Customer-value Creation
Utilizing ICT-AI technology

March 13th, 2019
Senior Executive Managing Officer
Chief Technology Officer
Ogawa Haruo
Today’s Agenda

1: Olympus’ New Management Philosophy
2: Challenges in Innovation
3: ICT-AI Technology Initiative
4: ICT-AI Technology Platform Strategy
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1:  Olympus’ New Management Philosophy

2:  Challenges in Innovation

3:  ICT-AI Technology Initiative

4:  ICT-AI Technology Platform Strategy
1: Olympus’ New Management Philosophy: Towards 100th year in 2019

Scientific Solution Business

Imaging Business

Medical Business

- 1920
- 1936
- 1952
OUR PURPOSE
Making people’s lives healthier, safer and more fulfilling

OUR CORE VALUES
- INTEGRITY: We are trustworthy and act in good faith
- UNITY: We are strongest when we work together as a team
- EMPATHY: We care about all of our stakeholders
- AGILITY: We challenge the status quo with open minds, focus and speed
- LONG-TERM VIEW: We look beyond the present to deliver future value
“Business to Specialist” Company

Perfect solutions to respond to customer expectations from a higher dimension.

The competence Olympus demonstrates has been fostered through a long history in the business.

to be the greatest “Business to Specialist” Company
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## 2: Challenges in Innovation

<table>
<thead>
<tr>
<th>Medical</th>
<th>Importance of value with high economic benefits, medical effects, and patient satisfaction</th>
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<tbody>
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<td></td>
<td>▾ Formulate new medical solutions for realizing customer value</td>
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<td>Shared</td>
<td>Appearance of “innovator’s dilemmas” resulting from new technological revolutions</td>
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| | ▾ Transition from process innovation era to product and business innovation era  
  • Redefine “Business to Specialist” business process (utilize ICT, etc) |
| Shared | Improvement of development efficiency through cross-business application of technologies |
| | ▾ Utilization of 4K and 8K technologies, robotics technologies, deep learning, ICT, and other technology trends  
  • Proactively form alliances and promote “open innovation” |
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On OLYMPUS Investor Day 2017 (September 13th, 2017), Our Innovation Technology (ICT/AI technology) Initiative was Announced
Utilization of the original deep learning technology developed by Olympus

AI supported medical diagnostics software research was conducted in collaboration with Kure Medical Center/Chugoku Cancer Center. Expected to ease the burden of medical doctors at medical sites.
The collaborative development project by Olympus, Oita University, and Fukuoka Institute of Technology played a role in the success of the world’s first AI guided surgery.

In this research, Olympus developed software that could easily link locations of landmark organs and blood vessels in endoscopic images during LC. Conventionally, linking information had to be manually entered in thousands of images; however, by using this software, the burden of such a task could be greatly reduced, and the AI was able to learn higher quality training data.

News Release: Announced on March 7th, 2019

~ Software developed for generating training data of surgical endoscope images for AI ~
New Collaboration between Olympus and the Jikei University School of Medicine

to Develop AI-Assisted Sperm Selection Aims to Reduce the Workload in Intra Cytoplasmic Sperm Injection (ICSI)

Research will make it easier for embryologists to select good sperm

This program aims to reduce the workload in ICSI and standardize the process by developing artificial intelligence (AI)-assisted sperm selection, which supports embryologists in selecting good-quality sperm.
Utilizing Deep-Learning Technology 
Intelligent Subject-Tracking AF

Automatic detection of specific subjects to adjust to the optimal focus point and tracking.
Real-time processing is realized by two TruePic VIII image processing engines.
May 7th, 2018
News Release from Olympus America Inc. (OAI)

Olympus made a collaborative research agreement with ai4gi, a joint venture between Satis Operations and Imagia, specialized in clinical diagnosis support solution in colonoscopy using AI.
LPixel Inc., a venture company with its strength in image analysis software systems in the field of life science, started with research members from the University of Tokyo. The company has made efforts on research in medical imaging technology for diagnostic support, and a collaborative research with Olympus is currently underway on AI technology development to support medical diagnostic imaging of endoscopes/microscopes.
Olympus Corporation (President: Hiroyuki Sasa) released an operating microscope ORBEYE with 4K and 3D video technology in the beginning of October, 2017, in Japan and U.S. Sony Olympus Medical Solutions Inc. (President: Yoichi Tsusue) was in charge of the technical development of this product. The company is the joint venture of Olympus Corporation and Sony Imaging Products & Solutions Inc. (President: Shigki Ishizuka) in the field of medical business.
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Assign the Responsibilities of Customer Solutions Development, Global

Eddie Mitchell

Mitsutoshi Aizawa
（相澤 光俊）
4: ICT-AI Strategy for Platform Technology

Creating Customer Value through Early Diagnosis and Minimally Invasive Treatment

Triple Aim

1. Improving Outcomes for Patient Population
2. Reducing Cost of Care
3. Enhance Patient Experience

+ Added Value through ICT-AI Platform

Quadruple Aim

Helping clinicians achieve joy in their work

① ② ③ + ④