

*International Forum on Elite Sport IV*

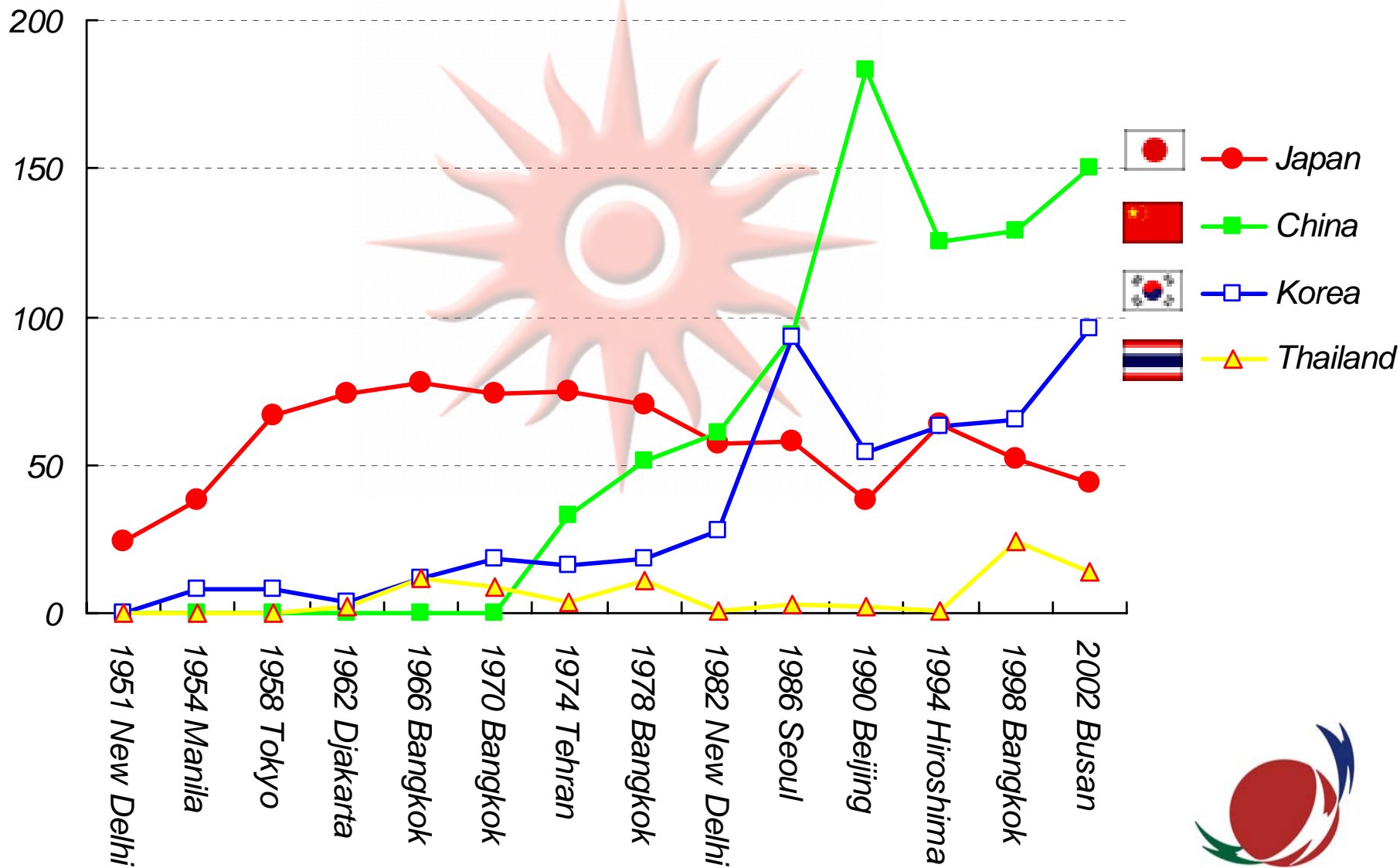
*The Challenge of Major Games for  
Center Operations*



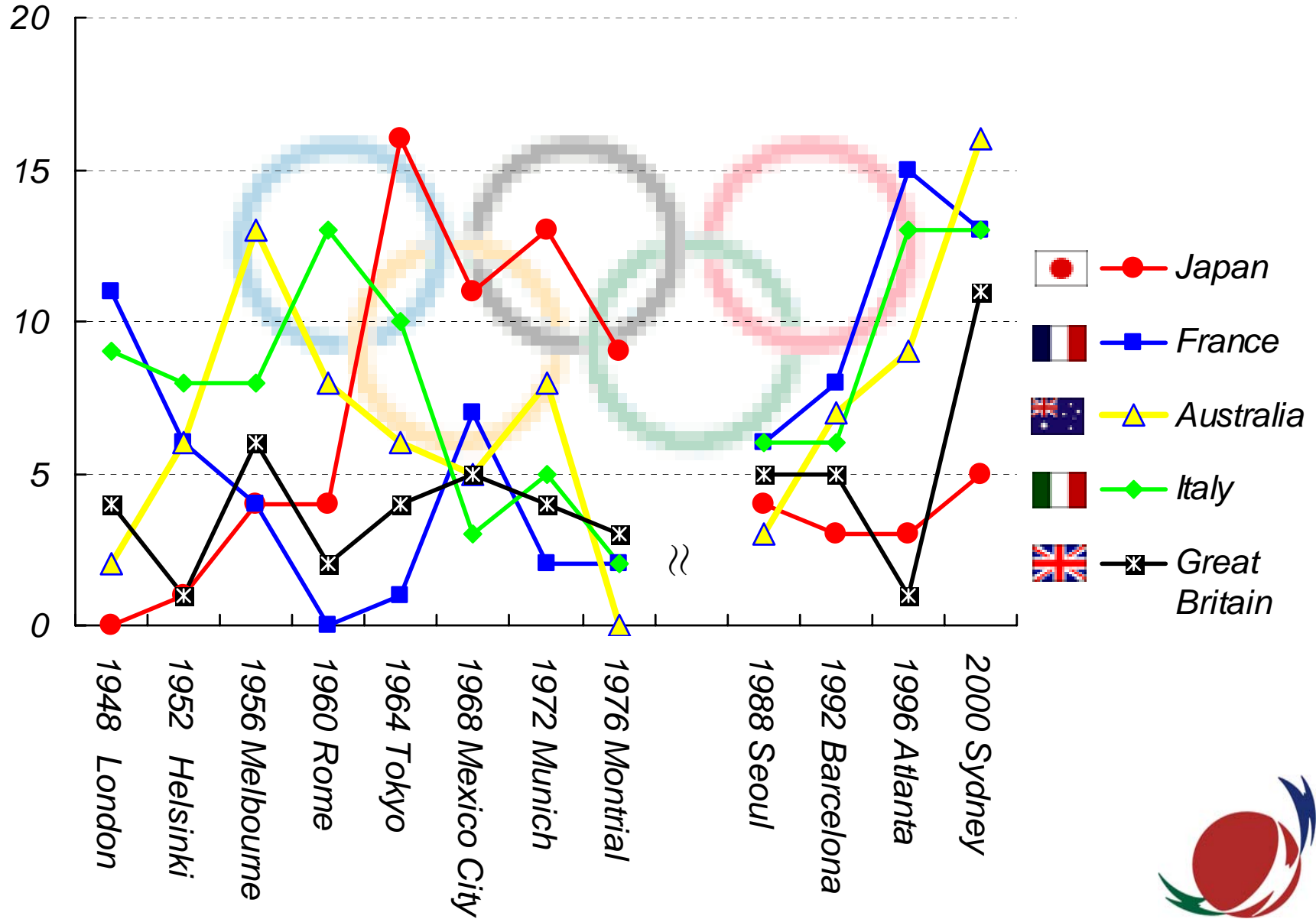
*Takashi Kawahara MD*  
*Japan Institute of Sports Sciences*



# Gold Medals on Asian Games



# Gold Medals on Olympic Games





# *New Sport Policy 1987*

## *1986 Asian Game*

- *Japan fell to 3<sup>rd</sup> position.*

## *1987 Government*

- *Sport Fund : financial support to excellent athlete  
and his coach*
- *Pay to National Coaches*
- *Decided to establish JISS*



**National Agency for the Advancement of Sports and Health (NAASH)**

***Japan Institute of Sports Sciences  
(JISS)***

**1988      Planning Started**

**1998      Nagano Olympic**

**1998      Construction began**

**April 2001      Established**

**October 2001      Open**





# Basic Plan for the Promotion of Sports 2000~2010 (2000)

*Ministry of Education, Culture, Sports and Technology  
(MEXT)*

- 1. Life-long Sports (sports for all)*
- 2. Elite Sport*
- 3. School-based Physical Education and Sports*



# Basic Plan for the Promotion of Sports

## 2. Elite Sport

*Target*                      *Olympic Medals* 1.7%(1996) ⇒ 3.5%

### *Measures*

*A1) Program to develop athletes from Junior to Top Level*

*2) National Training Center*

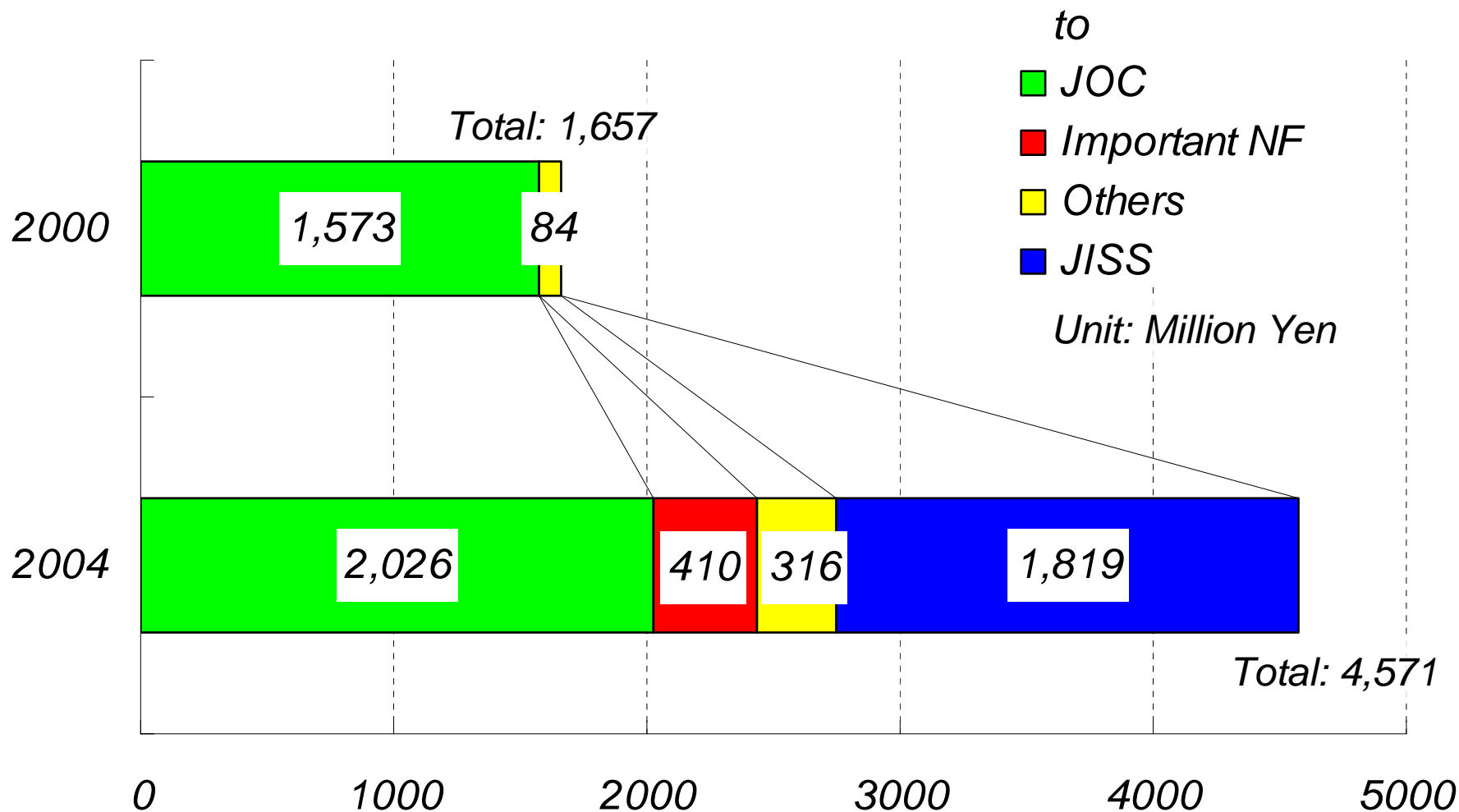
*3) National Coach Academy*

*B1) Sports Medicine and Sciences*

*2) Anti-Doping*

*3) To hold International Competitions*

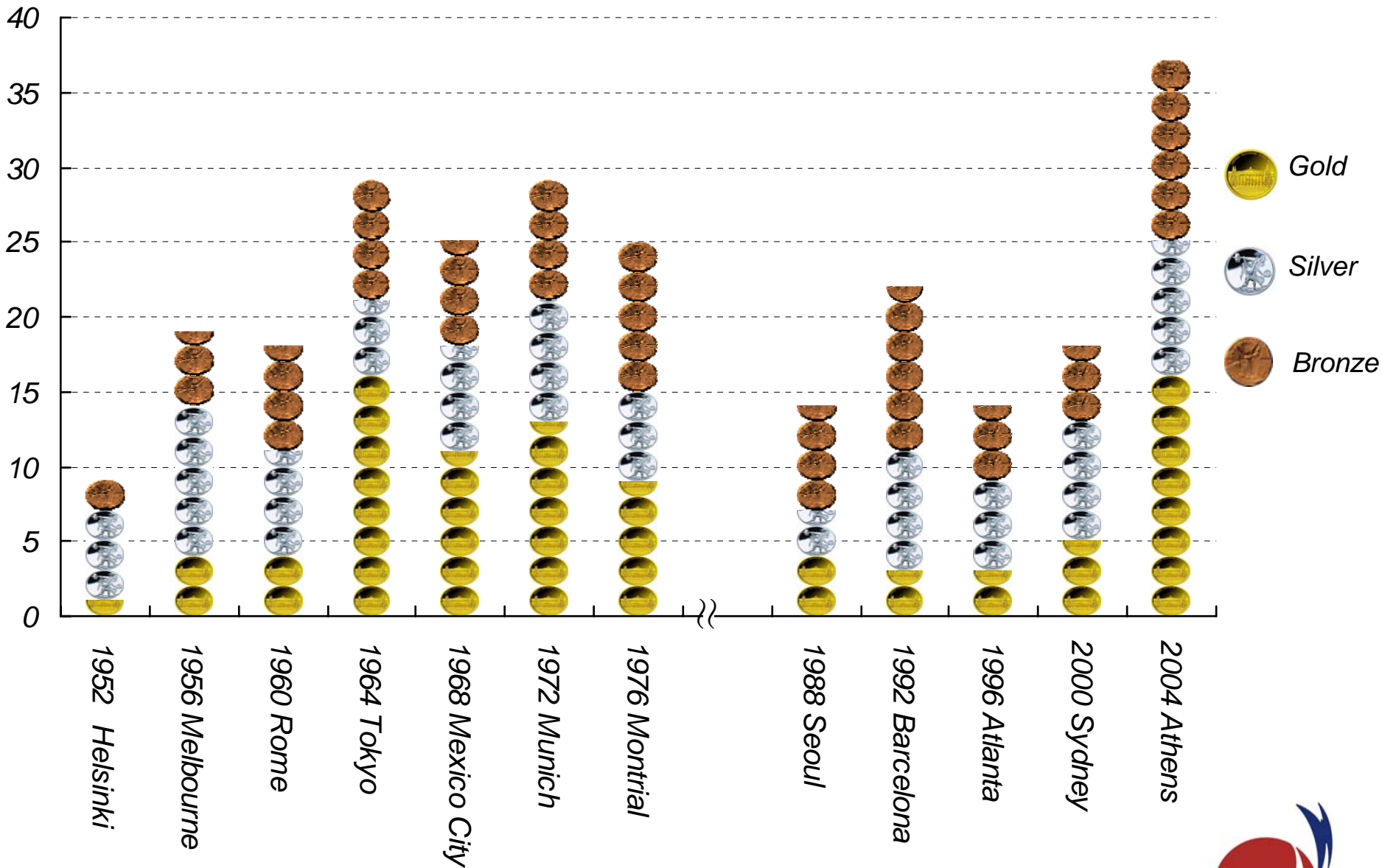




## Money Supply from MEXT for Elite Sport







**Change in Number of Medals on Olympic Games**





## Role of JISS

- **To support the elite athletes with sports sciences, medicine and information.**
- **To conduct research related with enhancement of athletes' performance.**
- **To be the COE of sports science, medicine and information.**



# Building Scale of JISS

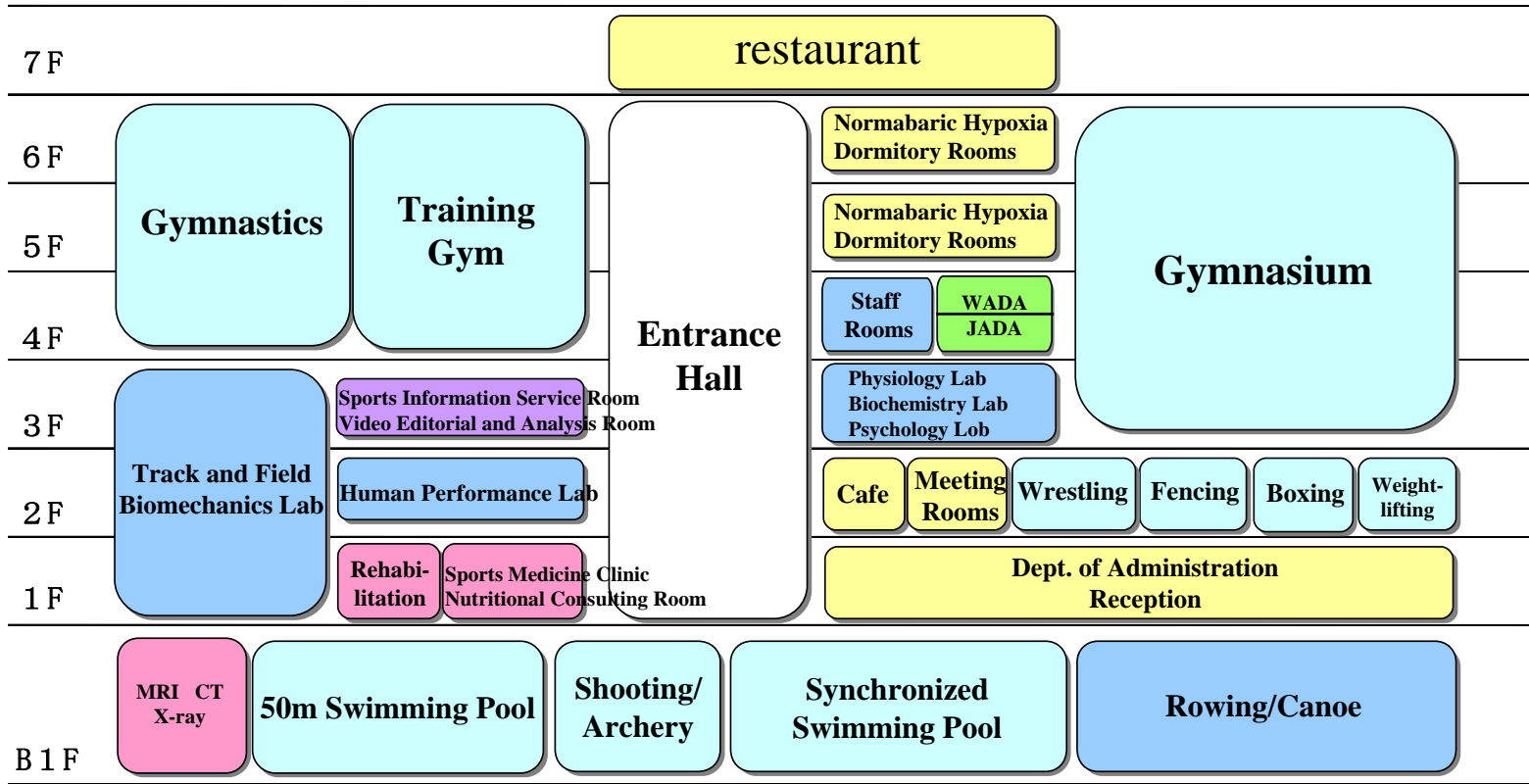
**Building Area**      **5,936**  
**m<sup>2</sup>**

**Total Floor Area**    **29,780**  
**m<sup>2</sup>**





# Structure of Building



- Dept. of Sports Science**
- Dept. of Sports Information**
- Dept. of Administration Service Facilities**
- Dept. of Sports Medicine**
- Training Facilities**
- WADA JADA**





B1F

Shooting/Archery

50m Swimming Pool

Synchronized Swimming Pool

Dept. of Sports Medicine  
(MR, CT, X-ray)

Rowing/Canoe



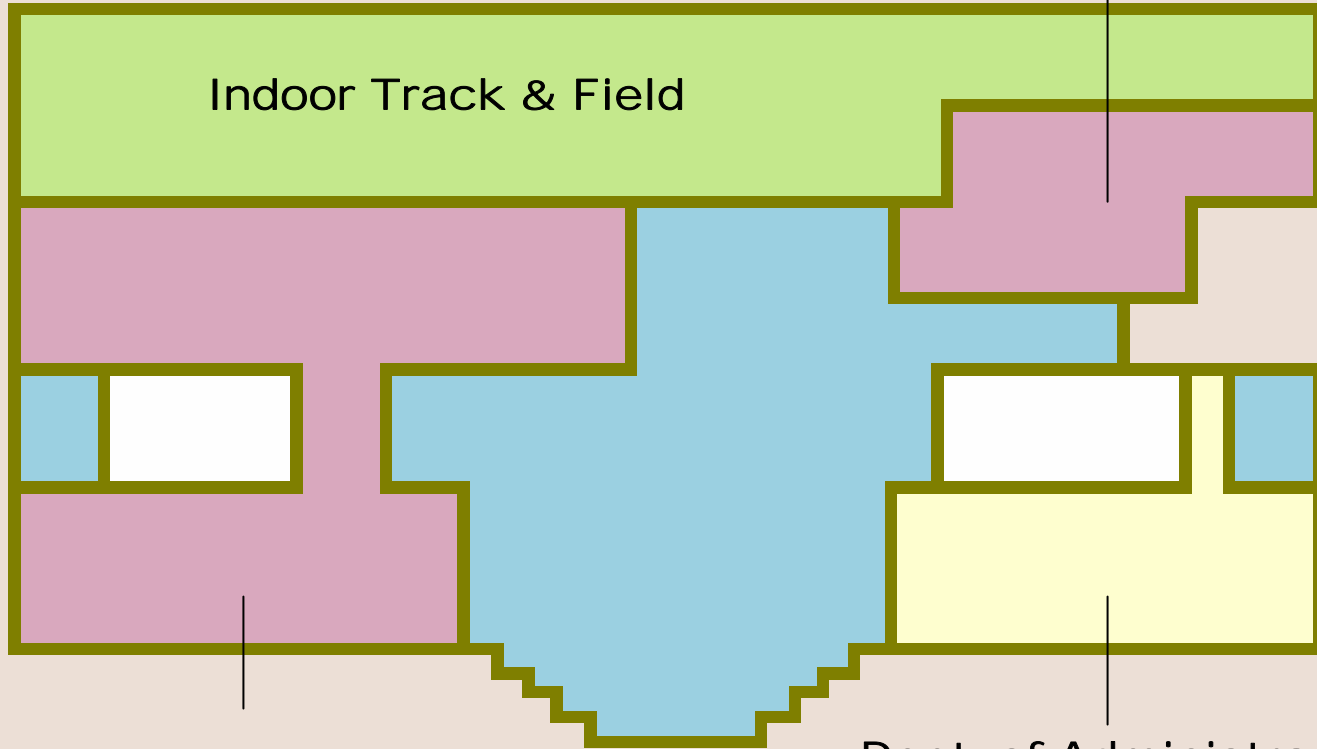
1 F

Dept. of Sports Medicine  
(Rehabilitation)

Indoor Track & Field

Dept. of Sports Medicine  
(Sports Clinic)

Dept. of Administration



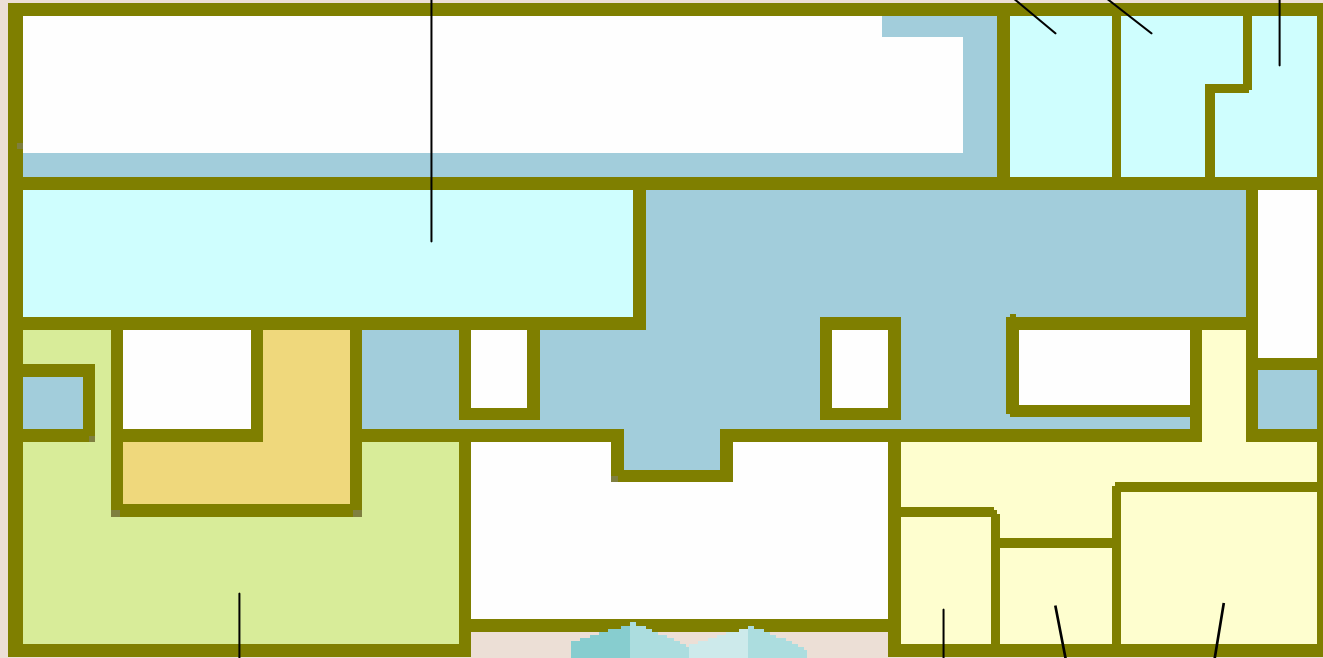
2 F

Wrestling

Fencing

Boxing

Weightlifting



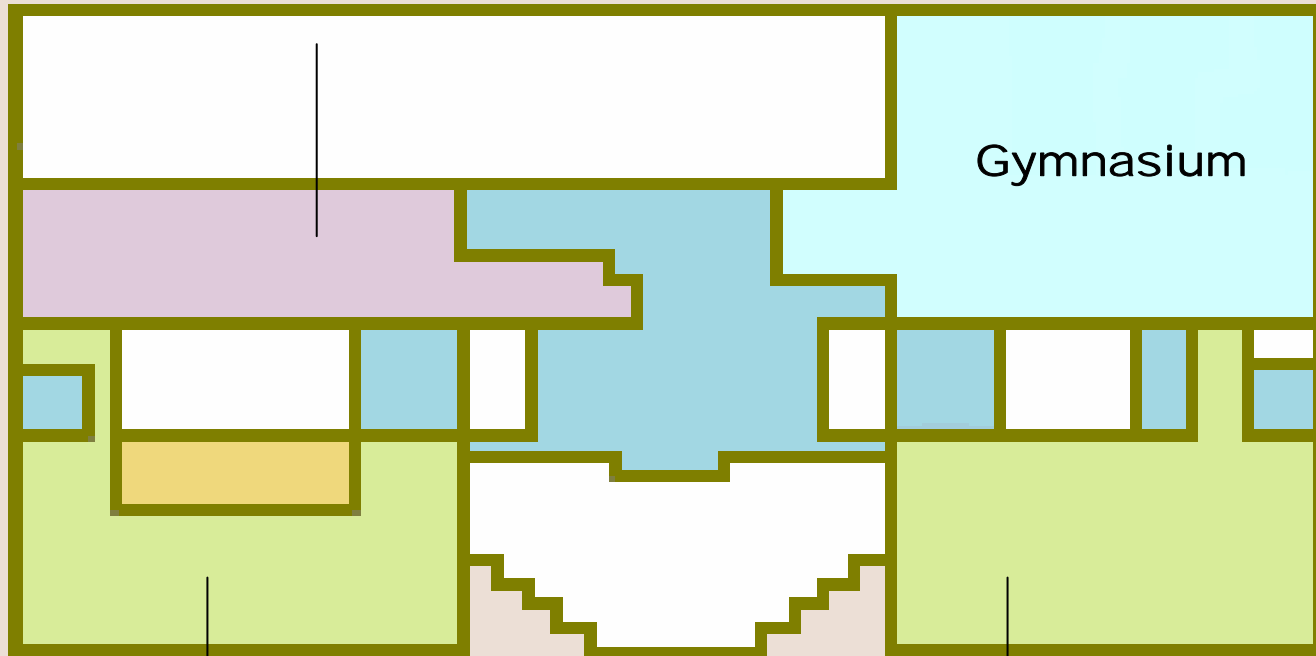
Dept. of Sports Science  
(Human Performance Lab.)

Cafe

Conference Rooms

3 F

Dept. of Sports Information  
(Sports Information Service)



Dept. of Sports Science  
(Physiology, Biochemistry,  
Environmental Research Lab.)

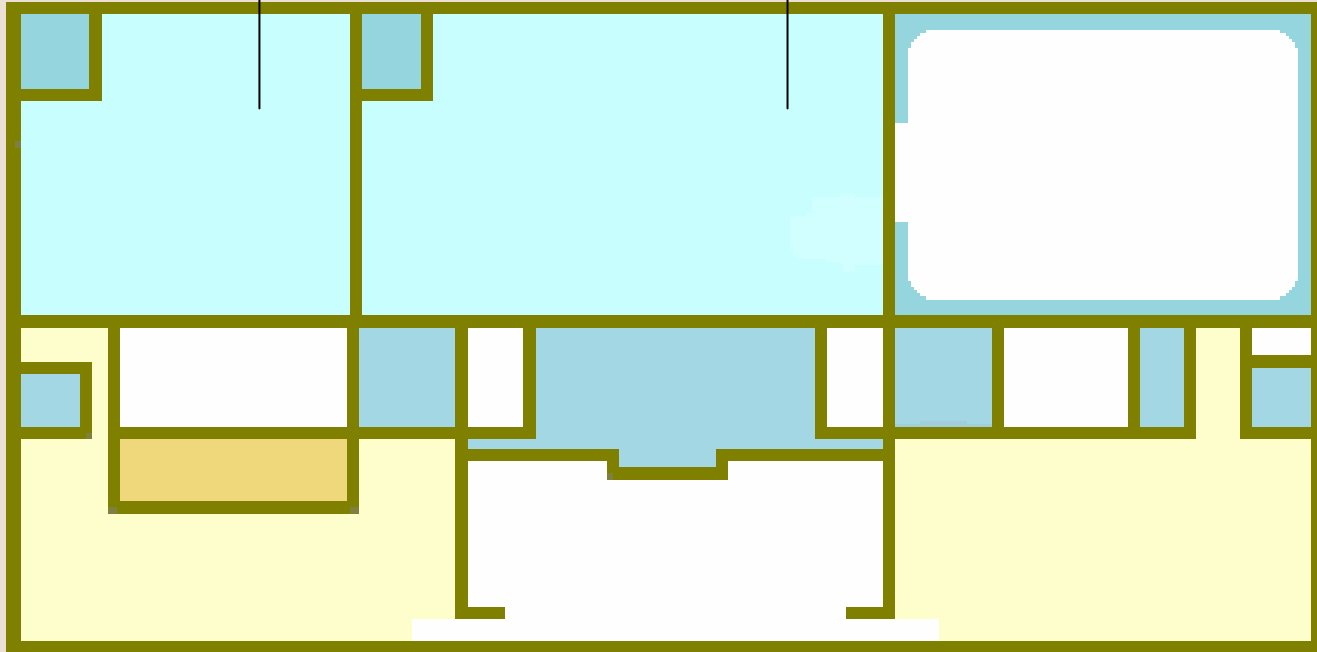
Dept. of Sports Science  
(Sports Psychology & Video Editorial)



4 F

Gymnastics

Training Gym



5, 6 F

Dorm Rooms



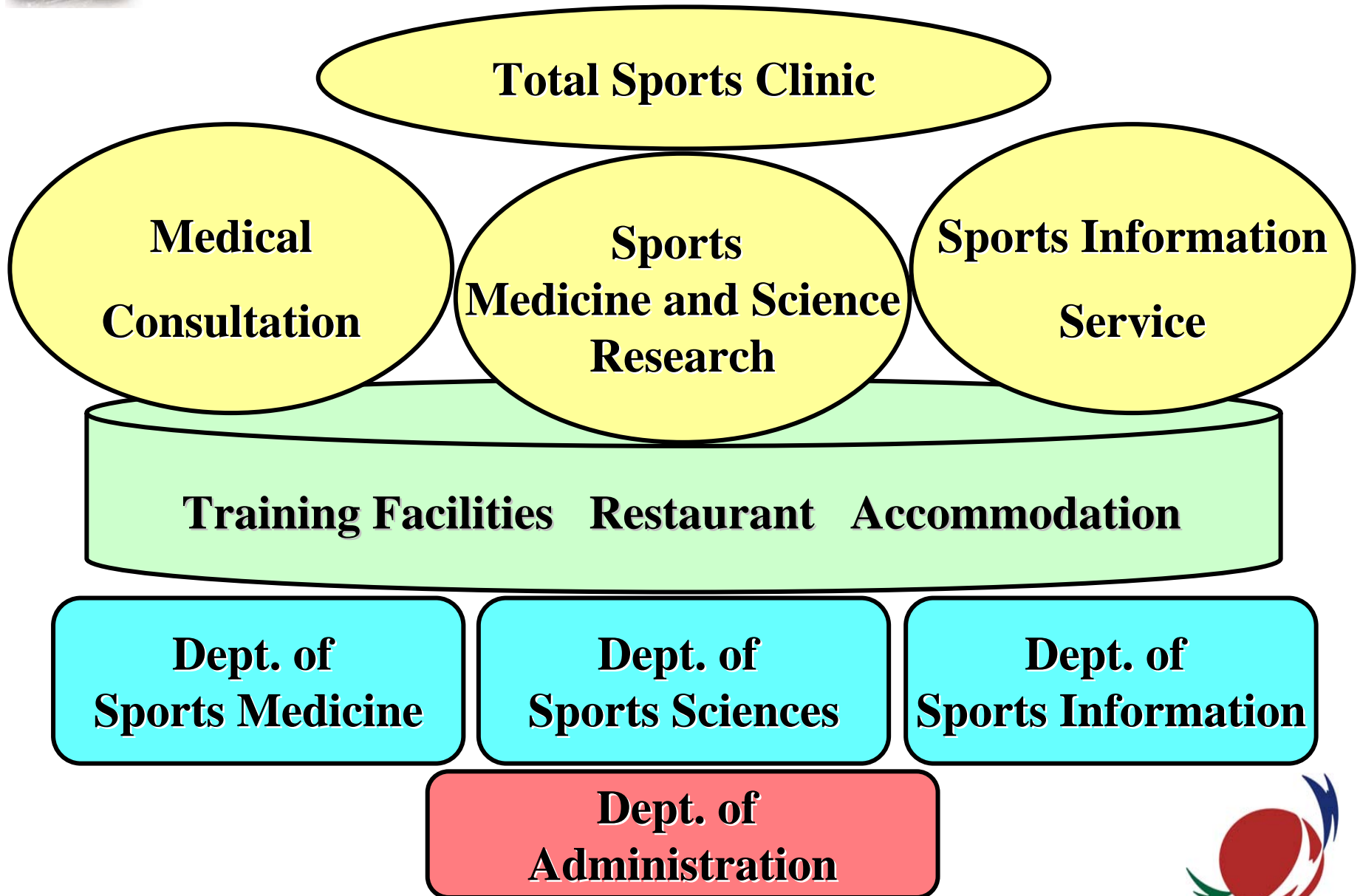
Restaurant

7 F





# Organization and Programs





# *Budget and Staff*

- *Construction*      *27,000 million yen*
- *Running Cost*      *1,800 million yen*
  
- *Fulltime Staffs (60+35=90)*
  - Sports Science*              *27*
  - Sports Medicine*              *21*
  - Sports Information*              *12*
  - Administration*              *35*



# Sports Medicine Service

- **Sports Medicine Clinic**

Internal medicine, Orthopedics

open 5 days a week

Dentistry, Ophthalmology,  
Otolaryngology, Dermatology,  
and Gynecology

1 or 2 days a week

- **Rehabilitation**

5 days a week

- **Mental counseling**

as-needed basis

- **Nutritional guidance**

as-needed basis





# Sports Information Service

- **Global Network of Related Organizations**
- **Sports Information Databases**
- **Dissemination of Sports Information  
and Information Technology**



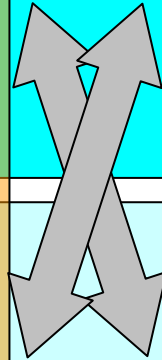


# Research: Hypoxic Training

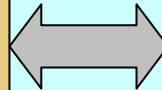
L i v  
i n g

T r a i n i n g

N o r m o x i a



H y p o x i a



At the altitude of 1,800~3,000m

At the altitude of 1,500~3,500m

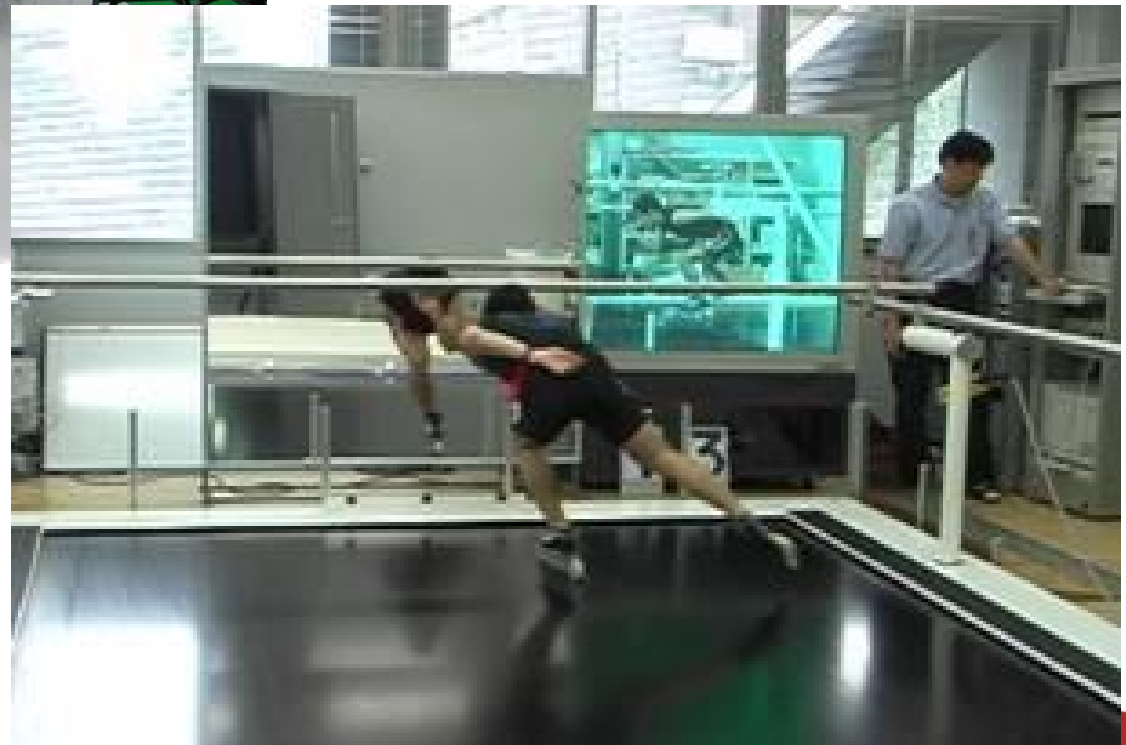
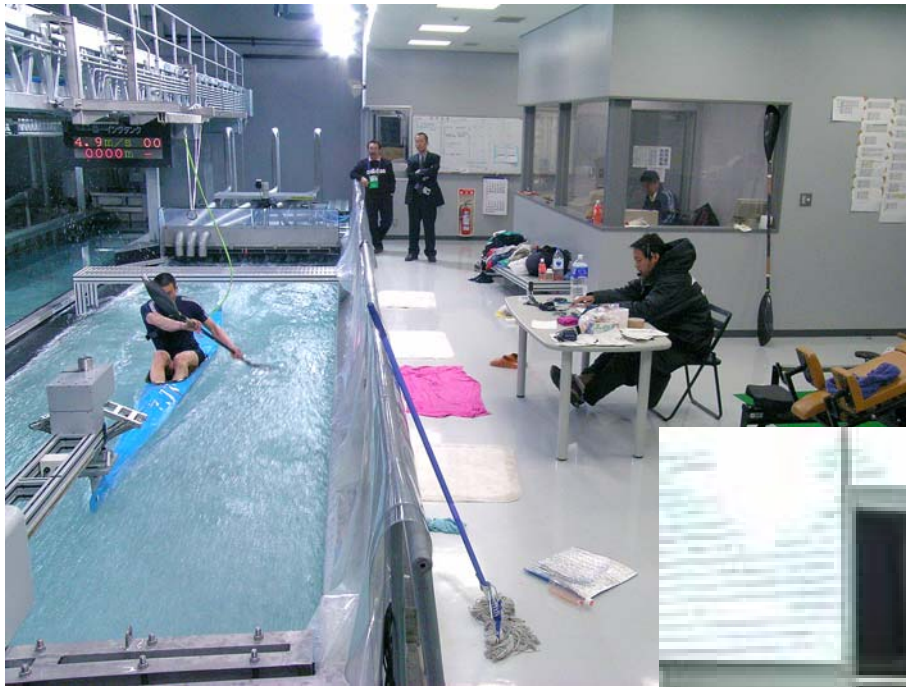
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# Development and Application of New Training Methods







# Total Sports Clinic (TSC)

**Medical Check**



**Fitness & Skill  
Check**



**Mental Assessment  
Nutritional Assessment**



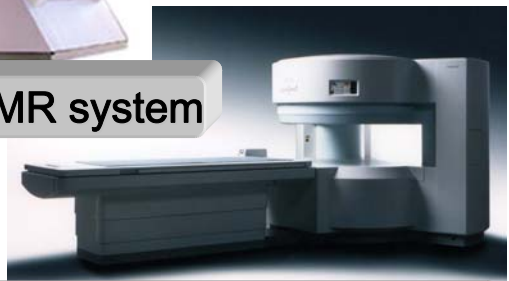
**Feedback to Athlete, Coach and Other Staff**



# Quantitative and Qualitative Evaluation of Muscles Using NMR System

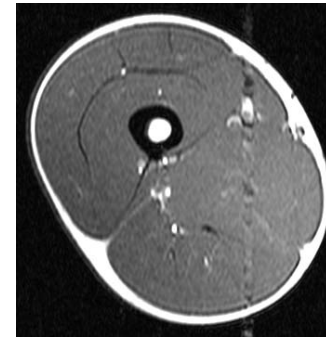


Superconducting MR system

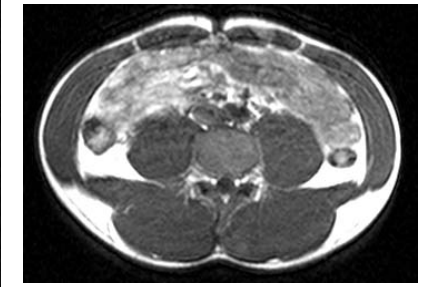


Open-configuration MR system

## Assessment of Cross Sectional Area of Muscle by MRI

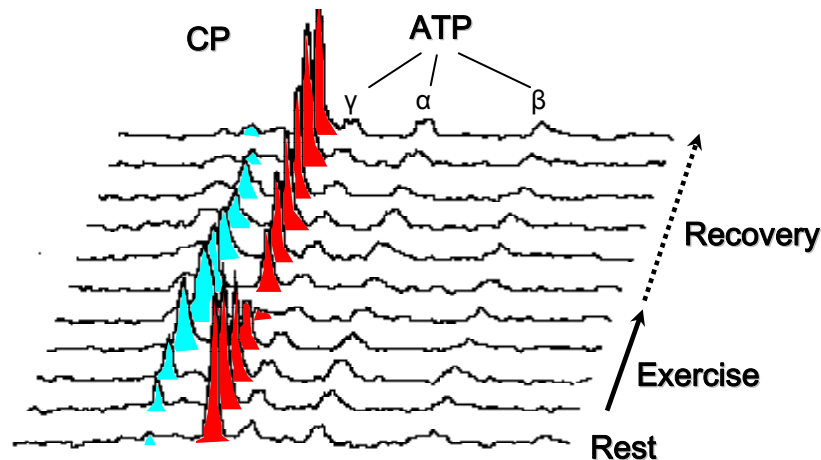


Thigh

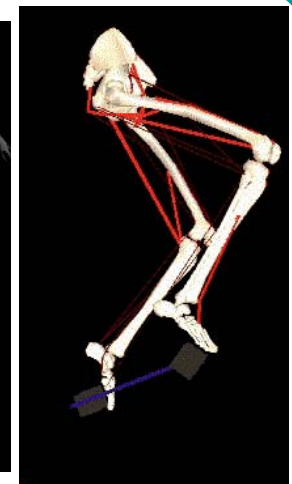
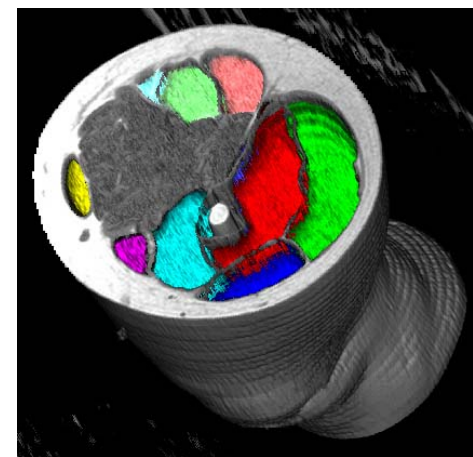


Trunk

## Evaluation of Metabolism in the Muscle by MRS



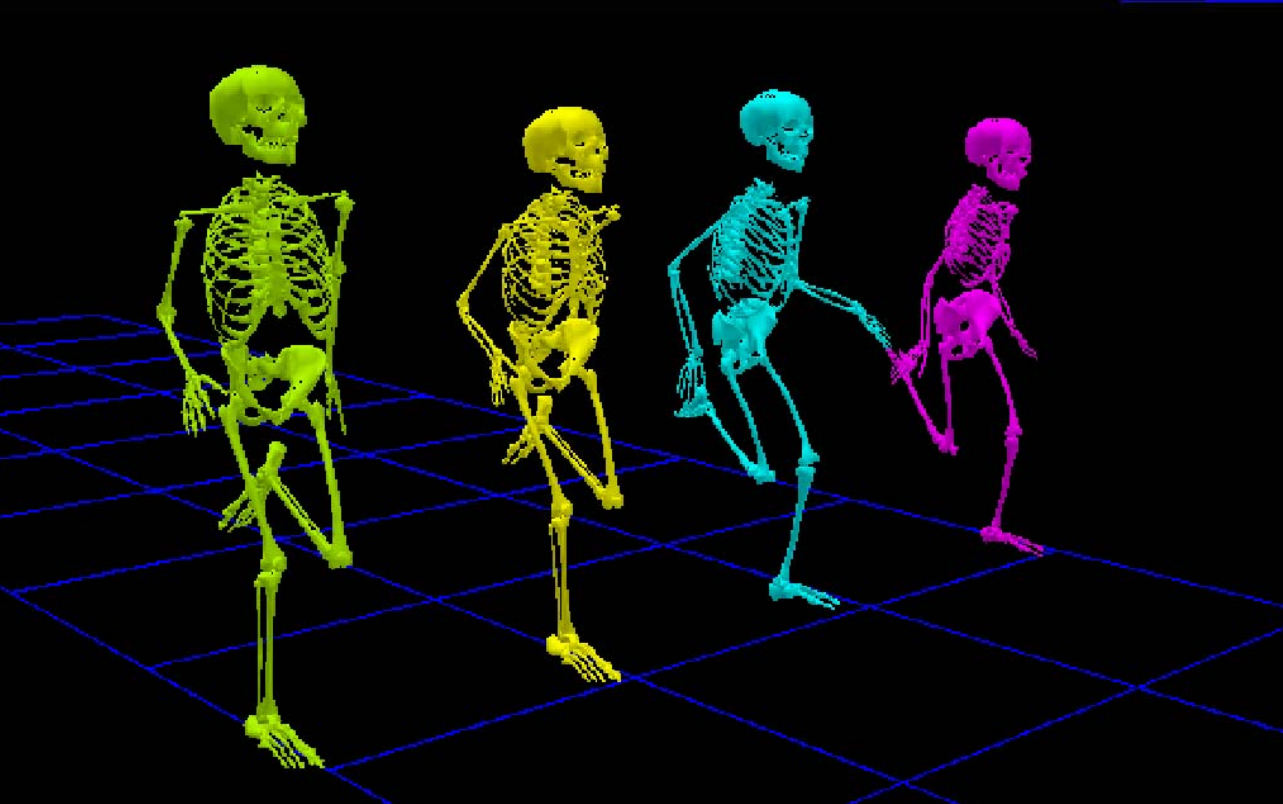
## 3D Analysis and Motion Analysis





# *Motion Analysis using VICON System and Force Platform*








Running motion with vectors of the ground reaction force.

Comparison of several athletes.



# TSC Support Projects for Each Sports Event

## Summer Olympic Events

				Medal in Athens		
2001	2002	2003	2004			
<i>Synchronized Swimming</i>					2	
<i>Wrestling</i>				2	1	3
<i>Soft ball</i>						1
	<i>Swimming</i>			3	1	4
	<i>Gymnastics</i>			1	1	2
	<i>Weight Lifting</i>					
		<i>Judo</i>		8	2	
		<i>Water Polo</i>				
		<i>Gymnastics Artistic</i>				
		<i>Handball</i>				
		<i>Cycling Track</i>			1	
		<i>Fencing</i>				
		<i>Badminton</i>				
		<i>Canoe</i>				
		<i>Triathlon</i>				
			<i>Archery</i>		1	
			<i>Tennis</i>			
			<i>Volleyball</i>			
			<b>Total</b>	14 (16)	9 (9)	10 (12)

Red: Important Events to Support





# Support Projects for Each Sports Event

## Winter Olympic Events

2001

2002

2003

2004

*Speed Skating* .....

*Ski Nordic Combined* .....

*Ski Cross Country* .....

*Ski Free Style* .....

*Ski Jump* .....

*Ski Alpine* .....

*Snow Board* .....

*Red: Important Events to Support*



# New Start of JISS

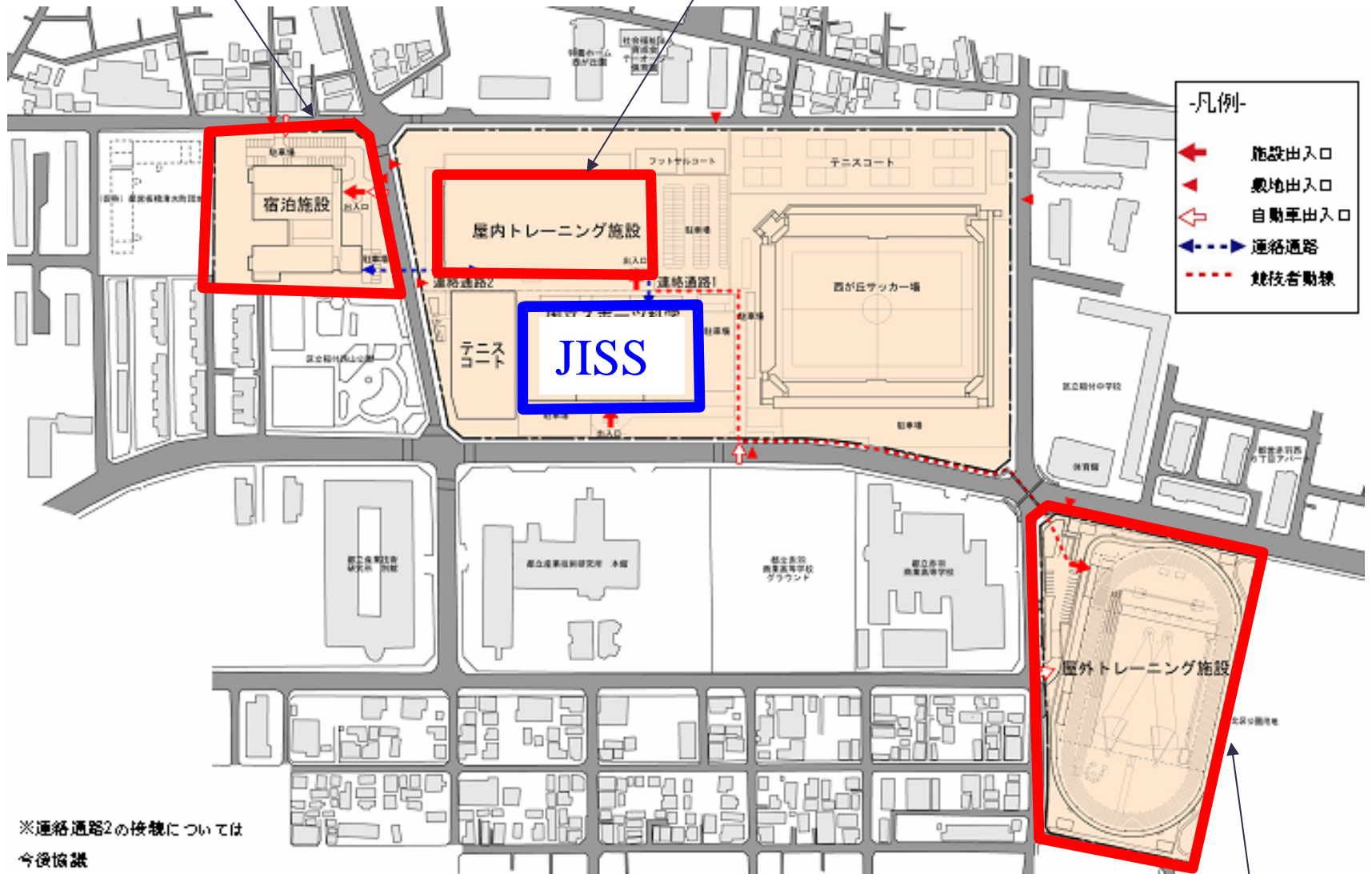
- ◆ National Training Center will be constructed nearby JISS by the end of 2007

- ❖ Key Facilities

- ◆ A track and field (400m track with roof)
- ◆ Indoor training center
  - ❖ Volleyball, basketball, handball (each 2 courts)
  - ❖ Badminton (8courts), Table tennis (10 tables)
  - ❖ Judo (1000mat),
  - ❖ Others (Weight lifting, Wrestling, Boxing etc.)
- ◆ Accommodation facility (250 beds)

accommodation

Indoor training facilities



※連絡通路2の接続については今後協議

Track and field



Thank You Very Much  
For Your Hearing



**JISS**

Japan Institute of Sports Sciences