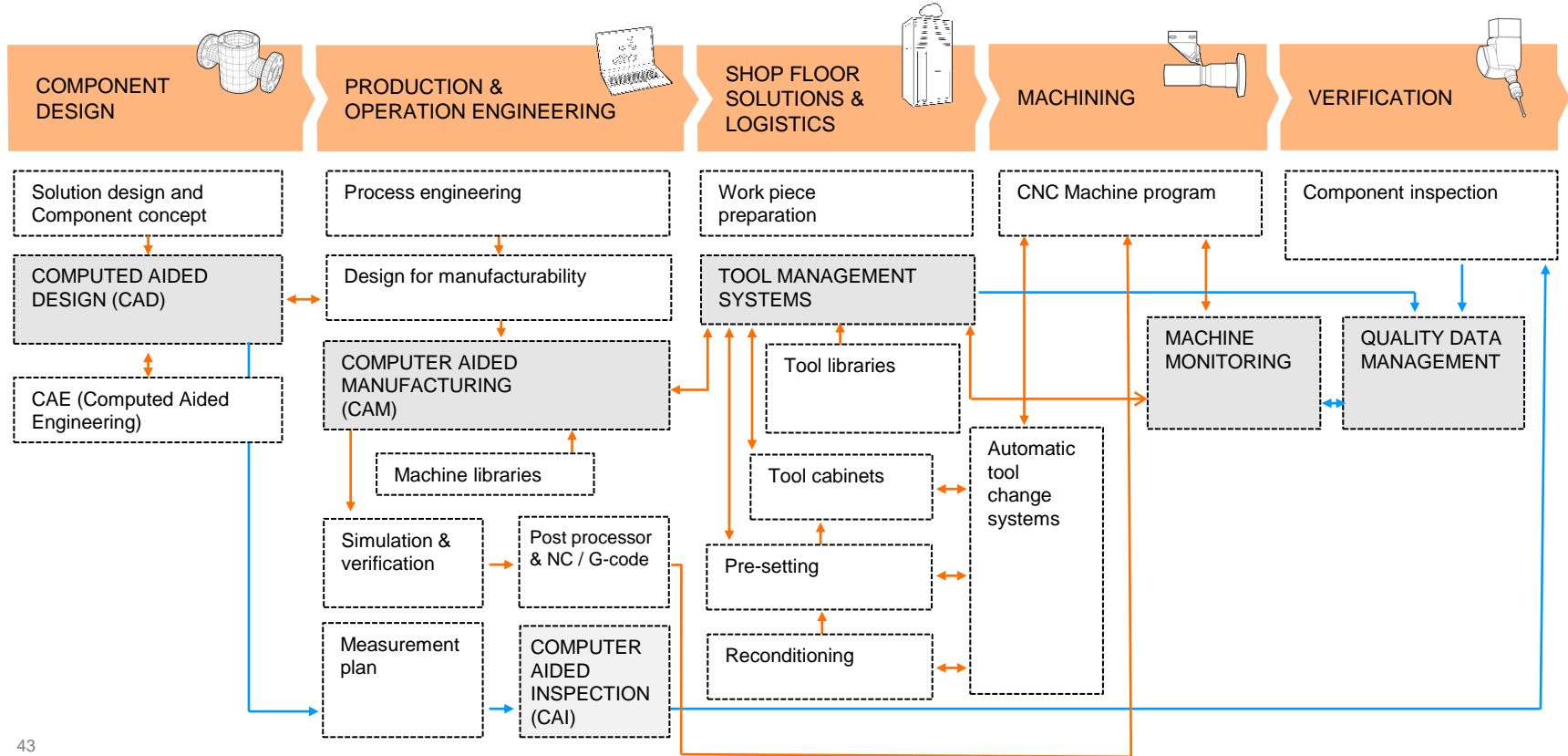
100 000

MARKET SHARE (SMS)

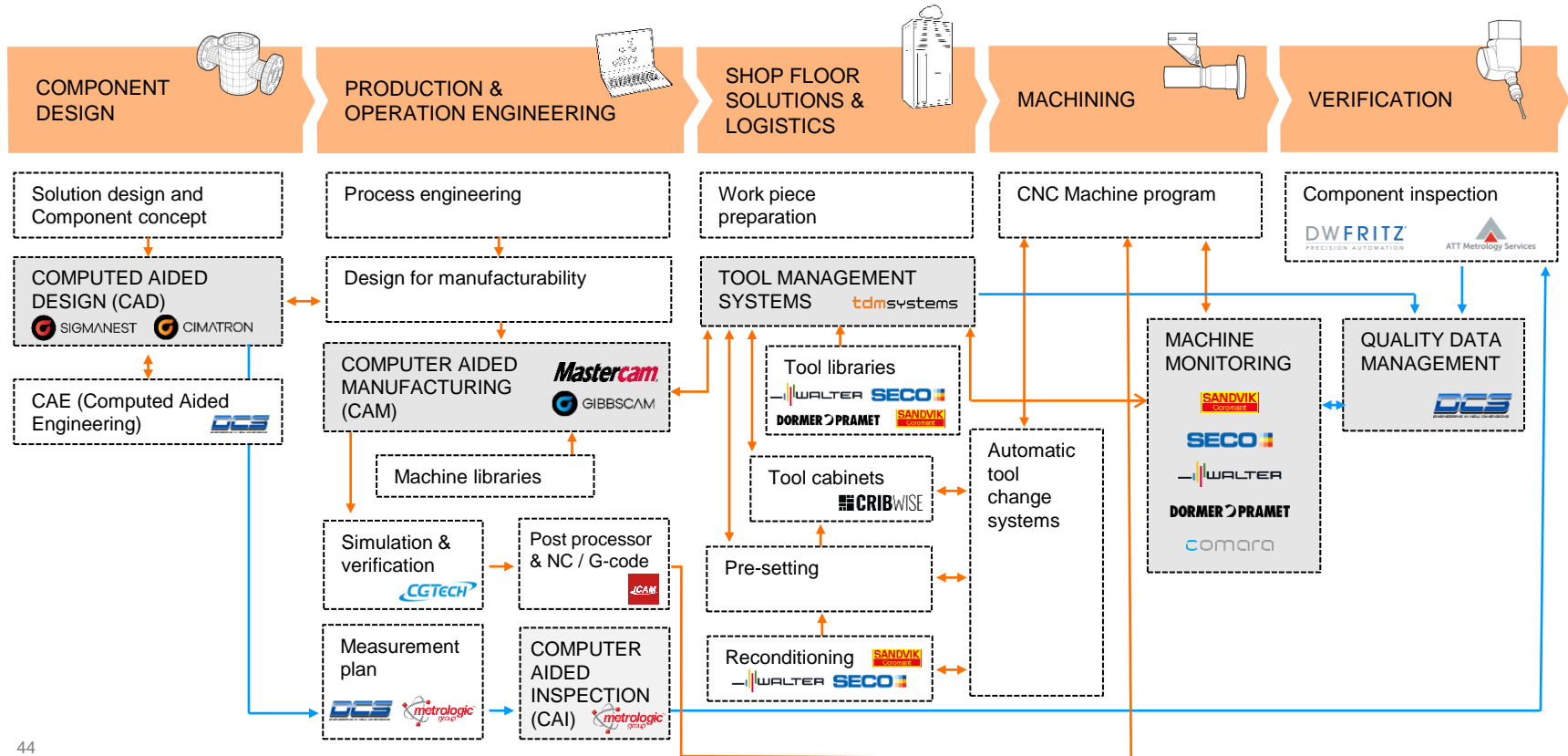
20%



# CLOSING THE LOOP



# CLOSING THE LOOP



# UNIQUE MARKET POSITION

## SHAPING NEW BUSINESS AND REVENUE MODELS

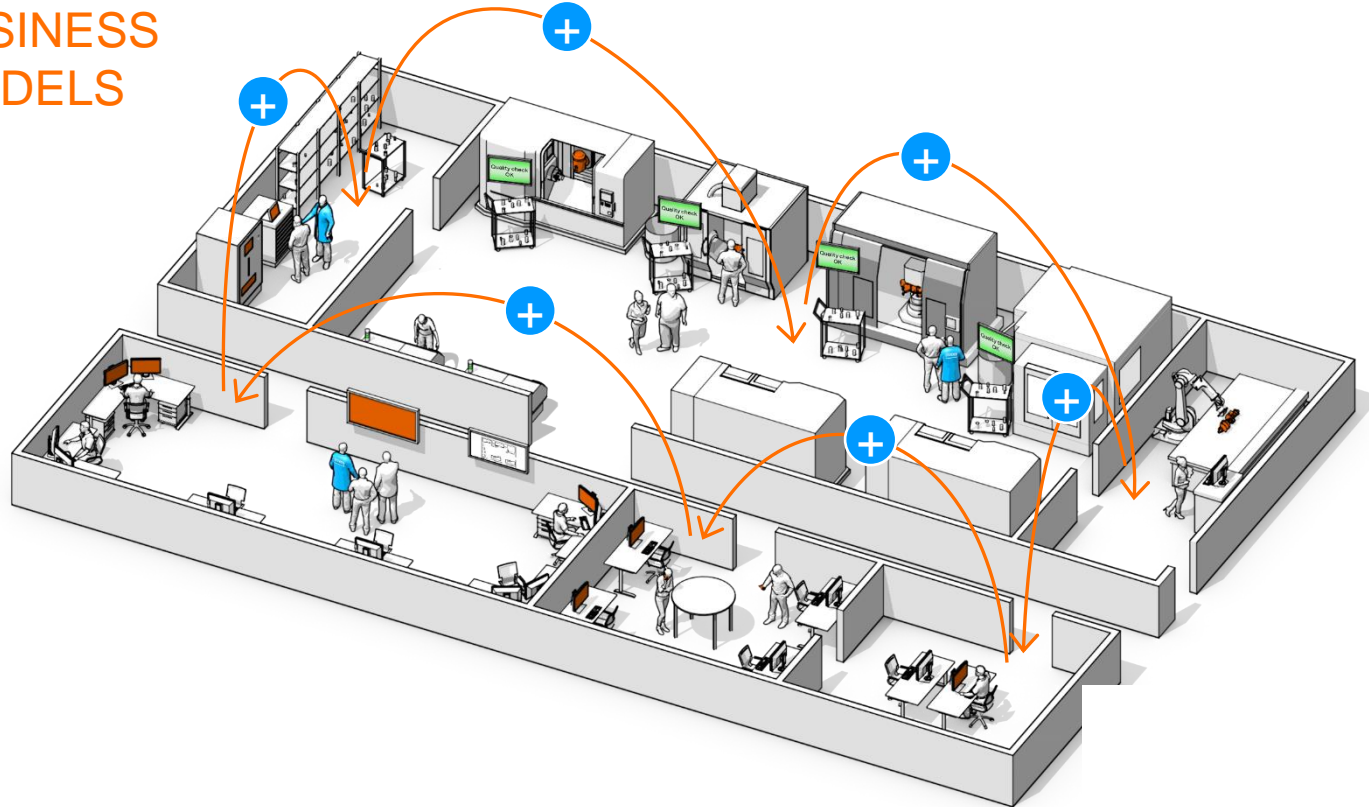
### EXAMPLES

Pay per part

Quality assurance integration

Tool data integration

Hybrid manufacturing





SANDVIK MANUFACTURING  
& MACHINING SOLUTIONS

The leader in closed loop  
component manufacturing  
solutions



# Q&A SESSION

An abstract graphic consisting of several bright blue lines that intersect to form a series of triangles and polygons, set against a black background. The lines are thin and create a sense of depth and movement.

# DISCLAIMER STATEMENT

“Some statements herein are forward-looking and the actual outcome could be materially different. In addition to the factors explicitly commented upon, the actual outcome could be materially affected by other factors for example, the effect of economic conditions, exchange-rate and interest-rate movements, political risks, impact of competing products and their pricing, product development, commercialisation and technological difficulties, supply disturbances, and the major customer credit losses.”



**SANDVIK**

The logo consists of the word "SANDVIK" in a bold, blue, sans-serif font. Below the text is a solid blue horizontal bar. The entire logo is enclosed within a thin blue rectangular border.