The Third Mid-term Business Plan
(FY2019 - FY2021)
April 26, 2019
TOPCON CORPORATION
President & CEO
Satoshi Hirano
The Third Mid-term Business Plan (FY2019 - FY2021)

I. Topcon’s Future Direction

II. The Second Mid-term Business Plan Review

III. The Third Mid-term Business Plan

IV. Growth strategy by Business
I . Topcon’s Future Direction
Expand our businesses and solve the societal challenges within the growing market of Healthcare, Agriculture and Infrastructure.

**Vision**

**Long-term Goal**

**FY2025** Sales ¥250B, ROE over 15%

**Topcon’s Future Direction**

**Eye Care**

Healthcare

Ophthalmology
Deals with increasing eye diseases caused by aging society

**Smart Infrastructure**

Infrastructure improvement
Surveying/Construction/Maintenance

**Positioning**

IT Construction
Automatic Management of Execution

**Agriculture**

IT Agriculture
IT/Efficiency of Agriculture

**Infrastructure**

Smart Infrastructure
Societal challenges to be addressed by Topcon

- **Global Ageing Population**
- **Global Population Increase**
- **Global Demand on Infrastructure**
- **Increasing Eye Disease**
- **Food Shortage**
- **Engineer Shortage**

Source: Topcon’s estimates based on Food and Agriculture Organization of the United Nations (FAO)

Topcon’s Future Direction

Topcon’s solution for the societal challenges

- **Healthcare**
  - Creation of eye disease screening
  - Early detection of diseases
  - Prevention
  - Medical efficiency improvement
  - Prognosis

- **Agriculture**
  - Automation of farm works
  - High precision /Labor saving
  - Production/Quality improvement

- **Infrastructure**
  - Automation of construction works
  - High skilled worker unnecessary /High-precision
  - Solution to labor shortage
Although Healthcare, Agriculture and Infrastructure are major industries, they are way behind in automating the process and adopting IT!
Ⅱ. The Second Mid-term Business Plan Review
The Second Mid-term Business Plan
(FY2016 - FY2018)

Accelerating Growth Strategy to a New Stage

Strategy 1: Strengthening the Management Structure
Strategy 2: Advancement of the Growing Business
Strategy 3: Creation of a Subscription Business Model

Aim for ROE20%!
The Second Mid-term Business Plan Review

Net Sales
- Achieved the sales goal as planned according to growth strategy!

Operating Income
- Achieved significant profit growth
- Not reached Second Mid-term plan
⇒ Prioritized the strategic investment

Record Sales
(unit: billion yen)

FY2015 FY2016 FY2017 FY2018

The Second Mid-term Business Plan

CAGR

130.7
CAGR 4.3%

148.7
GAP +2.7B

The 2nd Mid-term Business Plan
¥146B

13.6
CAGR 15.3%

8.8
GAP -7.4B

The 2nd Mid-term Business Plan
¥21B

FY2018 Mid-term Business Plan target
The Second Mid-term Business Plan Review

**Positioning**

- **Net Sales**
  - Significant revenue growth
  - Achieved Mid-term plan

- **Operating Income**
  - Significant OP growth
  - Achieved cumulative 3 year total in spite of temporal market stagnation in FY18

**Smart Infrastructure**

- **Net Sales**
  - Revenue increase
  - Achieved Mid-term plan

- **Operating Income**
  - Significant OP growth
  - Improvement of profitability
  - Achieved Mid-term plan

**Eye Care**

- **Net Sales**
  - Revenue increase
  - Growth of 3D OCT sales
  - Not reached Mid-term plan

- **Operating Income**
  - Not reached Mid-term plan:
    - Strategic upfront investment
  - Confidence in Screening Business

(peak: billion yen)

<table>
<thead>
<tr>
<th></th>
<th>FY2015</th>
<th>FY2016</th>
<th>FY2017</th>
<th>FY2018</th>
</tr>
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<tbody>
<tr>
<td><strong>Net Sales</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Actual</td>
<td>62.0</td>
<td>60.6</td>
<td>59.0</td>
<td>68.0</td>
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<tr>
<td>Plan</td>
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<td>77.7</td>
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<tr>
<td><strong>Operating Income</strong></td>
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<tr>
<td>Actual</td>
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<td>8.0</td>
<td>8.4</td>
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<tr>
<td>Plan</td>
<td>4.0</td>
<td>6.3</td>
<td>10.0</td>
<td></td>
</tr>
</tbody>
</table>

- **Net Sales**
  - Significant revenue growth
  - Achieved Mid-term plan

- **Operating Income**
  - Significant OP growth
  - Achieved cumulative 3 year total in spite of temporal market stagnation in FY18

- **Net Sales**
  - Revenue increase
  - Achieved Mid-term plan

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  - Improvement of profitability
  - Achieved Mid-term plan

- **Net Sales**
  - Revenue increase
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- **Operating Income**
  - Not reached Mid-term plan:
    - Strategic upfront investment
  - Confidence in Screening Business
The Second Mid-term Business Plan Review

<table>
<thead>
<tr>
<th>Management efficiency</th>
<th>The First Mid-term Business Plan</th>
<th>The Second Mid-term Business Plan</th>
</tr>
</thead>
<tbody>
<tr>
<td>Effect of improving operating income over 3 year period</td>
<td>FY2013-15  ¥4.3B</td>
<td>FY2016-18  ¥5.5B</td>
</tr>
<tr>
<td>Cash Flow</td>
<td>Actual  ¥29.4B</td>
<td>Plan  ¥6.0B</td>
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<tr>
<td>Operating CF over a 3 year period</td>
<td>FY2015  6.9%</td>
<td>FY2018  9.8%</td>
</tr>
<tr>
<td>Capital efficiency</td>
<td>FY2018  15%</td>
<td></td>
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<tr>
<td>ROE</td>
<td>FY2016  ¥16/39%</td>
<td></td>
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</tbody>
</table>

**The Second Mid-term Business Plan**

<table>
<thead>
<tr>
<th>Shareholder Return</th>
<th>FY2017  ¥20/35%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dividend/Payout Ratio</td>
<td>FY2018  ¥24/39%</td>
</tr>
</tbody>
</table>
Advancement of the Growing Business

**Positioning**

- **IT Construction**
  - Expansion of OEM Business by differentiated technology

- **IT Agriculture**
  - Further expansion of after market and OEM

**Smart Infrastructure**

- **i-Construction**
  - Opened 4 training centers nationwide to facilitate the spread of i-Construction in Japan

- **IT Agriculture in Japan**
  - Took a lead to develop the market by promoting Auto Steering System (after market)

**Eye Care**

- **Screening Business**
  - Foreign optical chain store deployed the Maestro
  - Initiated autonomous AI diagnosis (for D.R.) in the US
  - Established software development subsidiary in the US
  - Launched new IoT platform

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*"i-Construction" is a registered trademark of National Institute for Land and Infrastructure Management, MLIT, Japan.*
Creation of a Subscription Business Model

Built a Subscription Business platform in all segments, Healthcare, Agriculture and Infrastructure!

- Topcon Screen
- Topcon Harmony
- Topcon Cloud

- Medical data
- IoT Service
- Subscription model

- Topcon Agriculture Platform
- Agricultural machinery data
- Sensor data
- IoT Service
- Subscription model

- Topcon Agriculture Platform
- Cloud type Agriculture management IoT solution

- Sitelink3D
- TS shield
- Survey/Design/Construction data
- IoT Service
- Subscription model

- Sitelink3D
- TS shield
- Real time Construction management IoT solution
- Total Station remote management solution
The Second Mid-term Business Plan
Review Summary

Accelerating Growth Strategy!!
To a New Stage

- **Strategy 1**: Strengthening the Management Structure
- **Strategy 2**: Advancement of the Growing Business
- **Strategy 3**: Creation of a Subscription Business Model

**Positioning**
- Achieved

**Smart Infrastructure**
- Achieved

**Eye Care**
- Created a new growing business

Executed growth strategies
Entered a new stage!
Ⅲ. The Third Mid-term Business Plan
The Third Mid-term Business Plan
(FY2019 - FY2021)

**Long-term Goal**

**FY2025 Sales ¥250B, ROE over 15%**

**The Third Mid-term Business Plan**

**Acceleration of Growing Business**

- **Strategy 1**
  - Acceleration of business development in the *growing market*

- **Strategy 2**
  - Strengthen profitability of Core Business

- **Strategy 3**
  - Creation of new potential market

**Aim for ROE15%**
The Third Mid-term Business Plan

Societal Challenge

Shortage of skilled workers

Increasing demand for Infrastructure

Solution

Automation of construction
by robotization of construction machinery
and unification of work flow

- Productivity improvement
- Elimination of labor shortage

Topcon’s unique technology

① IT Construction technology
⇒ Machine Control System utilizing precision GNSS technology
② 3D Measurement technology
⇒ Sensor digitization which realize unification of work flow

Construction work flow

Realization

IT Construction Machinery

Dozer system
3D printer robot
Excavator system
3D Measurement
Terrestrial Surveying Instruments
Aerial photogrammetry

UAV
The Third Mid-term Business Plan

Market size estimation

IT Construction machinery
- Dozer system
  - Annual Production volume: approx. 25K units per year
  - Applicable model: upper 20%
  - Expected product lifetime: 8 years (after market)

Excavator system
- Annual Production volume: approx. 300K units per year
- Applicable model: upper 8%
- Expected product lifetime: 8 years (after market)

3D Measuring instruments

Growth Scenario

FY2018
- Installation ratio
- Global addressable number: 40K units
- Annual Production volume: approx. 25K units per year
- Applicable model: upper 20%
- Expected product lifetime: 8 years (after market)

FY2025
- Installation ratio
- Global addressable number: 200K units
- Annual Production volume: approx. 300K units per year
- Applicable model: upper 8%
- Expected product lifetime: 8 years (after market)

Penetration ratio

Market size:
- ¥200B

*Estimated by Topcon
The Third Mid-term Business Plan

Growth Scenario

Societal Challenge

- Food Shortage
- Shortage of skilled workers

- Global population increase
- Decreasing size of farmland per person

Solution

Automation of Agriculture
by automation of steering and unification of data management

Improvement of productivity and quality

Realization

Topcon’s unique technology

① IT Agriculture machinery
⇒ Auto-steering system utilizing precision GNSS technology

② Optical Sensor technology
⇒ Digitization by crop monitoring sensor and yield sensor

Food shortage
Population aging / Decreasing of skilled worker

Source: Topcon’s estimates based on Food and Agriculture Organization of the United Nations (FAO)
The Third Mid-term Business Plan

IT Agriculture machinery

Auto-steering systems for tractor

- Annual Production volume: approx. 1.5M units per year
- Applicable model: upper 5%
- Expected product lifetime: 8 years (after market)

Market size estimation

Global addressable number

600K units

Installation ratio

FY2018

FY2025

*Estimated by Topcon
**Eye care market environment**

**Global aging population**

- Aging Society — Demographic Trend and Prospect of World Population (1000s of billions)

**Increasing diabetes population**

- In 2017: 425M people
- In 2045: 629M people

**Complicating disease**

**Societal Challenge**

- Increase of eye diseases
- Rising medical cost

**Graph:**

- Increase of eye diseases: 351 million people
- Natural increase: 110 million people
- Complicating disease: 161 million people
- Rising medical cost: 80 million people

**Source:**
- IDF Diabetes Atlas Eighth Edition 2017
- Market Scope
The Third Mid-term Business Plan

Societal Challenge

Shortage of ophthalmologists to correspond to rapidly increasing eye diseases (351 million people)

Solution

Creation of Eye disease screening by Primary care physicians, Eyeglasses stores, Drug stores, etc.

Early detection
Early treatment
Medical efficiency improvement

Topcon’s unique technology

Full automatic Screening equipment: Easy operation with less expertise

3D OCT Maestro
- fully automatic OCT and color fundus photography
- Reporting function indicating possibility of 3 major eye diseases

TRC-NW400
- fully automatic color fundus photography
- Early detection of 3 major eye diseases

The world’s number of Primary care physician, Ophthalmologist and Eyeglasses store, etc.

<table>
<thead>
<tr>
<th>Primary care physician</th>
<th>Eyeglasses store, Drug store, Health check up facility</th>
<th>Ophthalmologist</th>
</tr>
</thead>
<tbody>
<tr>
<td>2,000</td>
<td>1,000</td>
<td>200</td>
</tr>
</tbody>
</table>

Exam/Diagnosis/Treatment domains

Screening (Preventive domain)

Screening facility

Optical Store

Drug Store

Primary care physician

Nursing Home

Screening (Prognostic Domain)
Case example of Eye diseases’ screening

Major optical chain store, Specsavers*, deployed 250 units of 3D OCT Maestro

**Effect**

**Early detection**

Specsavers’ case:

Glaucoma Detection Rate: 8%
Approximately 10,000 people were detected as suspicious patient of Glaucoma out from 125,000 people screening (yearly)

**Expectations of early treatment, improvement of medical efficiency and medical quality**

Easy operation with less expertise

*Optical chain store with 1,600 stores in 10 countries
Market size prediction (Screening Business)

**FY2018**

- Number of major global optical chain store : 40,000
- Number of Primary care physicians (global) : 2M 3% are addressable

**Number of Facilities**

- 100,000

**FY2025**

- Number of Optical/Drug store : 1M (global) 20% of the stores are addressable
- Number of Primary care physicians (global) 2M 20% of them are addressable

*Estimated by Topcon*
The Third Mid-term Business Plan
Growing business / Core business

Positioning

IT Construction : Acceleration of business growth
IT Agriculture : New customer development
Advancing IoT business

Growing Business

CAGR 9%

IT Construction
- Development of untapped market
- Market expansion by launching new strategic products
- Expand Road maintenance solution business
- Advancing subscription business in work progress management

IT Agriculture
- Further strengthening of OEM business
- Initiation of IoT platform business

Core Business

Enhancement of sales network - M&A
Launching the differentiated products
- Strengthening of competitiveness

Net Sales
Growing Business
Core Business
(unit: billion yen)

FY2018 Actual
FY2019 Plan
FY2021 Plan

77.7
79.0
93.0

55%
45%

45%
55%

For details, see "IV. Growth strategy by Business"
The Third Mid-term Business Plan
Growing business / Core business

Smart Infrastructure

Creation of new Growing Business
Strengthening of Core Business

Growing Business
CAGR 12%

IT Construction / 3D Measurement
- Advancement of i-Construction related business

IT Agriculture
- Business expansion in Japan and Asian market development

BIM market development
- Promoting combined solutions of 3D measuring devices and software

Creation of IoT business
- Utilization of high market share products

Core Business

Launching the differentiated products
- Improvement of business efficiency

Expansion of sales network in Asia and India

*For details, see "IV. Growth strategy by Business"

"i-Construction" is a registered trademark of National Institute for Land and Infrastructure Management, MLIT, Japan.
Expansion of the Screening Business

**Growing Business**

- **Expansion of Screening Business**
  - Utilization of Software Development Subsidiary in the US
  - Sales expansion of fully automatic screening equipments
  - Utilization of subscription model

**Business expansion in China**

- Creation of Screening Business in the world's largest diabetes market

**Core Business**

- **Improvement of business efficiency**
  - Reorganization of sales structure

- **Reinforcement of competitiveness by cost reduction**

*For details, see "IV. Growth strategy by Business"*

**Net Sales**

- Selling price: FY2019 ¥51.0bn → FY2021 ¥62.0bn

- Selling Price Growth
  - FY2018 Actual ¥47.7bn
  - FY2019 Plan ¥51.0bn
  - FY2021 Plan ¥62.0bn

- Selling Price Growth Rate
  - FY2018 Actual 47.7%
  - FY2019 Plan 29%
  - FY2021 Plan 45%

- FY2018 Actual 71%

- FY2019 Plan 51.0%

- FY2021 Plan 55%

- CAGR 25%
The Third Mid-term Business Plan
Strengthen profitability of Core Business

<table>
<thead>
<tr>
<th>Generation of Cash Flow</th>
<th>The Second Mid-term Business Plan</th>
<th>The Third Mid-term Business Plan</th>
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</thead>
<tbody>
<tr>
<td>Operating Cash Flow</td>
<td>FY16-18 total ¥47.2B</td>
<td>FY19-21 total ¥50.0B</td>
</tr>
<tr>
<td>Effect of improving</td>
<td>¥5.5B</td>
<td>¥7.0B</td>
</tr>
<tr>
<td>Operating Income</td>
<td></td>
<td>- Improvement of profitability</td>
</tr>
<tr>
<td></td>
<td></td>
<td>- Reduction of inventory</td>
</tr>
<tr>
<td></td>
<td></td>
<td>- Consolidation of operating base</td>
</tr>
<tr>
<td></td>
<td></td>
<td>- Further efforts in cost reduction by improving the productivity</td>
</tr>
<tr>
<td></td>
<td></td>
<td>- Reduction of the procurement cost</td>
</tr>
</tbody>
</table>
The Third Mid-term Business Plan
Creation of new potential market

Explore new potential market by new innovative solutions

Contribute to achieve **Long-term Target**

- Real time progress management
- Reduce administrative overhead
- Data correction according to the current situation

Further utilization of 3D Measuring technology

**Positioning**

**Smart Infrastructure**

Expand BIM Business

Mediate between the current state of construction and digital design drawings in real time

Create infrastructure Screening Business

Early diagnosis of infrastructure maintenance

**Eye Care**

Expand Screening Business

Further utilization of 3D OCT

Early detection of the diseases other than eye diseases through the retina examination

- Diabetes
- Dementia
- Heart disease etc.

Healthcare through the Eye
## Financial Targets [Consolidated] (unit: million yen)

<table>
<thead>
<tr>
<th></th>
<th>FY2018</th>
<th>FY2019</th>
<th>FY2021</th>
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</thead>
<tbody>
<tr>
<td><strong>Net Sales</strong></td>
<td>148,688</td>
<td>154,000</td>
<td>180,000</td>
</tr>
<tr>
<td><strong>Operating Income</strong></td>
<td>13,596 (9.1%)</td>
<td>14,500 (9.4%)</td>
<td>20,000 (11.1%)</td>
</tr>
<tr>
<td>(Operating Income Ratio)</td>
<td></td>
<td></td>
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<tr>
<td><strong>Ordinary Income</strong></td>
<td>11,497</td>
<td>12,500</td>
<td>-</td>
</tr>
<tr>
<td><strong>Net Income</strong></td>
<td>6,548</td>
<td>8,000</td>
<td>-</td>
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<tr>
<td><strong>ROE</strong></td>
<td>9.8%</td>
<td>11%</td>
<td>13-15%</td>
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<tr>
<td><strong>Dividends</strong></td>
<td>¥24</td>
<td>¥28</td>
<td>-</td>
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<tr>
<td><strong>Payout Ratio</strong></td>
<td>39%</td>
<td>37%</td>
<td>Over 35%</td>
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<td><strong>Exchange Rate</strong></td>
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<tr>
<td>USD (Average)</td>
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<td>¥110</td>
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<tr>
<td>EUR</td>
<td>¥128.43</td>
<td>¥125</td>
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### The Third Mid-term Business Plan

The financial targets for the Third Mid-term Business Plan are shown above. The targets for FY2018, FY2019, and FY2021 are listed for Net Sales, Operating Income, Ordinary Income, Net Income, ROE, Dividends, Payout Ratio, Exchange Rate, and Average USD and EUR values.
## Financial Targets by Business

(单位:百万日元)

<table>
<thead>
<tr>
<th></th>
<th>FY2018</th>
<th>FY2019</th>
<th>FY2021</th>
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<tbody>
<tr>
<td><strong>Net Sales</strong></td>
<td></td>
<td></td>
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</tr>
<tr>
<td>Positioning</td>
<td>77,722</td>
<td>79,000</td>
<td>93,000</td>
</tr>
<tr>
<td>Smart Infrastructure</td>
<td>36,744</td>
<td>38,500</td>
<td>43,000</td>
</tr>
<tr>
<td>Eye Care</td>
<td>47,713</td>
<td>51,000</td>
<td>62,000</td>
</tr>
<tr>
<td>Others</td>
<td>1,698</td>
<td>1,500</td>
<td>1,000</td>
</tr>
<tr>
<td>Elimination</td>
<td>-15,190</td>
<td>-16,000</td>
<td>-19,000</td>
</tr>
<tr>
<td>Total</td>
<td>148,688</td>
<td>154,000</td>
<td>180,000</td>
</tr>
<tr>
<td><strong>Operating Income</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Positioning</td>
<td>8,358</td>
<td>8,500</td>
<td>-</td>
</tr>
<tr>
<td>(Operating Income Ratio)</td>
<td>(10.8%)</td>
<td>(10.8%)</td>
<td>-</td>
</tr>
<tr>
<td>Smart Infrastructure</td>
<td>6,393</td>
<td>6,600</td>
<td>-</td>
</tr>
<tr>
<td>(Operating Income Ratio)</td>
<td>(17.4%)</td>
<td>(17.1%)</td>
<td>-</td>
</tr>
<tr>
<td>Eye Care</td>
<td>2,896</td>
<td>3,400</td>
<td>-</td>
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<tr>
<td>(Operating Income Ratio)</td>
<td>(6.1%)</td>
<td>(6.7%)</td>
<td>-</td>
</tr>
<tr>
<td>Others</td>
<td>-65</td>
<td>0</td>
<td>-</td>
</tr>
<tr>
<td>(Operating Income Ratio)</td>
<td>(-3.8%)</td>
<td>(0.0%)</td>
<td>-</td>
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<tr>
<td>Elimination</td>
<td>-3,986</td>
<td>-4,000</td>
<td>-</td>
</tr>
<tr>
<td>Total</td>
<td>13,596</td>
<td>14,500</td>
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<tr>
<td>(Operating Income Ratio)</td>
<td>(9.1%)</td>
<td>(9.4%)</td>
<td>(11.1%)</td>
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## Investment plan

<table>
<thead>
<tr>
<th>Category</th>
<th>FY16-18 total</th>
<th>FY19-21 total</th>
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<tbody>
<tr>
<td>CAPEX</td>
<td>¥15.9B</td>
<td>¥20B</td>
</tr>
<tr>
<td>Growth Investments (M&amp;A, etc.)</td>
<td>¥6.3B</td>
<td>¥40B</td>
</tr>
<tr>
<td>R&amp;D</td>
<td>¥37.4B</td>
<td>¥50B</td>
</tr>
</tbody>
</table>

## Shareholder return

- **Payout ratio**
  - FY18 Actual: 39%
  - FY19-21 Plan: over 35%
Ⅳ. Growth Strategy by Business

Ⅳ-1. Positioning

Ⅳ-2. Smart Infrastructure

Ⅳ-3. Eye Care
IT Construction: Development of untapped market

Positioning

**Untapped Market**
- (Emerging Countries)
- High customer awareness
- Huge potential of growth
- Adoption rate less than 10%

**Untapped Market**
- (Small - Mid Sized OEM)
- (Additional Opportunities: New Solutions / Products)
  - Road resurfacing, Excavator(auto), Fleet management, Small-sized machinery, etc)

**IT Construction Market**
- High customer awareness
- Huge potential of growth
- Adoption rate less than 10%

Top priority strategies to develop the untapped market

- **Strengthen sales force by promoting business alliance**
- **Expand sales network by M&A**
Sales growth by differentiated technology

**Strategic differentiated products**

*New*

**Excavator system X-53x (auto)**
- Autonomous operations according to the designed data
- Prevention of deep-digging
- Correspond to “MICHIBIKI” (correspond to multiple GNSS)

**Mastless Dozer system 3D-MC**
- Mastless
- High-speed and accurate operation

**Sales of IT Construction**
(unit: amount)

<table>
<thead>
<tr>
<th></th>
<th>FY2015 Actual</th>
<th>FY2018 Actual</th>
<th>FY2021 Plan</th>
</tr>
</thead>
<tbody>
<tr>
<td>1st MTP</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2nd MTP</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3rd MTP</td>
<td></td>
<td></td>
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</tr>
</tbody>
</table>

*Note: *MTP = Mid-term Business Plan*
IT Construction: Expand Road maintenance solution business

Social issue
Aging Road Infrastructure
Rapidly increase the Maintenance cost
¥230 trillion

Solution
New Resurfacing / Paving Process
Road Scanning + ICT Paving + Logistics Management
Contribution by ThunderBuild (acquisition 2018 Aug)

Resurfacing Process
Asphalt Plant + Road Scan + Logistics + Milling + Paving + Compaction

Saving: Material Labor Time
30% Cost Saving
Utilization of Subscription model for IT construction solution

- Real-time progress management
- Improvement of work efficiency
- Production / Finished-shape management
- Remote support

✔ Acceleration of Subscription model
✔ Pay-per-Use

Vendor neutral

Subscription model

Job Site Supervisor

Automated construction work site

IT Construction

data
IT Agriculture: Further strengthening of OEM Business

Untapped Market (Emerging Countries)
Untapped Market (Small - Mid Sized OEM)

Top priority strategies to develop the untapped market

- Strengthen sales force by promoting business alliance
- Expand sales network by M&A

OEM Business Development

- 8 times growth in last 4 years (number of OEM accounts)

- High customer awareness
- Huge potential of growth
- Adoption rate less than 10%
Launched cloud-based Agriculture management IoT solution

- Collect every data of agriculture
- IoT Service
- Utilization of Telematics
- Vendor neutral
- 1 console for 1 implement
- Simple!
- Unified data in 1 console

✓ Provide function and data which are necessary to maximize farm work productivity

- Unified management of agricultural machinery
- Farm data analysis
- Remote service
- Data cleansing
- Remote control
- Data management
- Data sharing
- Customer management
Ⅳ. Growth Strategy by Business

Ⅳ-1. Positioning
Ⅳ-2. Smart Infrastructure
Ⅳ-3. Eye Care
Advancement of i-Construction related business

Stable increase of public civil construction works adopting ICT and 3D data

**i-Construction**

<table>
<thead>
<tr>
<th>i-Construction number of order</th>
<th>Number of public works orders</th>
</tr>
</thead>
<tbody>
<tr>
<td>Source: MLIT, Japan</td>
<td>approx. 15,000/year</td>
</tr>
</tbody>
</table>

The scale of the project is approx. ¥7 trillion in 3 years

National resilience

(Three-years emergency measure: ratified on December 14, 2018)

Emergency measures such as Reinforcement of river banks

Source: MLIT, Japan

Expansion of infrastructure market in Japan

Sales of i-Construction related business in Japan

(IT Construction system / 3D measurement)

(unit: amount)

FY2015 Actual  FY2018 Actual  FY2021 Plan

1st MTP  2nd MTP  3rd MTP

*MTP=Mid-term Business Plan

```
"i-Construction" is a registered trademark of National Institute for Land and Infrastructure Management, MLIT, Japan.
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IT Agriculture: Business expansion in Japan and Asian market development

Installation ratio of Auto Steering System increase year by year

- Strengthen product capabilities
- Strengthen Sales Network
  - Utilization of sales network of all the major tractor manufacturers

Control Display
Steering wheel with electric motor
⇒ Added Auto-turn function

Industrial revolution of Agriculture in Japan/
Promotion of automation of Agriculture

Expanding the success model into Asian countries
(India・Korea・Thailand・Taiwan, etc.)

Source: Hokkaido Agricultural Administration Department Production Promotion Bureau, Japan Agricultural Machinery Industry Association
Significant increase of BIM work productivity

Significant work period reduction! 9 weeks to 3 days!
(15 times faster than conventional method)

BIM sales plan
(unit: amount)

- [Hardware]
  3D Measuring Devices

- [Software]
  Acquired by M&A

3D Laser Scanner

3D data measurement

- Auto-generated 3D model
- 3D design data qualification
- Real time automatic comparison

Easy generation of 3D model

Work period reduction

BIM Workflow:
- Design
- Onsite check
- Execution
- Maintenance

Smart Infrastructure

BIM market development: Promoting combined solutions of 3D Measuring devices and software

Significant increase of BIM work productivity

Easy generation of 3D model

Work period reduction

[Software]
Acquired by M&A

3D Laser Scanner

3D data measurement

Auto-generated 3D model

3D design data qualification

Real time automatic comparison

BIM sales plan
(unit: amount)
Creation of IoT business
Utilization of high market share products

Accelerate IoT business utilizing Total Station

TSshield
Cloud-based Remote support system

Release new Function

Centralized control and management of equipment
Lease/Rental management

Subscription model

Providing remote support service

Remote Support
Health Check
Maintenance management
Analysis of operational status
Time fence/Geo-fence/Remote lock etc.

100,000+ units available around the world

Operational data

Utilization of Telematics

IoT Service

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Ⅳ. Growth Strategy by Business

Ⅳ-1. Positioning

Ⅳ-2. Smart Infrastructure

Ⅳ-3. Eye Care
Utilization of Software Development Subsidiary in the US

Topcon Healthcare Solutions
(Software Development Subsidiary(US))

- Established new company in the US in May, 2018
- Hiring competent engineers, planning, marketing staffs from outside, and the organization grew with over 120 employees
- Established global organization by setting up sales subsidiary in Europe and Asia respectively

THS(US)/THS EMEA(Europe)/ THS AP(Singapore)

Released software and started providing solution service

- **Topcon Harmony**
  - Data management software
  - Possible to unify the diagnostic data thanks to vendor neutral system

- **Topcon Cloud**
  - Cloud Data Management
  - Automatic data backup

- **Topcon Screen**
  - Screening Inspection Service
  - Charge per inspection

Strong software development capability is to ensure the driving force of the screening business expansion
Sales expansion of fully automatic screening equipment

Expand the synergy sales of hardware and software

3D OCT Maestro TRC-NW400 + Topcon Harmony
Vendor neutral: Possible to unify the diagnostic data from any brand of equipment

Topcon Cloud
Released in 2018

Ophthalmologists
Optical chain store
Primary care physician
Drug store

Making it possible for major optical chain stores to provide screening services besides Ophthalmologists

Sales of fully automatic Screening equipment (unit: Q'ty)

FY2015 Actual
FY2018 Actual
FY2021 Plan

1st MTP
2nd MTP
3rd MTP
*MTP=Mid-term Business Plan
Expansion of Screening Business

Utilization of subscription model
Started offering screening inspection service

- Reading Center
- AI diagnosis system

Possible to get screening inspections besides at ophthalmology clinic

Practical application of autonomous AI diagnosis

- World's First FDA approved Autonomous AI diagnostic system
  (as a condition to use with Topcon TRC-NW400)
  - Early diagnose of Diabetic retinopathy
  - Early detection, Early treatment
  - Improvement of medical efficiency and quality

- Subscription service per inspection

- Optical chain store
- Primary care physician
- Drug store

IDx Technologies Inc.
*US venture company which develops algorithm of the disease detection based on retina or OCT image

*The above screening service by IDx-DR is not provided as a Topcon Screen service.
Busines expansion in China

Creation of screening business in the world's largest diabetes market

The number of diabetes is the largest in the world, while in shortage of ophthalmologists

<table>
<thead>
<tr>
<th>Number of Diabetes Top10 Countries</th>
<th>Ophthalmologists per 100,000 population</th>
</tr>
</thead>
<tbody>
<tr>
<td>China</td>
<td>United States : 15.7</td>
</tr>
<tr>
<td>India</td>
<td>Japan : 11.2</td>
</tr>
<tr>
<td>United States</td>
<td>China : 2.8</td>
</tr>
<tr>
<td>Brazil</td>
<td></td>
</tr>
<tr>
<td>Mexico</td>
<td></td>
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<tr>
<td>Indonesia</td>
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<td>Egypt</td>
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<tr>
<td>Germany</td>
<td></td>
</tr>
<tr>
<td>Pakistan</td>
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</tr>
</tbody>
</table>

Source: Diabetes Atlas 8th Edition (million)

Source: MarketScope 2018

Expand Screening Business in a huge growing market

Topcon for Human Life

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These materials contain forward-looking statements, including projections of future operating performance. Such statements are based on management’s best judgment, given the materials available to them at the time these statements are made.

However, please be aware that actual performance may differ from projected figures owing to unexpected changes in the economic environment in which we operate, as well as to market fluctuations.

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