Business opportunities generated from collaboration and exchange among industry, academia and government

Introduction of TAMA Association's activities

The 6th Regional Cluster Seminar
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TAMA Industrial Vitalization Association Inc.
Summary of TAMA
What is TAMA?

It is a wide area covering the following regions:

- The **southwest part of Saitama prefecture** (including Kawagoe, Sayama, Tokorozawa, Iruma, and Hanno);
- the **Tama area in Tokyo** (cities such as Hachioji, excluding the 23 wards of Tokyo);
- and the **central part of Kanagawa prefecture** (Shonan area including Sagamihara and Fujisawa)

\[
\text{TAMA} = \text{Technology Advanced Metropolitan Area}
\]

- The area is located alongside Route 16.
  - Area: approx. 3,000 km\(^2\)
  - Population: approx. 10 million
  - Number of municipalities: approx. 74
- Inland industrial area
- Further development is expected thanks to the construction of Metropolitan Inner City Expressway (Ken-O-Do Expressway)
Potential of the TAMA region

- TAMA takes pride in being a technologically advanced metropolitan area that has twice the shipment value of Silicon Valley.
  (Number of business establishments: approx. 380,000 locations/ product shipment value: approx. 24 trillion yen)

- TAMA is filled with universities.
  (Universities for science and technology number: 40; of which TAMA member universities number: 23)

- TAMA is filled with prominent small- and medium-sized companies.
  - Companies that are developing new products and having strong market capturing capabilities
  - Companies that excel in processing technology
Member universities

- Number of member universities: 35 (national: 4/public: 2/private: 25/other: 4)
  - Tokyo Metropolitan University, Tokyo Metropolitan Institute of Technology, Yokohama National University, Tokyo Denki University, Kogakuin University, Hosei University, Tokyo University of Agriculture and Technology, Saitama University, Meiji University, The University of Electro-Communications, Soka University, Chuo University, Keio University, Musashi Institute of Technology, Kitasato University, Tama Art University, Tama University, Takushoku University, Sanno University, Toyo University, Shobi University, Nippon Institute of Technology, Aoyama Gakuin University, Tokyo University of Technology, Kanagawa Institute of Technology, Surugadai University, Tokyo Keizai University, Tokyo University of Pharmacy and Life Science, Josai University, Seikei University, Ajia University, Nippon Engineering College of Hachioji, Technos International College, Tokyo National College of Technology, Salesian Polytechnic

- Number of universities whose professors are members: 14
  - Hitotsubashi University, Kanto Gakuen, Bunri University of Hospitality, Waseda University, Yokohama City University, Kokugakuin University, Rissho University, Tokyo University of Pharmacy and Life Science, Obirin University, Kanagawa University, Tamagawa Gakuen, Aomori University, Kaetsu University, Polytechnic University
**Member companies that produce new products**

**Top leading TAMA member companies (based on research in 2002)**

<table>
<thead>
<tr>
<th>Company Name</th>
<th>Capital (in Yen)</th>
<th>Location</th>
<th>Domestic share</th>
<th>Product name</th>
</tr>
</thead>
<tbody>
<tr>
<td>Resuka Co., Ltd.</td>
<td>24 million</td>
<td>Tachikawa</td>
<td>100</td>
<td>Hot-dip plating simulator</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>80</td>
<td>Bonding tester</td>
</tr>
<tr>
<td>Stack Electronics Co., Ltd.</td>
<td>60 million</td>
<td>Akishima</td>
<td>100</td>
<td>Oscilloscope probe</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>70</td>
<td>Antenna cell components for ground stations for 3G mobile</td>
</tr>
<tr>
<td>Fuchu Giken Co., Ltd.</td>
<td>20 million</td>
<td>Fuchu</td>
<td>100</td>
<td>Wireless optical bidding system</td>
</tr>
<tr>
<td>Soken Kagaku Co., Ltd.</td>
<td>590 million</td>
<td>Sayama</td>
<td>70</td>
<td>N-methylol acrylamide</td>
</tr>
<tr>
<td>Denshi Seigyo Kokusai Co., Ltd.</td>
<td>50 million</td>
<td>Hamura</td>
<td>70</td>
<td>Impulse winding test machine</td>
</tr>
</tbody>
</table>

TAMA area is filled with the following companies:
1) Companies that have been focusing on developing niche products
2) Companies that develop original products based on their specialized technologies and know-how
Purpose for establishment of TAMA

To realize the potential of the TAMA region, an organization that coordinates the following matters is necessary:

- Industry-university joint research (industry-academia collaboration)
- Ordering and joint research between companies (inter-corporate collaboration)

TAMA Industrial Vitalization Council was established in April 1998.

- It took its first steps as a voluntary organization.
- It was launched with 328 members in total (including 193 companies, 20 universities, and 17 administration members).

TAMA Industrial Vitalization Association Inc. was established in April 2001.

- It became an aggregate corporation.
- It operates with 590 members in total (including 290 companies, 34 universities, and 20 administration members).
Directors of TAMA Association and the executive office

○ Board members (28 directors, 2 auditors)

- Chairman (director): Yuji Furukawa  
  Professor of the Faculty of Technology, Tokyo University of Agriculture and Technology
- Vice-chairman (director): Yoji Kawamoto  
  Chairman of Toho Electronics Inc. (Kanagawa)
- Vice-chairman (director): Takeo Kato  
  Chairman and director of Fuji Electric Co. Ltd. (Tokyo)
- Vice-chairman (director): Shigeki Sugiyama  
  President of Sigma Koki Co. Ltd. (Saitama)
- Executive director: Makoto Ibuka  
  President of Tama-TLO Inc.

○ Executive Office

- Address: Hachioji Square Bldg., 11th floor, Hachioji-shi, Tokyo
- Number of employees: 9
  - 4 regular employees  
    (R&D, accounting, administration, web management);
  - 5 loaned employees  
    One each from local governments (Sagamihara City, Hachioji City, and Sayama City)
    2 from private sector (Seibu Shinkin Bank)
In the TAMA Association, the general meeting is the supreme decision-making institution and the board of directors is a business operation institution.

TAMA support organizations

TAMA is backed with local support

Sayama City ((14)- dispatch of personnel to the secretariat, outsourcing)
Sayama Chamber of Commerce and Industry ((12)- implementation of national coordinating activity support program to support company visits by members, (13)- cooperation for Mini-TAMA meetings)

Kawagoe Chamber of Commerce and Industry ((10), (11) cooperation for event service, (13)- cooperation for Mini-TAMA meetings)

Metropolis of Tokyo ((13) dispatch of personnel to the secretariat, outsourcing)

Seibu Shinkin Bank ((13)- dispatch of personnel to the secretariat, (14) cooperation for Mini-TAMA meetings, (15)- tie-up for incubation center)

Fuji Electric Co. Ltd. ((13)- tie-up for incubation center)

Hachioji City ((13)- provision of office premises free of charge, (14) dispatch of personnel to the secretariat, outsourcing)

Sagamihara City ((13)- dispatch of personnel to the secretariat, (14) outsourcing)

Industry Promotion and Development Foundation of Sagamihara ((10)- operation of information network center, (13) secondary office in charge of information network service)
TAMA players

TAMA network

TAMA Industrial Vitalization Association Inc.

Universities

TAMA coordinators

Outsourcing contracts

Participation

Environmental maintenance

Business tie-ups

TAMAWEB

Industry-academia collaboration

Technical evaluations Royalties

Commercial and industrial organizations

Patent applications Maintenance of rights

Member companies

Preferential disclosure Grant of license

Administration

Japanese Patent Office

Inventions

Inter-corporate collaboration

Spread of measures

Enterprise support Fund offers

Other companies

TAMA-TLO Inc.

Royalties

Grant of license

Local financial institutions

Companies

Royalties

Enterprise support Fund offers
TAMA Association Network

Human resources
- Many experts (coordinators)
- Utilization of staff from major companies, etc.

Goods resources (information)
- Network maintenance
- Distribution of information
- Building of databases, etc.

TAMA Association Resources 590 organizational/individual members
(290 companies, 35 universities, 20 municipalities)

Capital resources
- Governmental support (subsidies)
- Injection of private fund (banks, VC), etc.

Collaborative organizations
- Commercial and industrial organizations
- Universities and research institutions
- Local support organizations, etc.

Supporting small- and medium-sized companies by combining local forces
TAMA Activities
**TAMA activities list**

1. **Information network service**  
   (Secretariat: Industry Promotion and Development Foundation of Sagamihara)  
   Promotion of registration to the product and researcher databases, introduction of IT to member companies, formulation of new ordering system (WEB-EDI), etc.

2. **Industry-academia collaboration and R&D promotion service**  
   (Secretariat: Head office)  
   Patent strategy seminar, internship service, coordination for implementing new local consortium service (outsourcing service for technological R&D), etc.

3. **Event service**  
   (Secretariat: Head office)  
   Technological exchange exhibitions, order exchange meetings, presentation of joint research results, etc.

4. **New business incubation support service**  
   (Secretariat: Head office)  
   Business plan HSJ project, promotion of human resource mobility, etc.

5. **Cultivation of market and overseas development support service**  
   (Secretariat: Kawagoe City)  
   Seminar on how to cultivate markets, cross-industrial matching sessions, support for participation in overseas exhibitions, etc.

- “Business Solutions Companies Visits,” “Mini-TAMA meetings” (community interaction)
- Collaboration with local “Entrepreneur Support Centers” and “Financial Institutions”
Information network service
provision and exchange of information through active use of website

TAMA website

Integrated searching of industry/academia database
- Information on products/technologies/services
- Information on researchers/research themes

University information searching robot (automatic searching of university researchers’ websites) From April 2002

Virtual laboratory database (testing/research equipment) From April 2003

Promotion of industry-academia collaboration and order volumes

Information on support measures such as subsidies

Event/seminar information (Internet seminar)

Mini-TAMA information

Number of accesses:
- 2,000 to 6,000 per day
- Recently it has increased to more than 100,000 per month.

Member’s private information database (Realization of CRM) From January 2004

35 Universities

290 companies

Mailing list service

15
TAMA Association supports practical application of joint studies between industry and academia from the R&D stage to commercialization of products in the following process.
Event service  Business matching sessions

Business matching sessions tied up with Seibu Business Fair
Date: Friday, May 16, 2003

Participants: 28 companies
(R&D division: 14/Outsourcing division: 14)
Ordering companies: 24 major and medium-sized companies

Resulted in over 100 million yen in orders last year!

Presentations  Individual business meetings  Social gathering party

3 training sessions prior to the matching sessions
1) Training on how to prepare presentation materials with PowerPoint
2) Preliminary evaluation of presentation by experts
3) Rehearsal of presentation (10-minute presentation)
New business incubation support service

**Business plan HSJ project**  the powerful support of an expert team

**H = Hop**

**Presentation seminar**
- Learn effective presentation skills
- Experts will evaluate presentations and give advice

**S = Step**

**Business plan contest**
- Contest for business plans that cleared document examinations
- For those considered as outstanding plans, incentives will be given. (Outstanding award: 1, Incentive award: 2)

**J = Jump**

**Matching sessions with VCs, etc.**
- Matching sessions in which participants who won awards in the contest make presentations to VCs, etc., and carry out individual business meetings.

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**Expert team (7 experts)**
Persons in charge of new business/technology at major companies, a former president of a major marketing company, staff from a company specialized in marketing, a certified public accountant, a certified management consultant, and a small- and medium-enterprise management consultant.

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At the business plan contest

At the matching sessions with VCs, etc.
New business incubation support
promoting mobility of human resources

Matching scheme

Staff from major companies

Small- and medium-sized company operators

Job placement companies that are TAMA members

Recruit Ablic Inc., Yokogawa Human Create Corporation, CareerRize Corporation, Sony Human Capital Corporation

Achievements in FY 2002

25 companies requested
65 candidates recommended in writing
29 candidates remained for the interview

Recruitment of 12 employees (by 10 companies)

Technological development (1), design (5), sales (1), maintenance (1), R&D (2), NC programmer (1), accounting (1)
We make business alliances or collaborations with incubation facilities that corporations (FIO), the administration (SIC21), and financial institutions (SIO) prepare. We give advice about technological problems, cultivation of markets, and other managerial issues so that our tenants may operate their businesses swiftly.

In FIO, Tokyo Systems Factory in Fuji Electric Co., next to our office, plays the role of backyard function (testing, evaluation, and experiment) of manufacturing corporations. In SIO, Central General Accounting Office helps outsourcing of finance and personnel. Collaborating with the soft support provided by the TAMA Association, they give you comprehensive assistance to realize your idea.
We provide you with opportunities for industry-academic-government collaboration in a number of regions.

We hold a Mini-TAMA Meeting where local business managers, university researchers, university students, staff members of the Kanto Department of Economy, Trade and Industry and local governments can get together and exchange their opinions informally and frankly. We hope you will use these opportunities positively to create local networks. (Non-members of the TAMA Association are welcome to these meetings.)

**Mini-TAMA Seibu Meeting**
(West of Saitama prefecture)
Meeting: the second Friday every month
18:00 - 21:00
Location: Sayama(even month) / Kawagoe(odd month) Boards of Trade

**Mini-TAMA Santama Meeting**
(Tama region of Tokyo)
Meeting: The third Friday of even months
18:00 - 21:00
Location: Seibu Shinkin Bank, Haijima Branch

**Mini-TAMA Sagami Meeting**
(provisional name)
We plan to establish Mini-TAMA branch office in the center of Sagamihara city as the main office of Kanagawa prefecture in the near future.
Success case in TAMA
ONLY 8 workers-INC. tried R&D by Industry-university cooperation

1. Yoneyama factory Inc. 株式会社米山製作所 (Mizuho town, TOKYO)
   employee: 8 persons  capital: ¥10mil.
   The contents of operating:
   making and reforming metal mold for printed board (1975～)
   waterjet-cutting (1990～)
   bending for light metal square bar (e.g. alminium) (1999～)

2. Industry-university cooperation
   theme: development bending machine for light metal bar
   partner: Tokyo Metropolitan Institute of Technology (Hino c., TOKYO)
   Department of Mechanical Systems Engineering
   Dr. Shuji SAKAKI
   (Research areas: Mechanics of Materials, Metal forming,
   stability and working limit of material processing.)
development bending machine for light metal bar

right processing with Distortionless, crackless and wrinkless
development bending machine for light metal bar

- right processing with Distortionless, crackless and wrinkless
- Development of bending processing for Light metal (e.g. Aluminum) square bar in difficult conditions (thin meat, smallness R, asymmetry)
- Mass production is possible.

回転引き曲げ方式
development bending machine for light metal bar

(PULL domain)

Cracking-area

Wrinkle-area

good processing area

(PUSH domain)

Cracking-area

Wrinkle-area

good processing area

• dissolution of distortion (modification control)
  ◦ using core

• dissolution of Compression domain (wrinkle-control) ◦ extension

• control against overextension (crack-control) ◦ shaft controle
Destination of TAMA
(Outline of the next 5-year plan)

TAMA
New Business Incubation
Strategy Plan

(2003 to 2007: Phase 2 five-year plan)
Phase 1 (1998 to 2002)
Formation of industry-academia-government network

Phase 2 (2003 to 2007)
Enhancement of system to support commercialization

TAMA network

Universities

TAMA Industrial Vitalization Association Inc.

TAMA coordinators

Outsourcing contracts

Japanese Patent Office

Non-member companies

Member companies

Inter-corporate collaboration

Commercial and industrial organizations

Local financial institutions

Business tie-ups

TAMA-TLO Inc.

Member companies

Outsourcing contracts

TAMA-Web

Industry-academia collaboration
Numerical target

Transitional goals for tie-up projects in achieving numerical target

- **Number of tie-up projects in past 5 years**: approx. 90

- Coordinating 250 tie-up projects, of which 50 projects to be commercialized at an early stage

**Graphical Representation:**
- Colored bars represent:
  - Blue: Number of tie-up projects in phase 1
  - Yellow + Orange: Number of tie-up projects targeted in phase 2
  - Orange: Number of commercialized projects targeted in phase 2
◆ Vision of Phase 2 five-year plan ◆
Utilizing a sophisticated network to develop “TAMA” into a world-class new business incubation center

1. Strengthening member’s ability in R&D
2. Supporting commercialization of new products/technologies
3. Supporting entrepreneurs and entry to new business fields
4. Strengthening tie-ups with local financial institutions
5. Strengthening of interregional collaboration
6. Expanding TAMA by increasing members and building a stable operation system
**TAMA’s challenges**  
Production of "salable" goods

1. Customers decide product specifications. *(Unnecessary functions should not be added.)*
2. Review product specifications by taking development period into consideration *("Not too early, but not too late.")*
3. The basic of product development is to focus on "who will pay how much for what."