

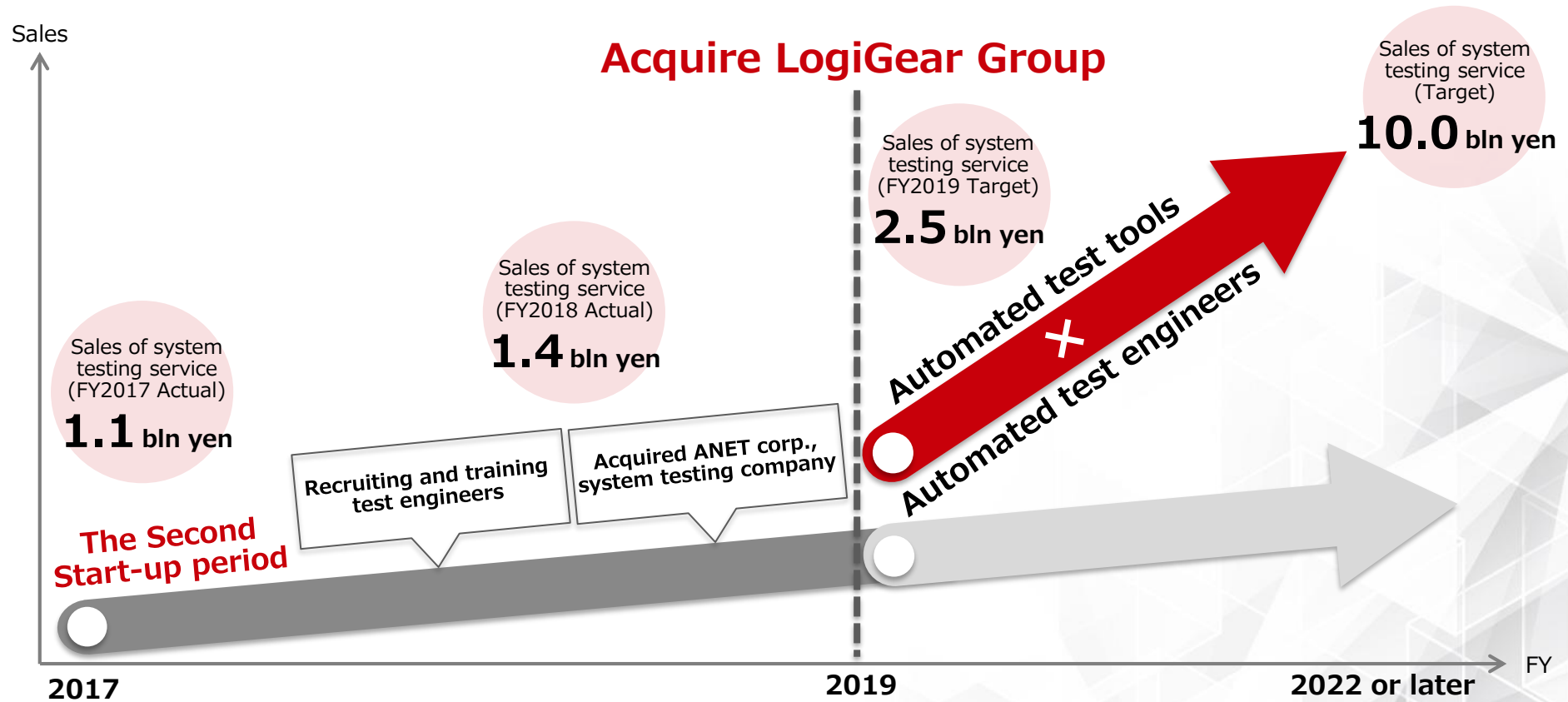
# Strategy for System Testing Business

2019/07/29

Tokyo Stock Exchange First Section : Code 3676  
<https://www.digitalhearts-hd.com/>

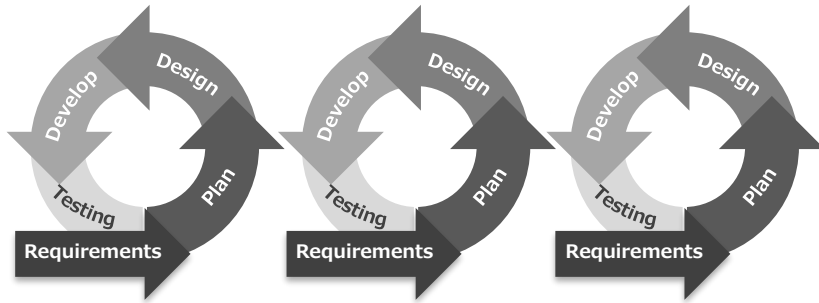
To make the second pillar of our group business,  
we decided to acquire LogiGear Group,  
a world leader in software testing and test automation solutions

To accelerate the growth of our System testing business



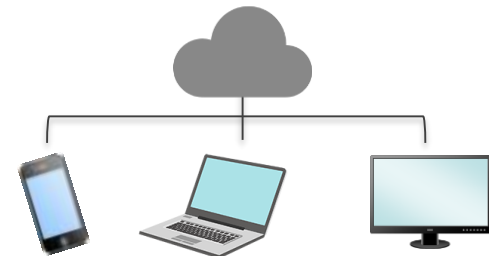
## Popularization of agile method software development

- Shortening of development cycles



## Increase of cloud-based software

- Requiring frequent and continuous updating/upgrading of new functions



## New challenges/requirements to overcome

1. Frequent testing with shorter cycle
2. Re-run test cases with same conditions, steps, settings, etc.

**Increasing demands for testing operations  
at lower costs and higher efficiencies**

**DIGITAL HEARTS Group will provide test automation solutions  
for this increasing demands in the market**

# To acquire 51% stocks of LOGIGEAR CORPORATION, who has rich knowledge and business records in test automation solutions

## Strong points of LogiGear Group

**Specialists**  
leading the market  
of test automation  
solutions



- LogiGear group is led by Mr. Hung and Mr. Takahashi, both are the top experts in the market
- Well-trained test engineers
- Advanced state-of-the-practice test automation methods and tools

**Automated  
Test Tools**  
with the newest  
technology



- Automated Test Tools, requiring no programming skills for high operability
- Frequent updating by utilizing the latest Silicon-valley methods and technologies

**Aprx. 500**  
**Automated Test  
Engineers**



- Large off-shore test centers in Vietnam
- Retain talented human resources with good relationship with universities and colleges in Vietnam

Founded in 1994/Incorporated in 1996, LogiGear has provided a wide variety of system testing solutions to a large number of US clients

## Business Case

|   |  |   |
|---|--|---|
| <p>One of the world's largest providers of products to the energy industry</p> <p><b>HALLIBURTON</b></p>                                | <p>Security product/service provider</p> <p><b>Centrify</b></p>  | <p>Education Software Service</p> <p><b>LeapFrog</b></p>  |
| <p>Provided services</p> <ul style="list-style-type: none"><li>➤ Automated Test Solution</li><li>➤ QA training and consulting</li></ul> | <p>Provided services</p> <ul style="list-style-type: none"><li>➤ Automated Test Solution</li><li>➤ QA training</li></ul> | <p>Provided services</p> <ul style="list-style-type: none"><li>➤ Testing/Automated Test Solution</li><li>➤ QA training and consulting</li></ul> |
| <p>Achievement</p> <p><b>Reduce end-to-end integration testing time by 98%</b></p>  | <p>Achievement</p> <p><b>Achieve 80% test automation coverage</b></p>  | <p>Achievement</p> <p><b>Cut hourly testing costs by 30%</b></p>  |

## Awards



America's Fastest Growing Private Companies  
2009, 2012, 2013 and 2014






US Business News  
Automated Software Testing Company of the year 2017

From labor-intensive to technology-driven service provider  
**Aim to achieve over 70% cases with test automation out of all test solution projects**

## Target Industries

To focus on markets with paradigm shifting

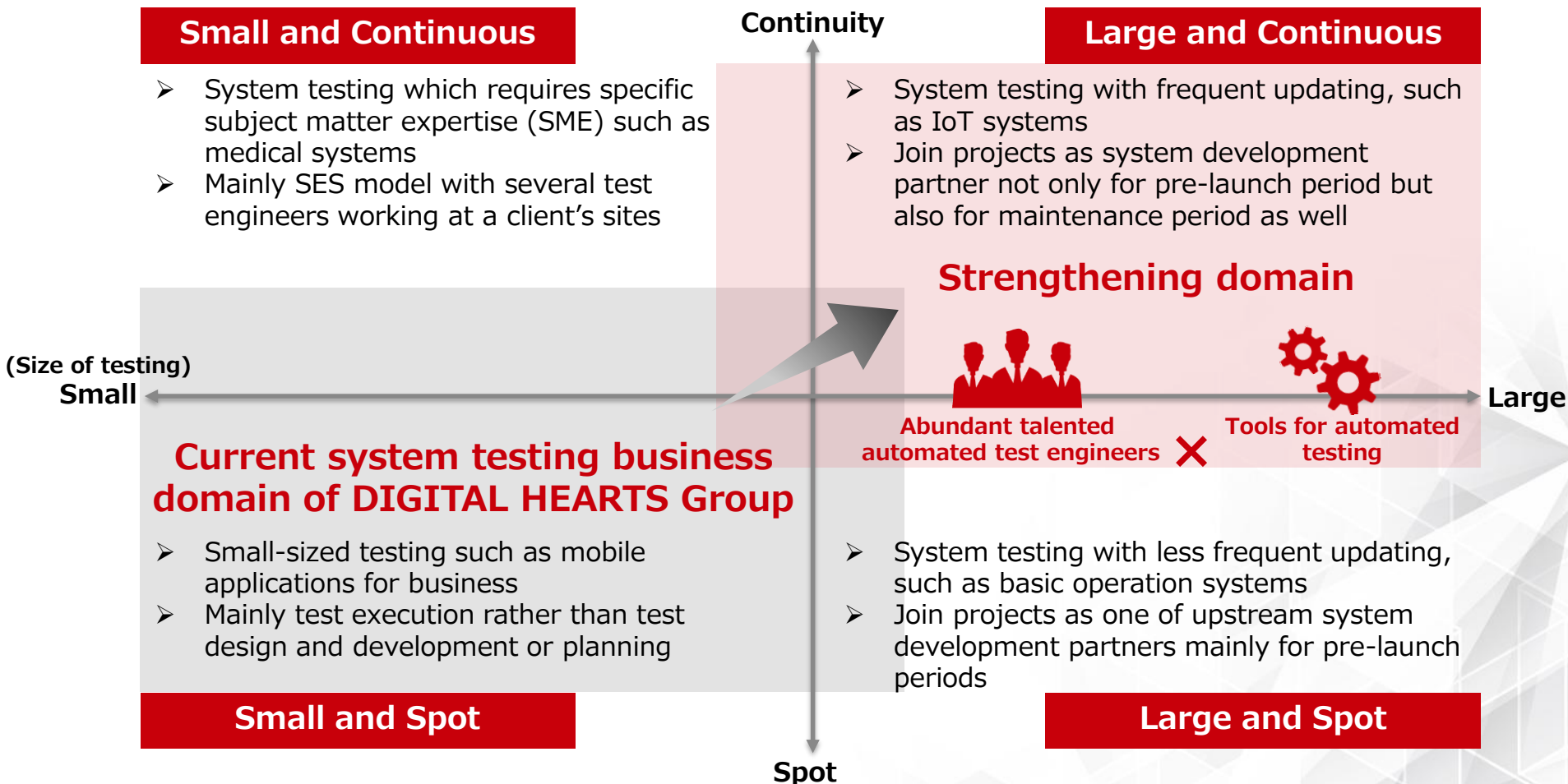
| Shift  | Brick & Mortar → Internet  | Fuel engine → Electric   | Product sales → Subscription   |
|--------|--|--|--|
| Target |  <b>Trading</b><br>(e-commerce) |  <b>Automobile</b> |  <b>IT</b><br>(application) |

### 【Factor】

1. Easy matching with automated test operation
2. Growing market in upcoming years
3. Accelerating cycle time through test operation outsourcing
  - Volume of system testing demands outpaces the availability of the internal engineer resources
  - Relatively less number of engineers with deep knowledge of system testing



**Rapid sales growth by getting large-scale system test projects, which fit test automation solutions and will become annual-based contracts**

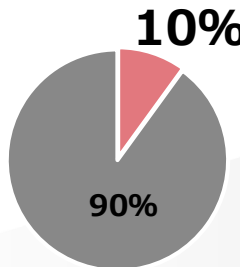


To achieve System testing business sales of **10 bln yen** in 3-5 years

|              |                    |              |                    |              |                     |
|--------------|--------------------|--------------|--------------------|--------------|---------------------|
| Net Sales    | <b>2.5</b> Bln yen | Net Sales    | <b>5.0</b> Bln yen | Net Sales    | <b>10.0</b> Bln yen |
| Gross margin | <b>25%</b>         | Gross margin | <b>30%</b>         | Gross margin | <b>40%</b>          |

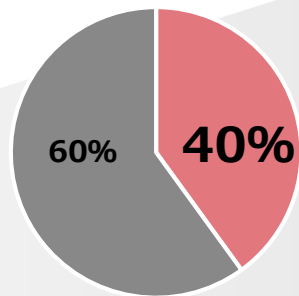
Ratio of cases with automated testing tools

- With automated testing tools
- Without automated testing tools



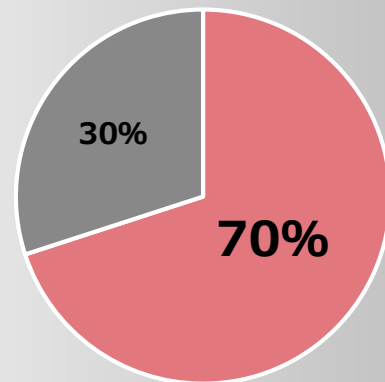
FY2019

- ✓ Improve awareness of automated testing services
- ✓ Actual cases of PoC
- ✓ Hiring talented people for automated test engineering and sales promotions



FY2020

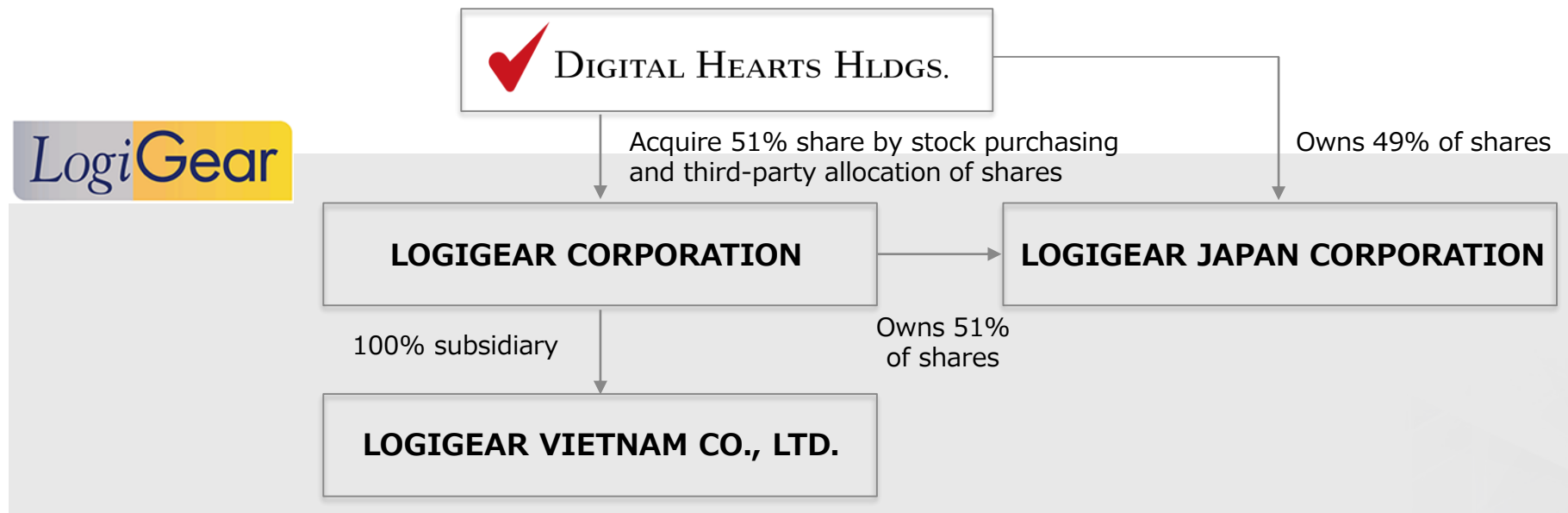
- ✓ Develop and improve the automated test services
- ✓ Getting business contracts after PoC processes
- ✓ Strengthening sales promotions with newly hired specialists



FY2021 or later

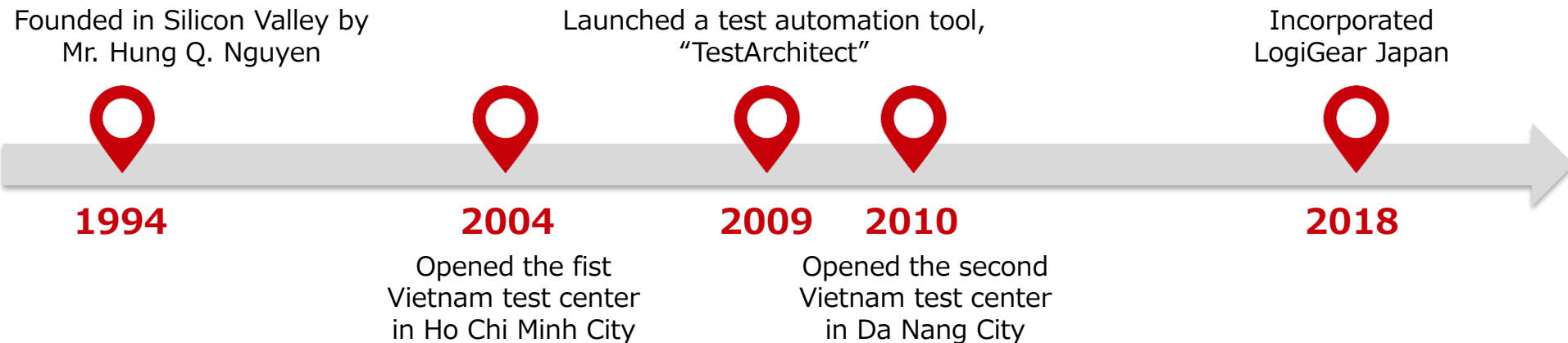
- ✓ Improve total contract value (TCV)
- ✓ Establish the position as a leader of automated test service provider
- ✓ Research and development of next generation testing

## To consolidate LOGIGERA CORPORATION and its subsidiaries in Vietnam and Japan at the beginning of October 2019



### LogiGear Corporation

|                |                          |                   |  |
|----------------|--------------------------|-------------------|--|
| Head Office    | California, USA          | Business          | System testing, System development           |
| Founded        | 1994 (Incorporated 1996) | Major shareholder | Hung Q. Nguyen 83.0%                         |
| Representative | Hung Q. Nguyen, CEO      | Financial results | Net sales USD 11.9 Mln<br>EBITDA USD 0.1 Mln |



## Key Person

### Mr. Hung Q. Nguyen

Hung Q. Nguyen co-founded LogiGear in 1994, and CEO of LOGIGEAR CORPORATION. He holds a Bachelor of Science in Quality Assurance from Cogswell Polytechnical College, and completed a Stanford Graduate School of Business Executive Program. He is co-author of the top-selling book in the software testing field, "Testing Computer Software," (Wiley, 2nd ed. 1993) and other publications including, "Testing Applications on the Web," (Wiley, 1st ed. 2001, 2nd ed. 2003), and "Global Software Test Automation," (HappyAbout Publishing, 2006).

## Key Person

### Dr. Juichi Takahashi

Juichi Takahashi is CEO of LOGIGEAR JAPAN CORPORATION. After receiving guidance from Dr. James Whittaker on software testing, he received a doctoral degree at Hiroshima City University. Prior to LogiGear, Dr. Takahashi held engineering and technical leadership positions in software testing and QA for prominent software/IT and product companies including Microsoft, SAP, and Sony. Throughout his career, he has gained extensive experience in testing and quality engineering. Dr. Takahashi is the author of the top-selling testing book in Japan, "Software Testing for Beginners."