



New CLT Laboratory Project Outline

June 25 2018
Miraca Holdings

Demographics
Social security
Hospital
management

Advancements in
medical
technology

Change in
expectations of
companies

- Need to curb increasing medical costs
- Increase in aging population
 - Increasing trend in sample volume
- Demand for reduced testing fees
- Decrease in working population



**Provide high quality
testing at a low price**

Demographics
Social security
Hospital
management

Advancements in medical technology

Change in
expectations of
companies

- Advanced/expensive medical treatment
 - Genome, regenerative medicine etc.
- Technological progress in life science field

**Innovative testing for
cutting edge medical care**

Demographics
Social security
Hospital
management

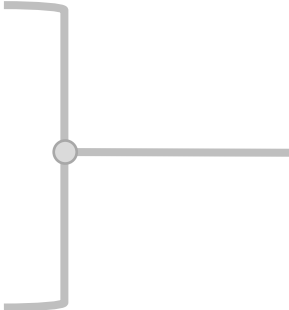




Advancements in
medical
technology

**Change in
expectations of
companies**

- **Incorporating ESG**
 - **BCP Support**

- Contributions to society/ local communities
- Eco-conscious
- Business continuity in case of natural disasters

Mid-long term targets

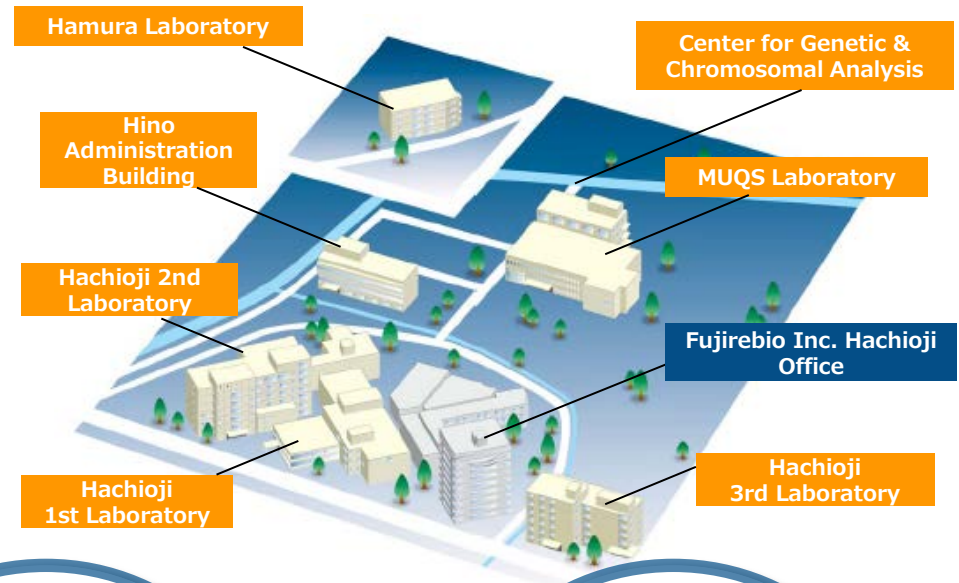
- | | | |
|---|---|--------------------------------------|
| 1. Full automation |  | • Improve testing quality/speed |
| 2. Utilize IT・AI | | • Cost reduction |
| 3. Efficient workflow | | • Labor-saving operation |
| 4. Seismic resistance |  | BCP |
| 5. Reinforce R&D |  | Future business creation |
| 6. Green facility grounds and solar panels |  | Lower environmental burden |
| 7. Welfare enrichment |  | Employee-friendly working conditions |

Current status of Hachioji Lab complex



Hachioji Lab Complex

- Multiple extensions added since 1980
- Multi-story buildings, with shuttle bus transportation between labs
- Outdated IT system (over 40 years from launch)



**Limited
Potential for
Growth**

**Complex
Operations**

**Outdated
facility
and IT
system**

Business growth and eco-friendly initiatives are difficult with the existing facility

Corporate philosophy

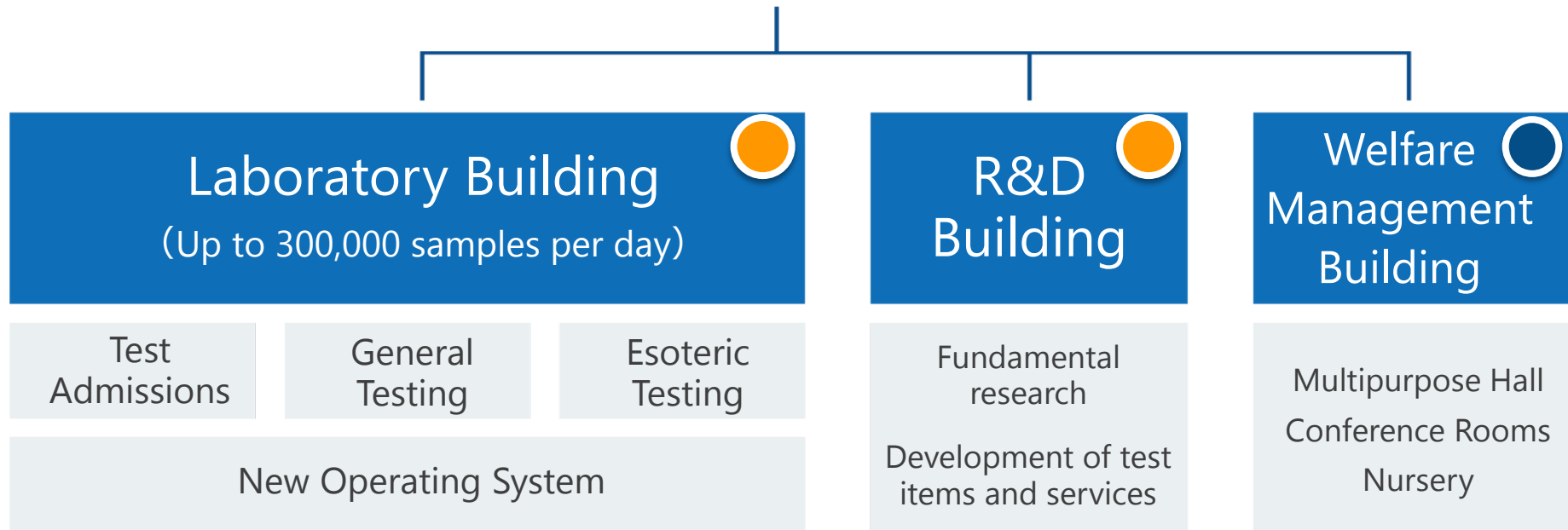
Create new value in Healthcare and contribute to the prosperity of people.

To ensure the future needs of society can be met, Miraca Group will build a cutting edge laboratory with outstanding technical ability and increased efficiency to serve as their flagship facility

New CLT Laboratory - Outline



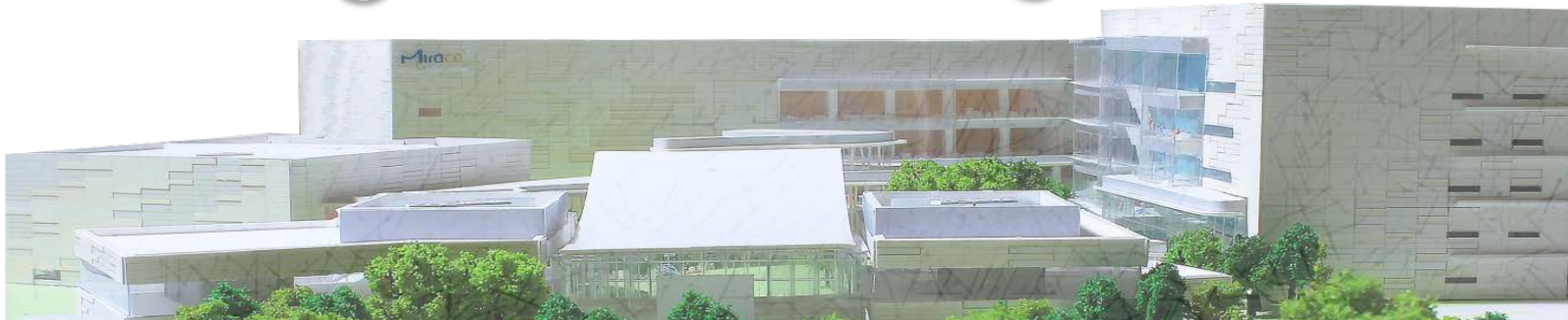
New CLT Laboratory



Seismic Base Isolation



Earthquake Resistance



1. **Full automation** and 24 hour operations to increase efficiency
2. **World's largest laboratory** with mass testing capabilities
 - Increase of general tests processed, as per "Transform! 2020"
3. Establishment of local depots, **overall efficiency** increased

*Local depots: Mainly for admission of samples and separating cells/serum

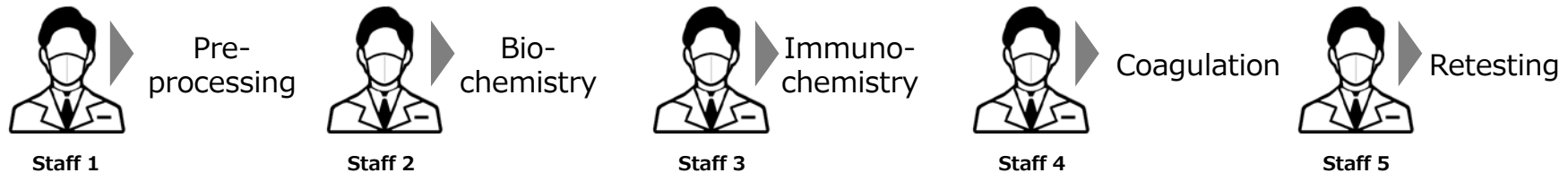
- New depots planned for major locations in the Kanto area
- Some equipped with STAT labs (emergency testing capabilities)
- Current Kanto satellite lab to be converted into a local/ STAT lab

General Testing – Fully Automated

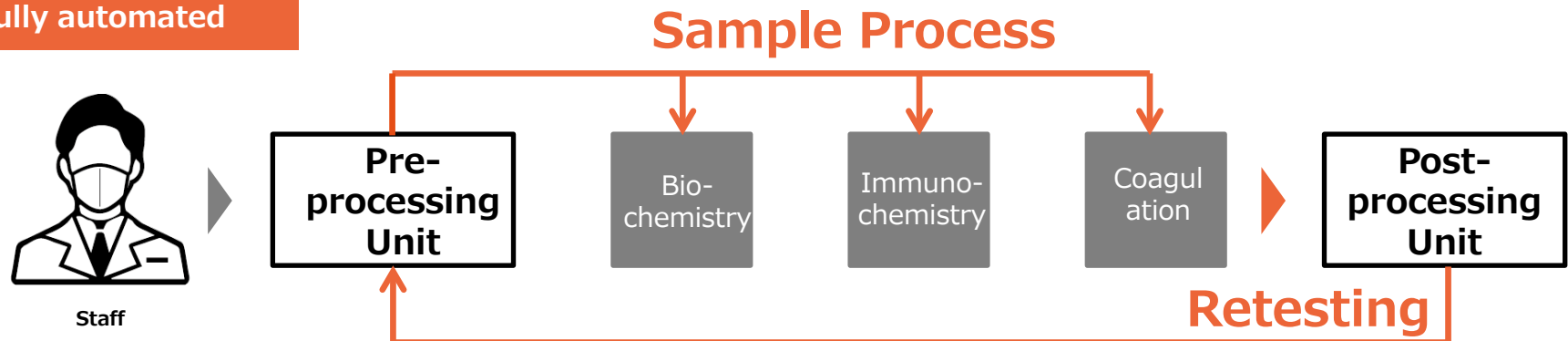
- Use knowledge from SRL Advanced Lab. Azabu
- Improve test quality and reduce costs

Reduce human error in each test category

Conventional Method

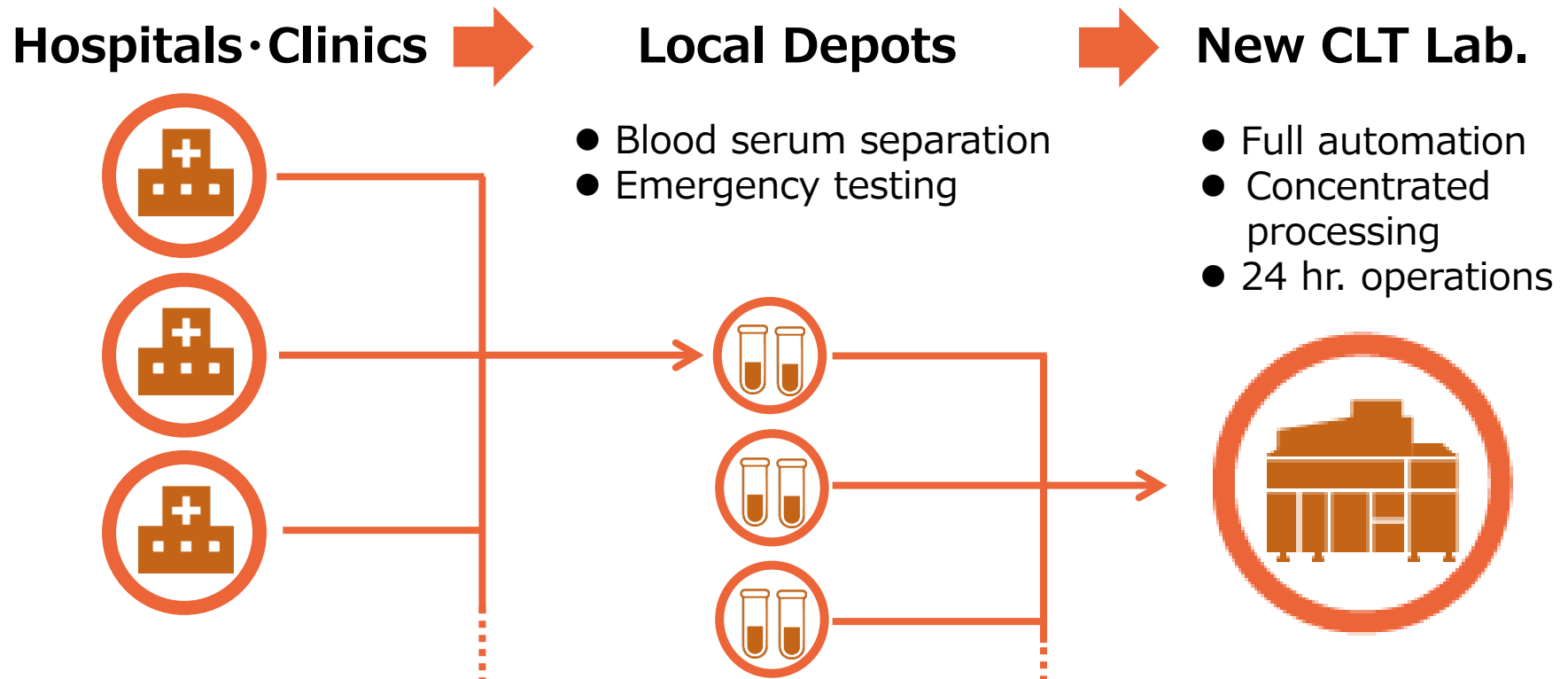


Fully automated

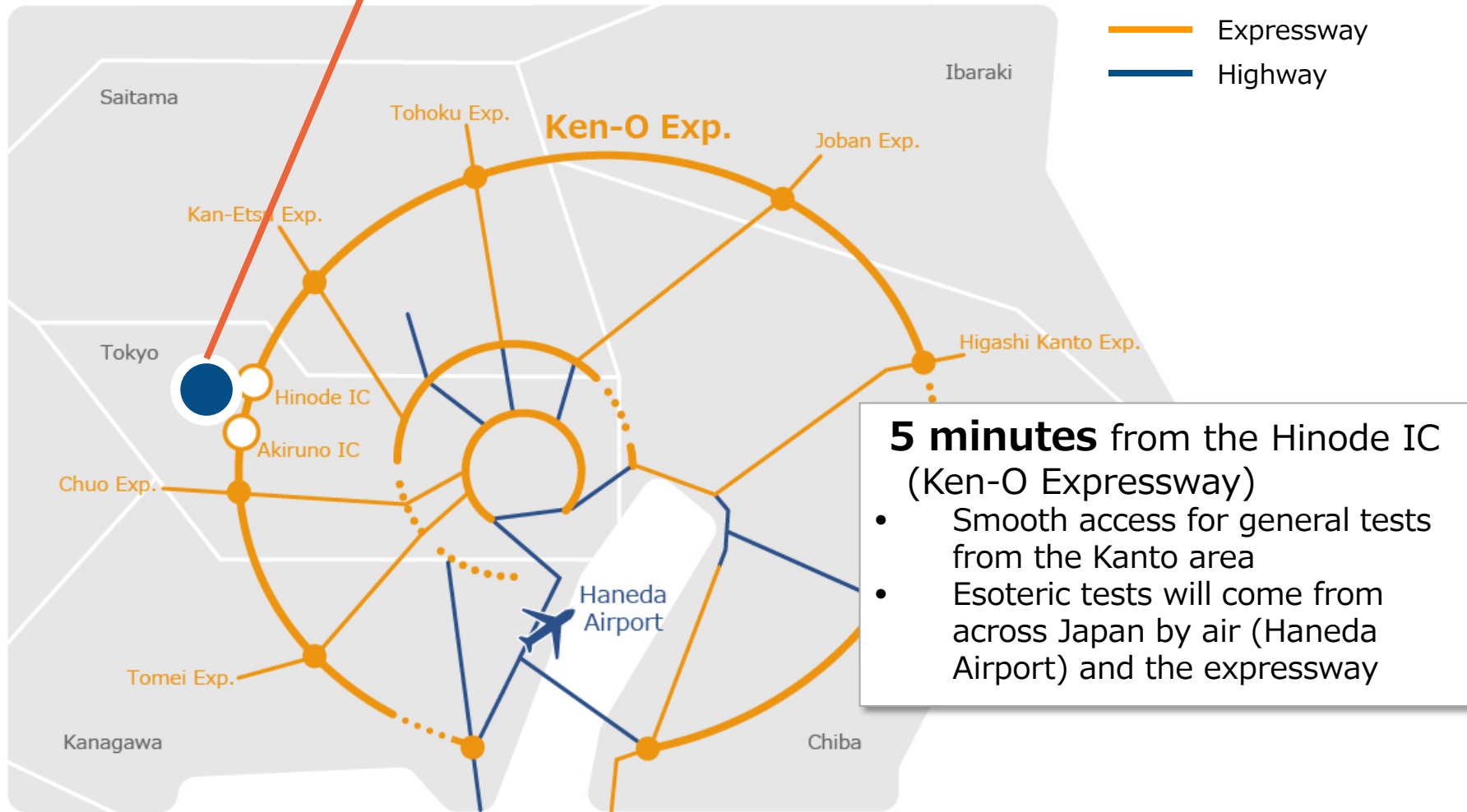


General Testing – Work with local depots

- Consolidate general tests from the Kanto area in the new CLT Laboratory
- Depots admit samples and separate blood serum, before sending on to the CLT laboratory
- Cost reduction through mass processing and full automation



New CLT Laboratory



1. Facilities and environment to support the **cutting edge testing**

- Introduce state-of-the-art testing facilities for expanding on and advancing test items
- Ensure potential for flexible growth by integrating automation and robots
- Increase efficiency and space through effective layout changes

2. Improve **Testing Quality**

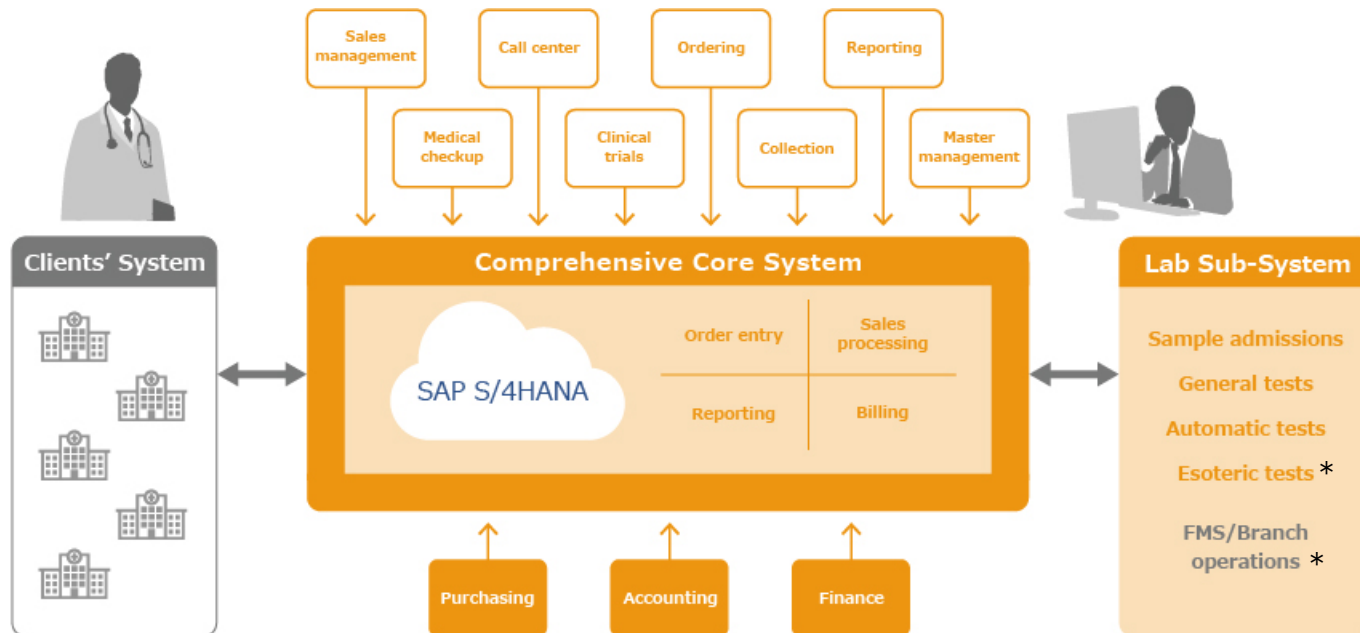
- Keep movement of samples to a minimum for efficiency and to give leeway
- Ensure safety and test quality improvements

3. Incorporate **AI technology**

- Efficiency through automation/semi-automation of the testing process
- Reduce labor through AI/image recognition technology (testing categories such as chromosomal tests/cell-mediated immunity tests etc.)

New Operating System

- Full-scale upgrade of IT system (utilization of the existing software)
- Reduce effect on clients by continuing use of existing interface with clients' systems
- Create optimal environment for business development using cloud and our own data center



*Partial use of existing system

Existing System

New Operating System

1. Fundamental research for **new business creation**

- Focal points of the group's fundamental research and also promotion of open innovation
 1. Innovative analytics platform
 2. Supporting medical advancements, personalized medicine and technological developments
 3. Medical information, informatics, AI

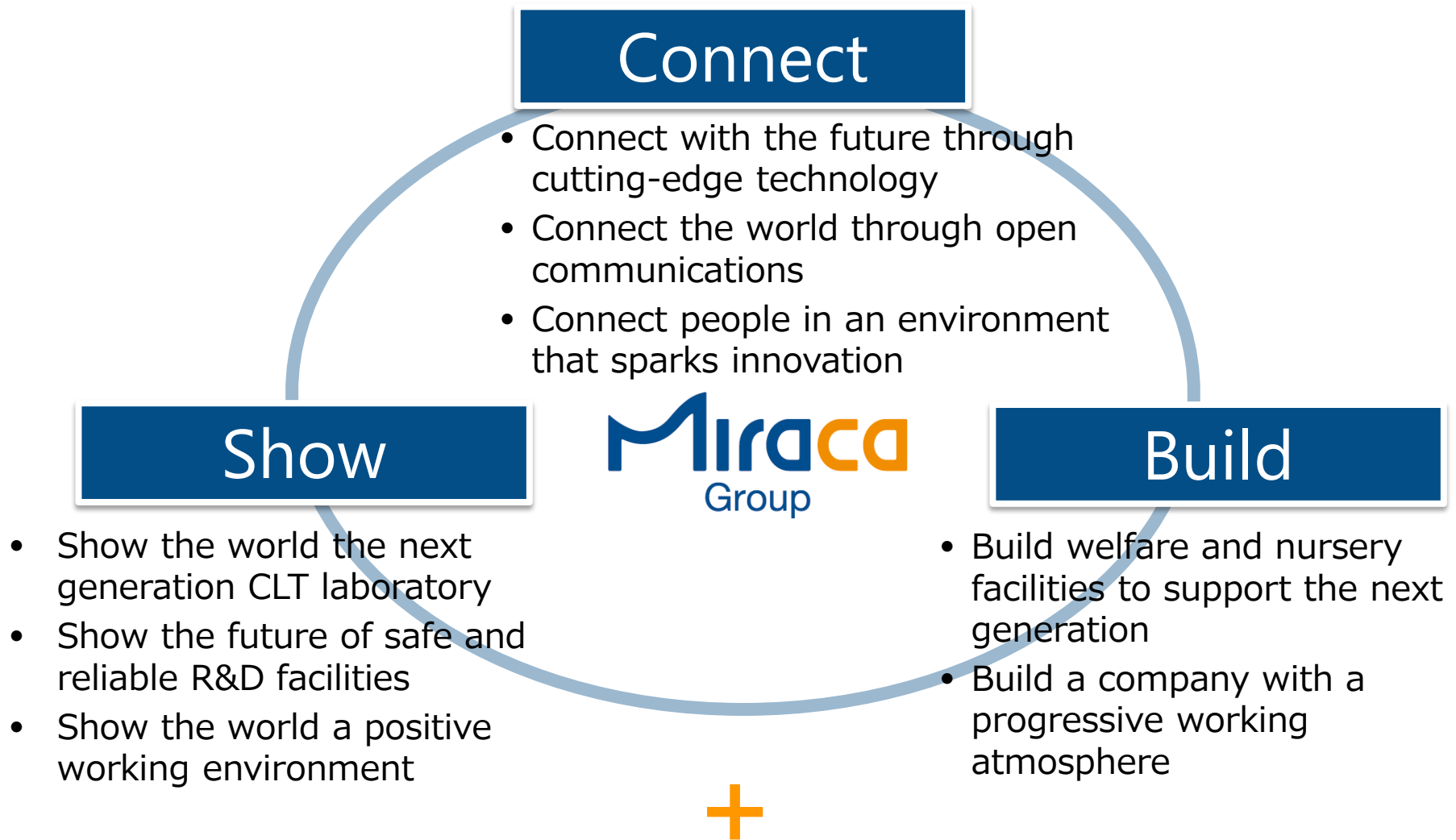
2. Development and introduction of **new test items**

- New test items for the CLT Business
- Development is in close proximity to test sites to ensure swift implementation

3. **Next Generation Platform**

- Developing a next generation platform for the IVD Business

Facility Design Concept

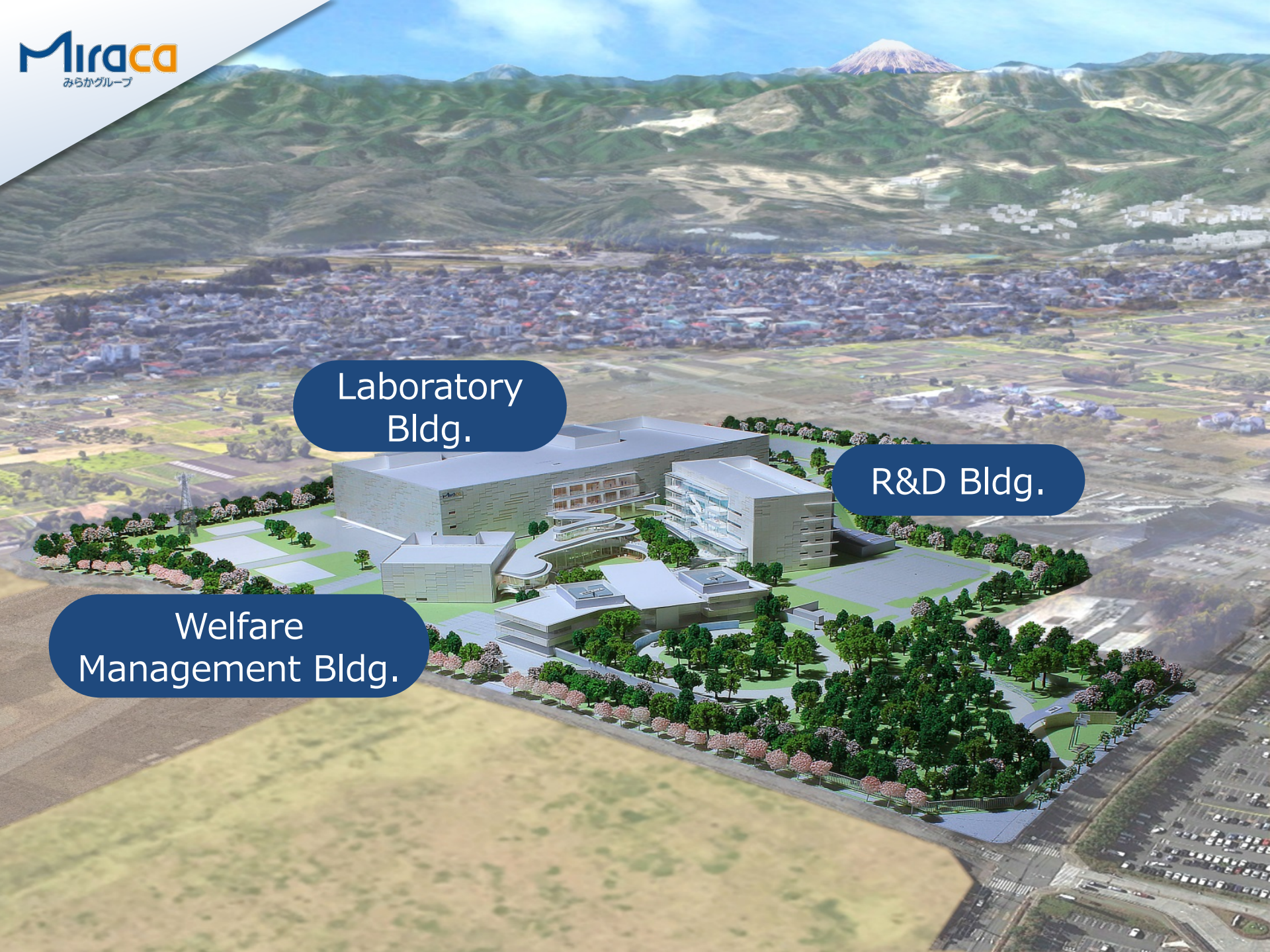


Business continuity even in the event of a disaster

Laboratory
Bldg.

R&D Bldg.

Welfare
Management Bldg.





Total Project Scale and Schedule

Outline of buildings



Laboratory

R&D

Welfare Management

Floors

3

- 1F: Sample admissions, General tests
- 2,3F: Esoteric tests

4

- Reception, visitors' room, conference room
- Hall, research/study room, cafeteria

Total Floor Space (approximately)

46,000m²

10,000m²

10,000m²

Outline

- Seismic isolation
- General tests
 - Full automation
- Esoteric tests
 - Cutting edge instruments
 - Potential for future growth or flexibility of use

- Seismic isolation
- Miraca Research Institute
- IVD
 - Next generation platform
- CLT
 - New test items

- Earthquake resistance
- Multipurpose Hall
 - Conference room (300 seats)
- Accepts visitors
 - Workspaces visible to visitors
- Facility grounds full of greenery

● Site area: 122,000m² Total Floor Space: 66,000m²

Total Scale of Project

Real estate	JPY 50 billion
Land	JPY 13 billion
Buildings (including related equipment)	JPY 37 billion

Off balance sheet
under real estate
financing is also
under consideration

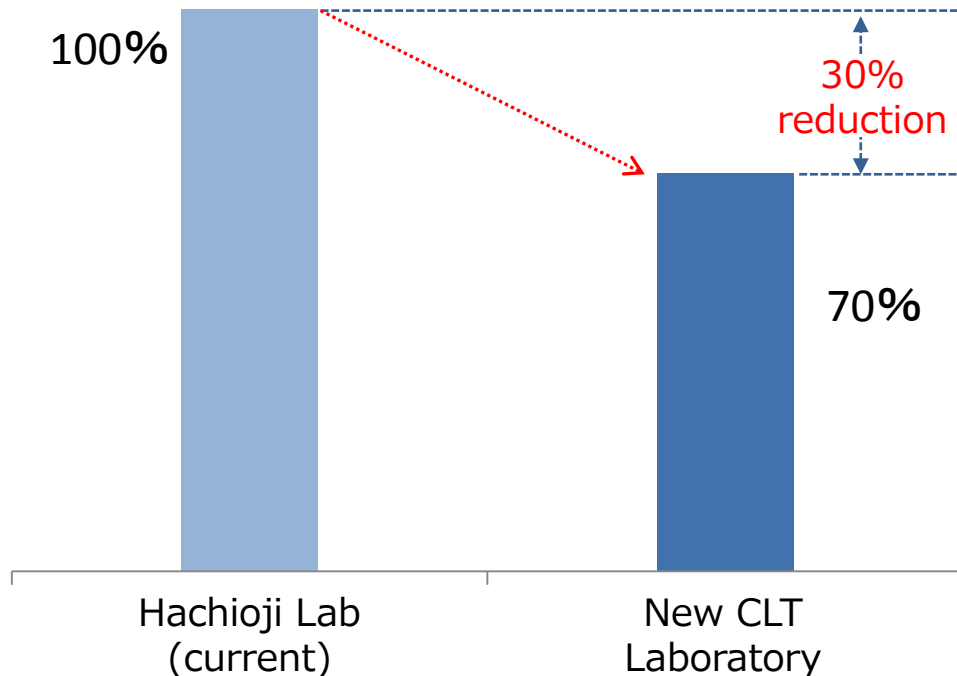
Instrument and Core IT system	JPY 25 billion
Instrument	JPY 17 billion
Core IT system	JPY 8 billion

**Total project
scale
JPY 75 billion**

CAPEX

Cost reduction

- 30% reduction in fixed costs per sample for general tests



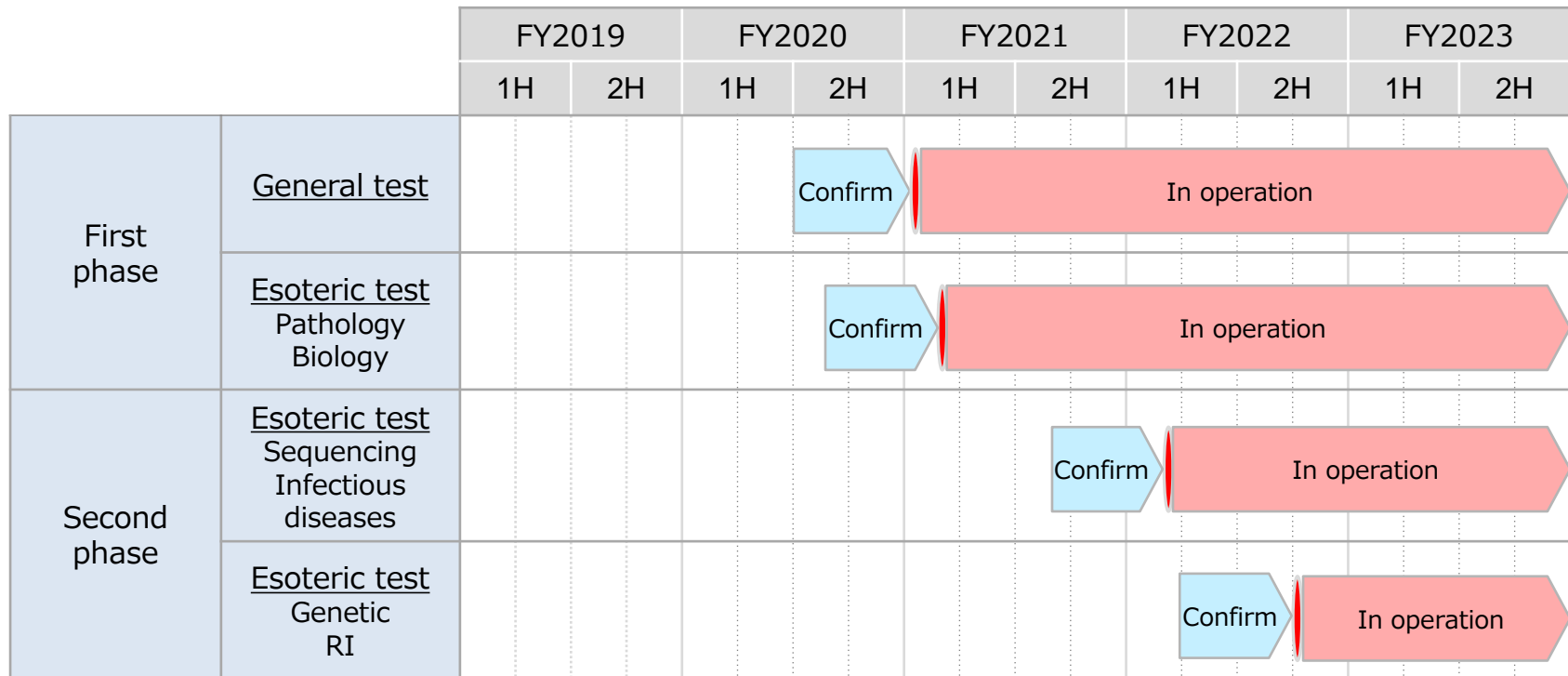
Main points for improvement

- Efficiency by automation
 - Sample admissions
 - Testing operations
- Optimal lab network
 - Concentrated processing for samples from Kanto region
 - Satellite labs conversion to local depots

- Cost reduction for variable costs in general tests, and costs for esoteric tests will be under continuous consideration until the start of operations

Schedule

Construction Start February 2019 (subject to change)
 Completion June 2020 (subject to change)
 Start of Operations Beginning of FY2021



【Contact information】

Miraca Holdings Inc.

Investor and Public Relations Department

Email : mhd.ir@miraca.com

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Factors affecting the performance include, among others, aggravation of the economic situation, fluctuation of the exchange rate, change of regulatory, statutory, and administrative requirements, delayed launch of new products, pressures from the product strategies of competitive companies, and decline of the sales potential of existing products.