

Flow chart of
the 18th Japan-France Building Colloquium
November 22, 2004.

November 22, 2004

The 18th Japan-France Building Colloquium Presentation

Overview of the Activities of the Building Center of Japan

with an update on
building activities & building regulations
in Japan



The Building Center of Japan

Presentation is divided into 3 parts

- Social & Economic Conditions and Recent Developments in Japanese Building Sector
- Recent Developments in Japanese Building Regulations
- Recent Activities by Building Center of Japan (BCJ)



Social & Economic Conditions and Recent Developments in the Japanese Building Sector

- Land and Population
- Changes in Land Prices
- Building Starts
- Total Floor Area of New Buildings according to Use in FY2003

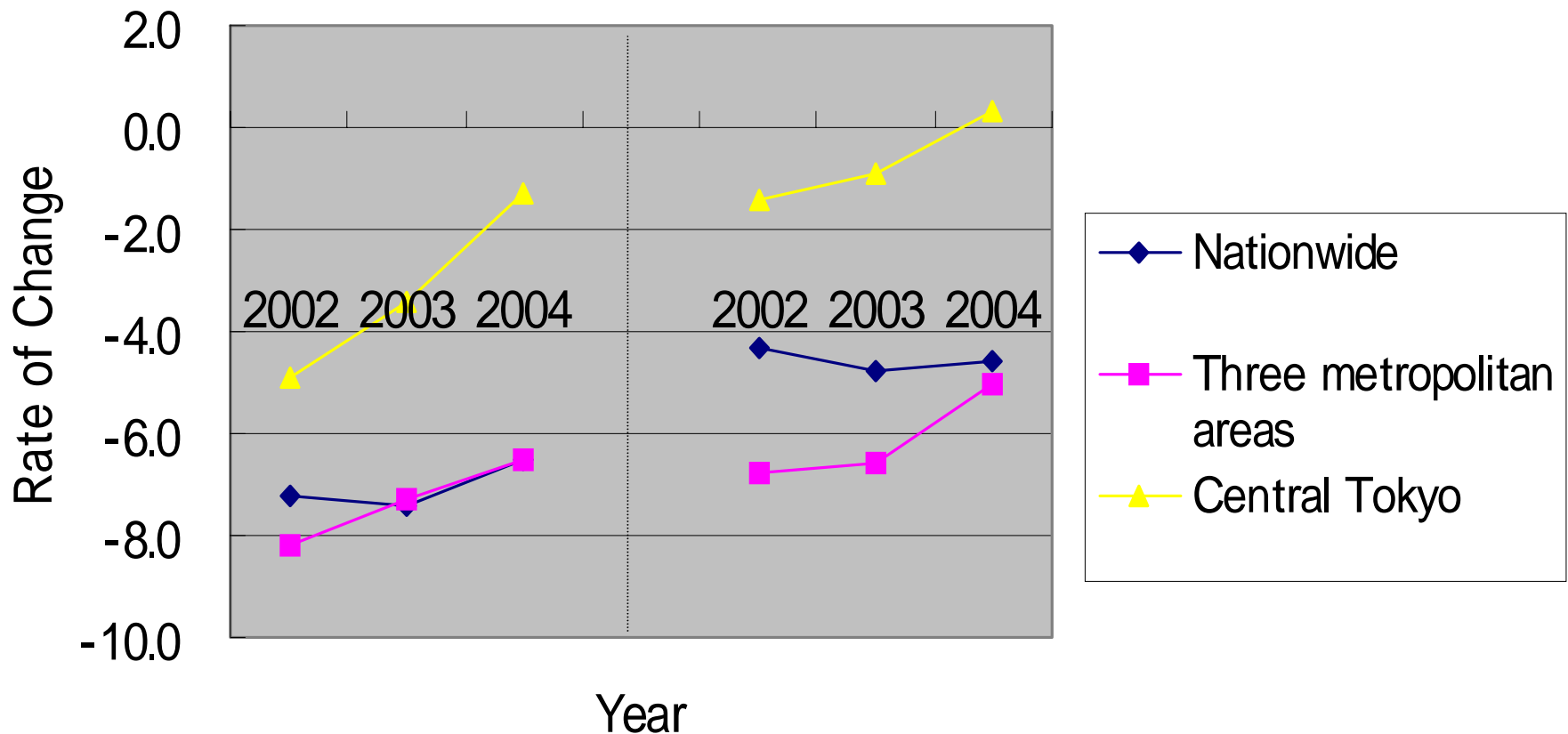
Land and Population

	Japan	France
- Total land area (km ²)	376.520	550.100
- Habitable land area(k m ²)	126.520	400.050
- Population(millions)	126.9(YR2000)	59.6(YR03)
- Percentage of aged people (65 or older) (YR2000) (%)	17.17	15.97
- Birthrate	1.29(YR03)	1.90(YR01)



Changes in Land Prices

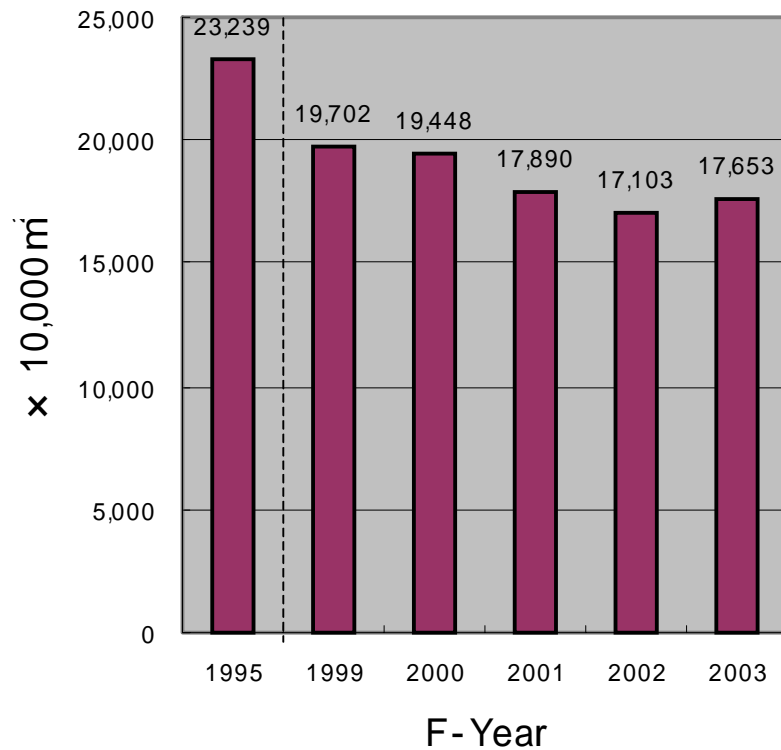
Commercial Land (Left), Residential Land (Right)



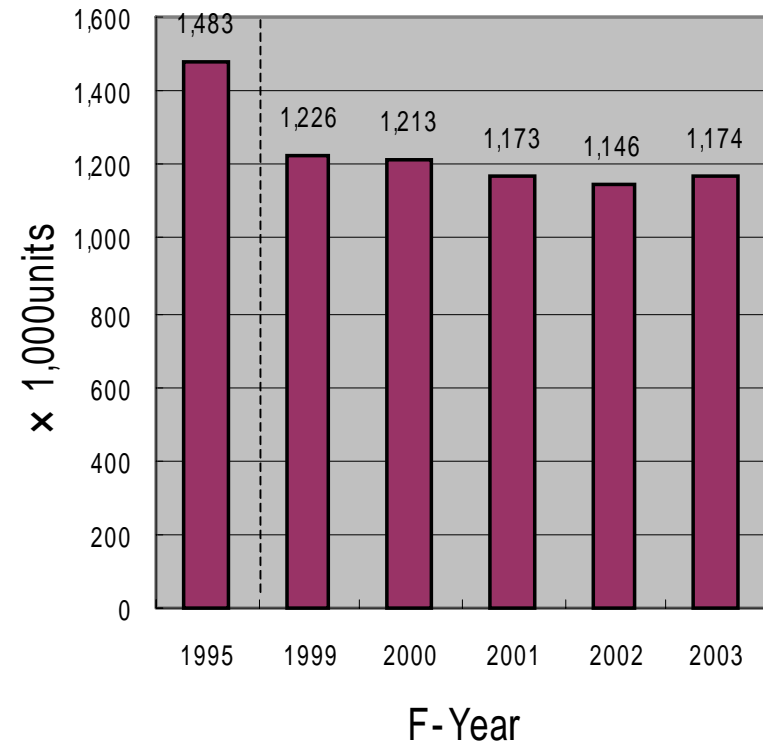


Building Starts

Total floor area of construction starts

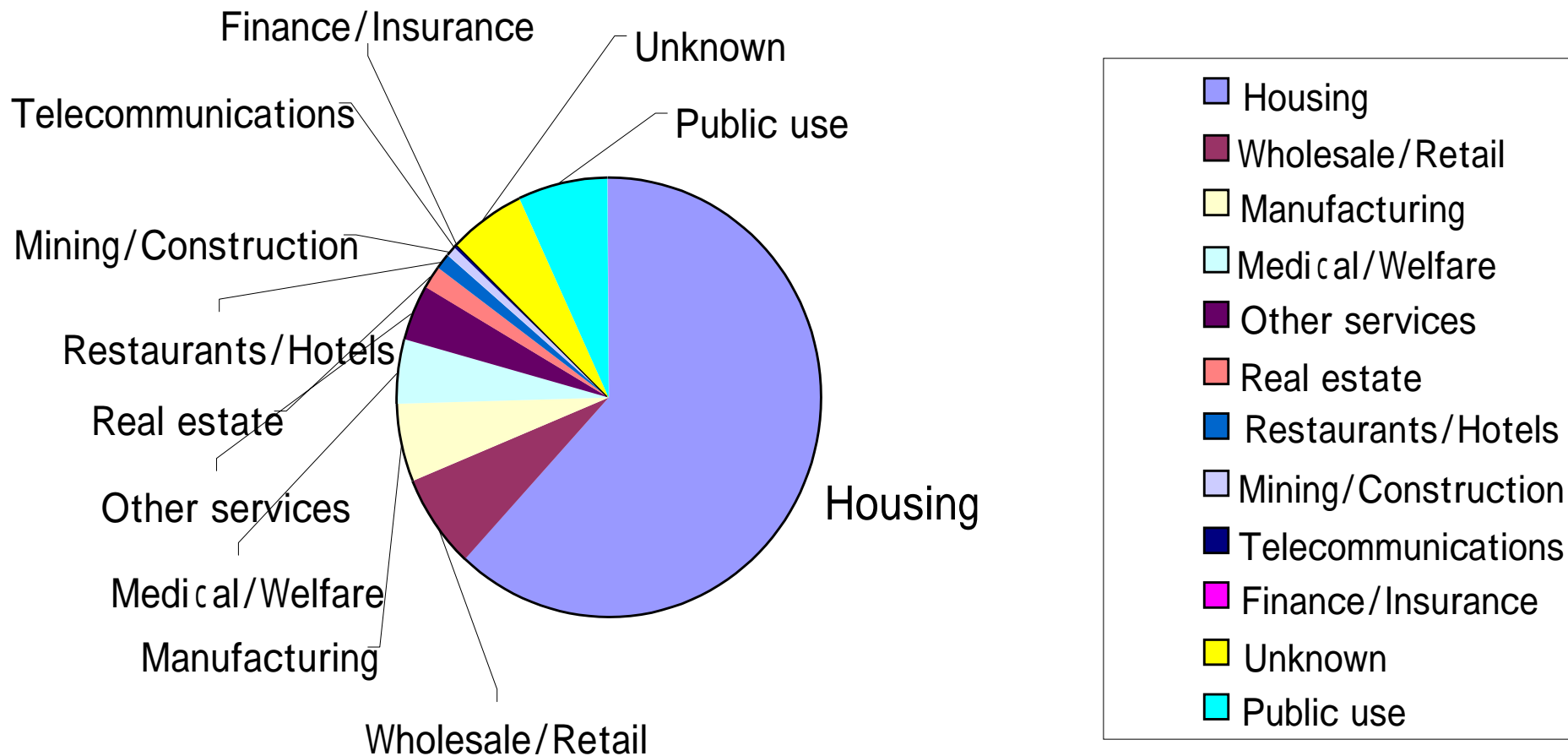


Number of New Housing Starts





Total Floor Area of New Buildings According to Use in FY2003



Recent Developments in Japanese Building Regulations

The Building Standard Law (BSL)

- Overview of BSL
- This year's Amendments to BSL

Others

- Overview of the Housing Quality Assurance Act (HQAA)
- Other Building-related Laws and Regulations



Composition of BSL

WHOLE AREA OF JAPAN

General Provisions

- Administrative Provisions
- Miscellaneous
- Penalties

Building Codes (enforced throughout Japan)

- Fire Section**
- Structural Section**
- Building Equipment Section**

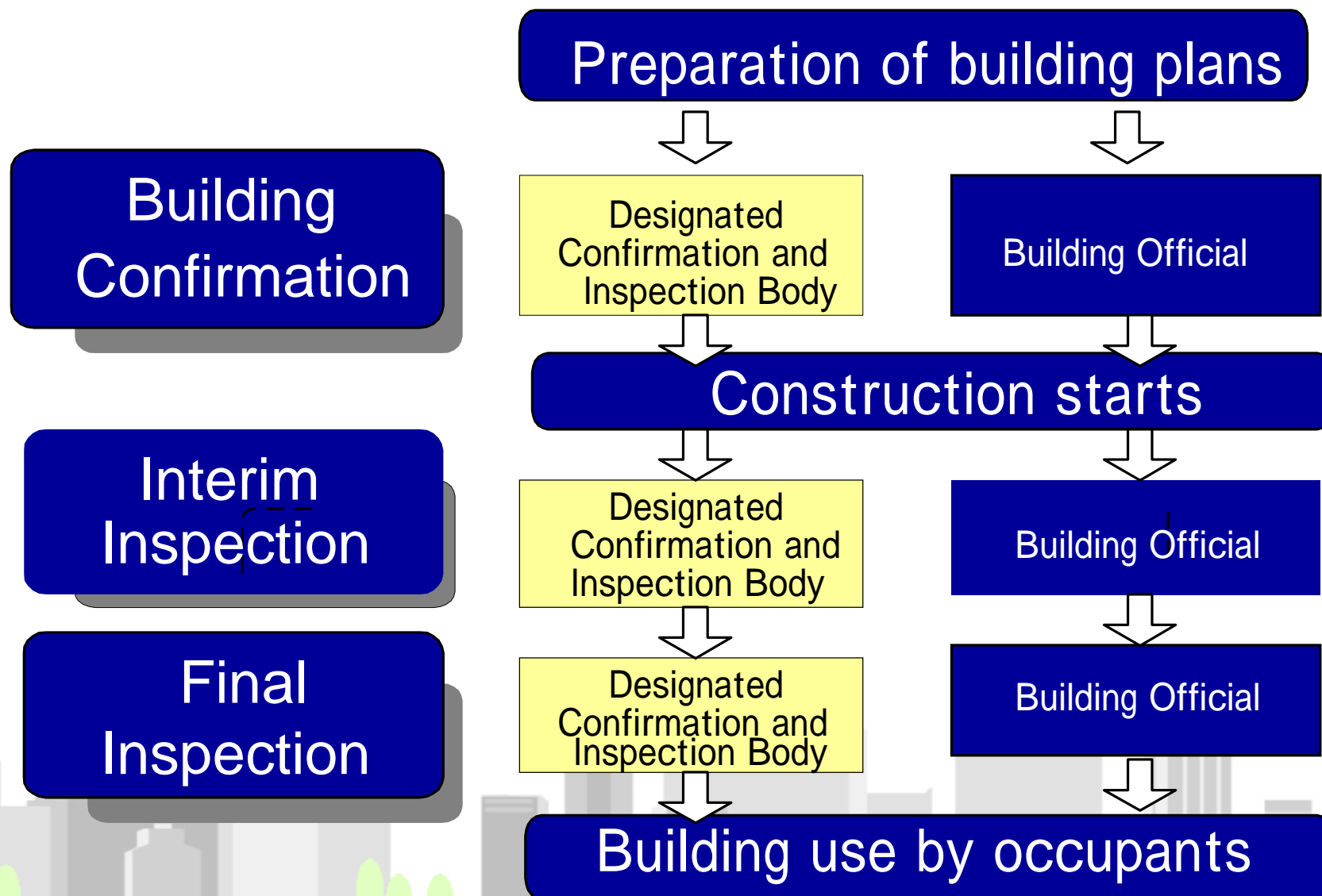
CITY PLANNING AREAS

Zoning codes (enforced within “City Planning Areas”)

- Relation between Sites and Roads
- Land-Use Zoning Regulation
- Building Height-Bulk-Shape Control
- Restrictions in Fire Protection District



Flow of Building Confirmation and Inspection Procedures



System of Performance-based Code

Law or
Enforcement
Order

Performance Requirements

e.g. Fireproof
performance

- Principal building parts withstand the heat of a fire that is forecast to occur inside the building until the end of the said fire.
- External walls withstand the heat of a normal fire occurring in the area surrounding the said building until the end of the said fire.

e.g. -fire safety
-structural safety
-building equipment safety

Enforcement
Order

Performance Standard

e.g. Fireproof
performance criteria
for each principal
building part

When principal building parts are heated with heat produced during a normal fire, the said parts are not deformed, melted, cracked, or undergo any other damage detrimental for structural strength.

Enforcement
Order
or
Notification

Advanced Verification Method

Evaluation: Designated Evaluation Body



Approval: Minister of Land,
Infrastructure and Transport

Ordinary Verification Method

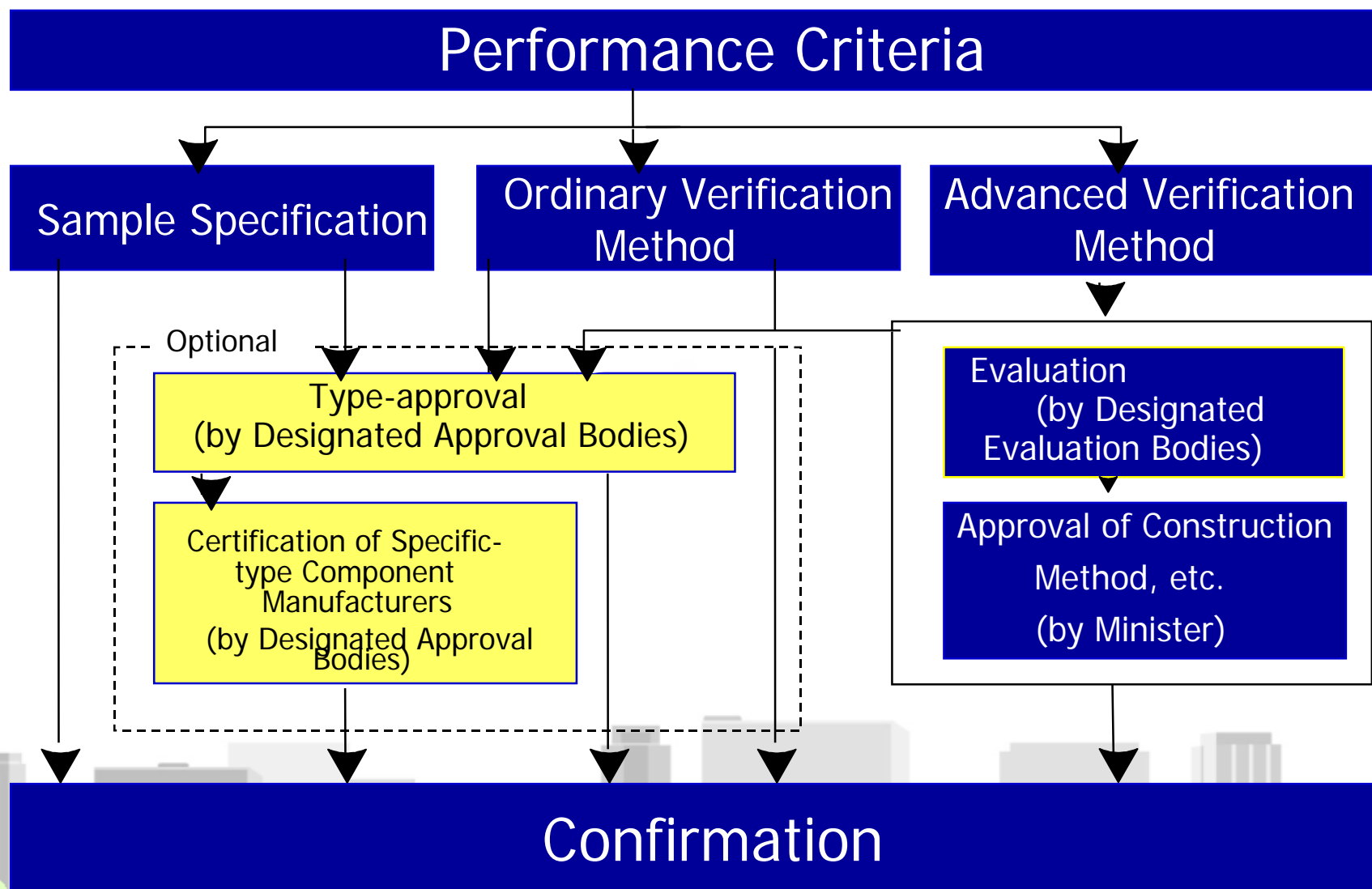
e.g. Fireproof design

Sample Specification

e.g. Principal building parts
shall be reinforced
concrete construction



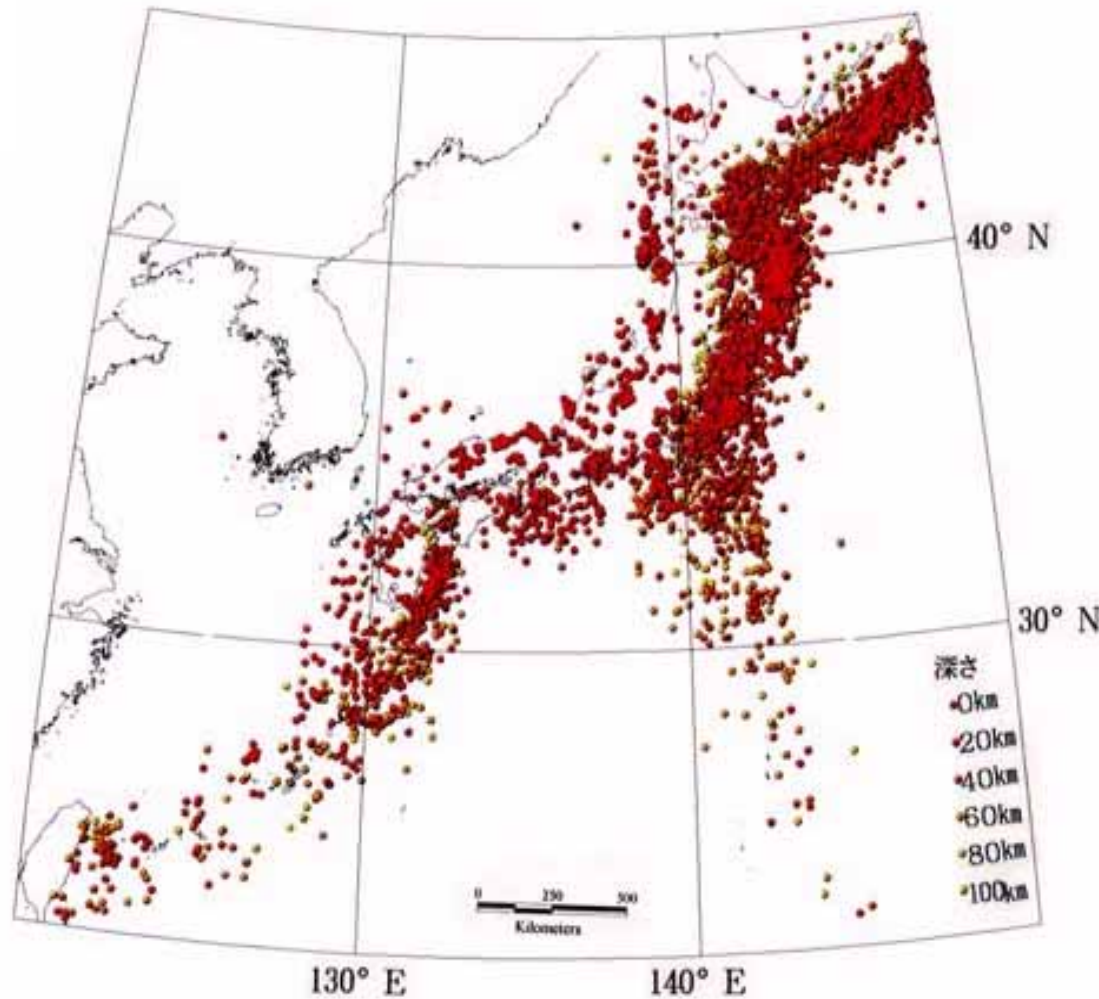
Flow of Performance-based Building Confirmation under BSL





This Year's Amendments to BSL

In order to Secure the Safety of Buildings against Earthquakes



Distribution of Earthquake Epicenters in Japan (Earthquakes of over M5 last 70years)



Background of this year's Amendments to BSL (part 1)

Necessity

- In the Great Hanshin-Awaji Earthquake of 1995, around 80% of casualties (6,432) were killed because of collapsed houses.
- It is predicted that a multitude of earthquakes of a magnitude greater than 8 could occur
(We had 4 earthquakes of over M.6 and many of over M.5 recently in Japan)





Background of this year's Amendments to BSL (part 2)

The present condition

To ensure seismic structural safety, BSL was revised in 1980. Presently, there are still a lot of buildings built before this revision (Almost all of them are presumed to be existing **non-conforming buildings**).

	approx. number of total stock	approx. number of non-conformed buildings (ratio)
residential building	44 million units	14 million units (approx. 30%)
non-residential building	3.4 million buildgs.	1.2 million buildgs. (approx. 40%)

Amendment of BSL on Existing Buildings

Strengthening

- Release of Information on Maintenance
- Recommendation by Regulatory Authority
- Fine going up to 100 million JP

Relaxing

- Partial Compliance
- Dividing Portions of Building by Function
- Strength of Un-reinforced Foundation

Amendment of BSL on Existing Buildings

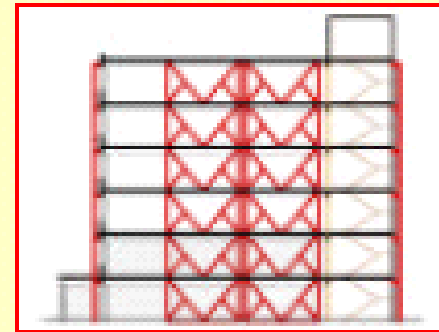
Partial Compliance

Developing Whole Plan

1st phase:
Structural Alteration

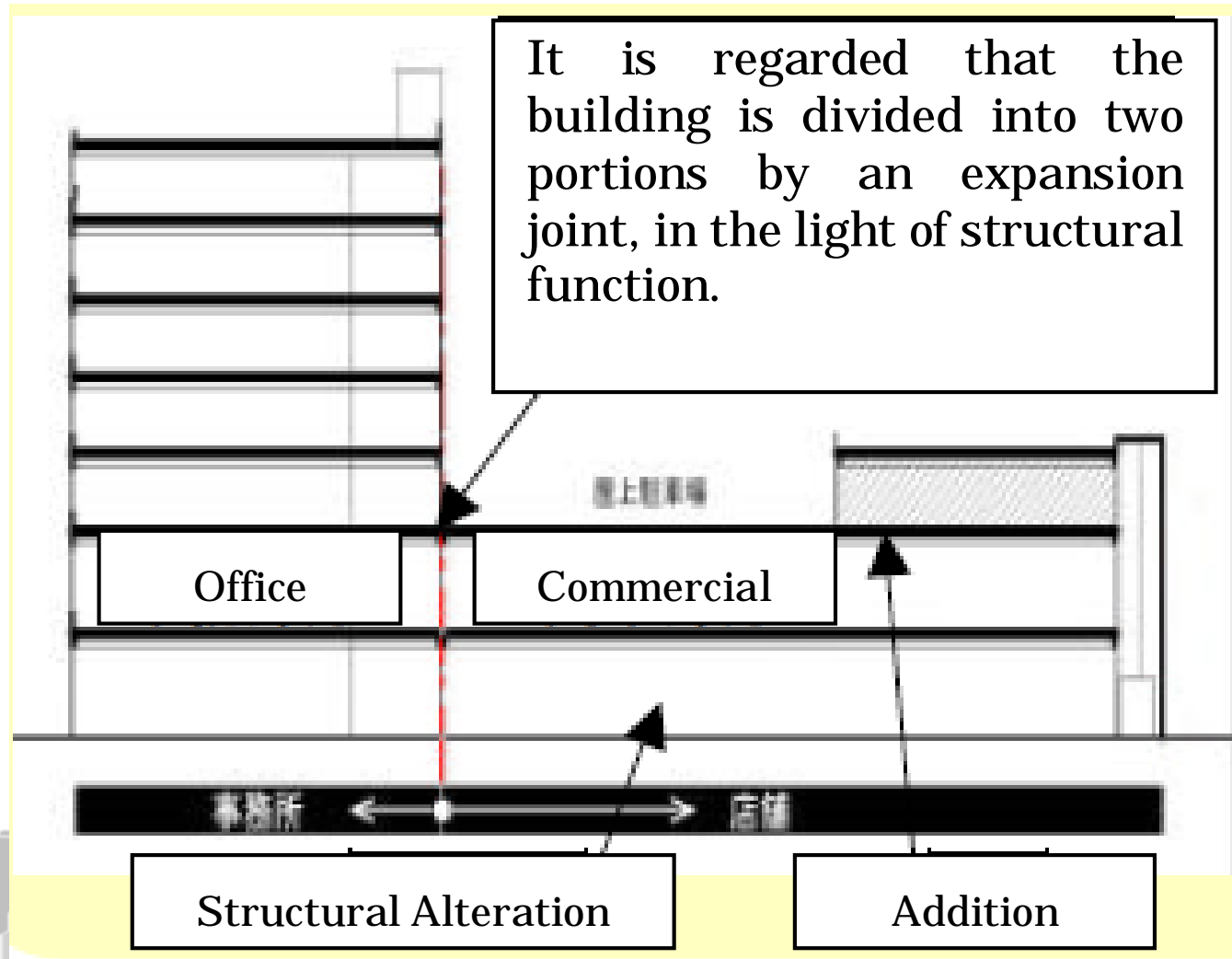
2nd phase:
Fire Preventive Alteration

Completing Compliance
until Final Phase



Amendment of BSL on Existing Buildings

Dividing Portions of Building by Expansion Joint



Overview of the Housing Quality Assurance Act (HQAA)

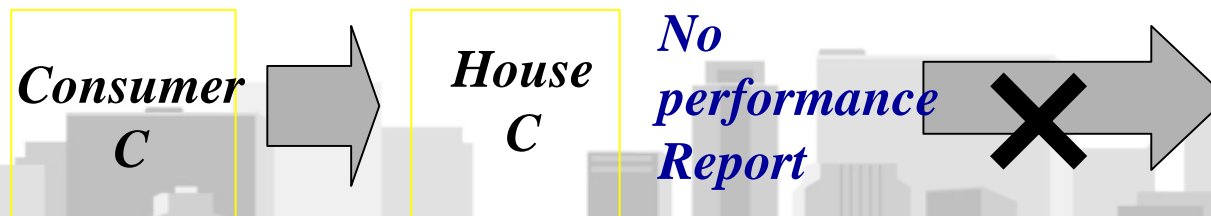
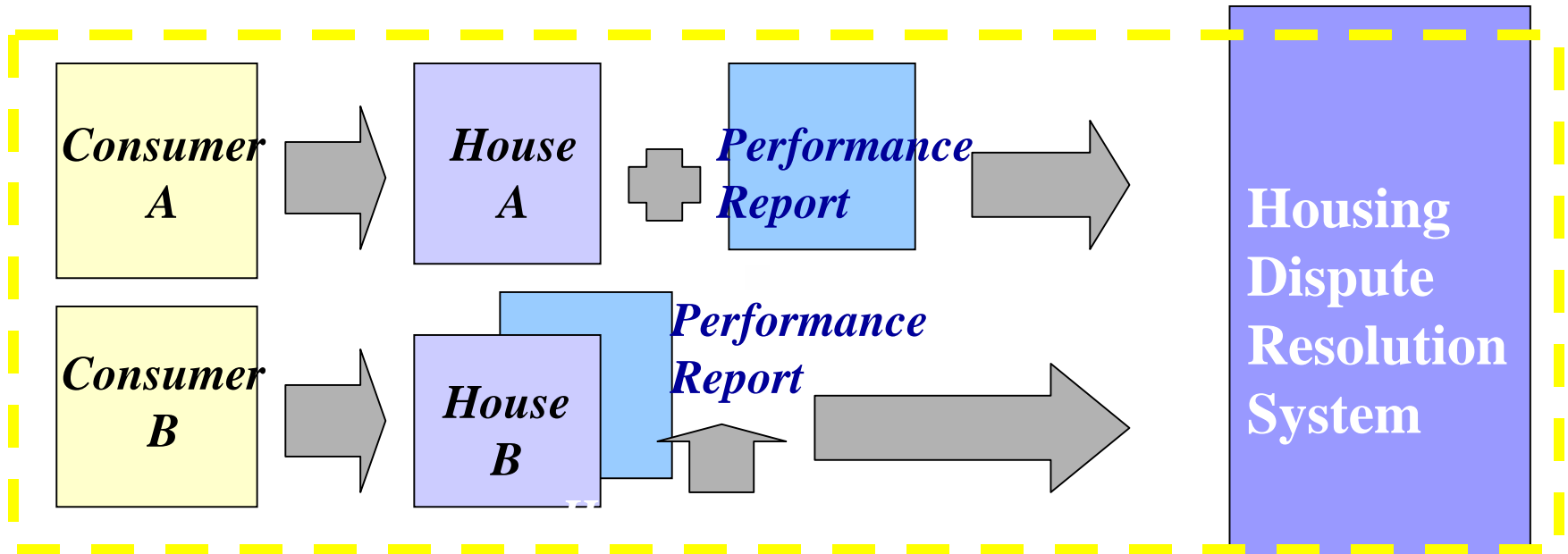
3 Elements of HQAA

- Housing Performance Indication System
- Housing Dispute Resolution System
- Enforcement of 10 Years for Defects Liability

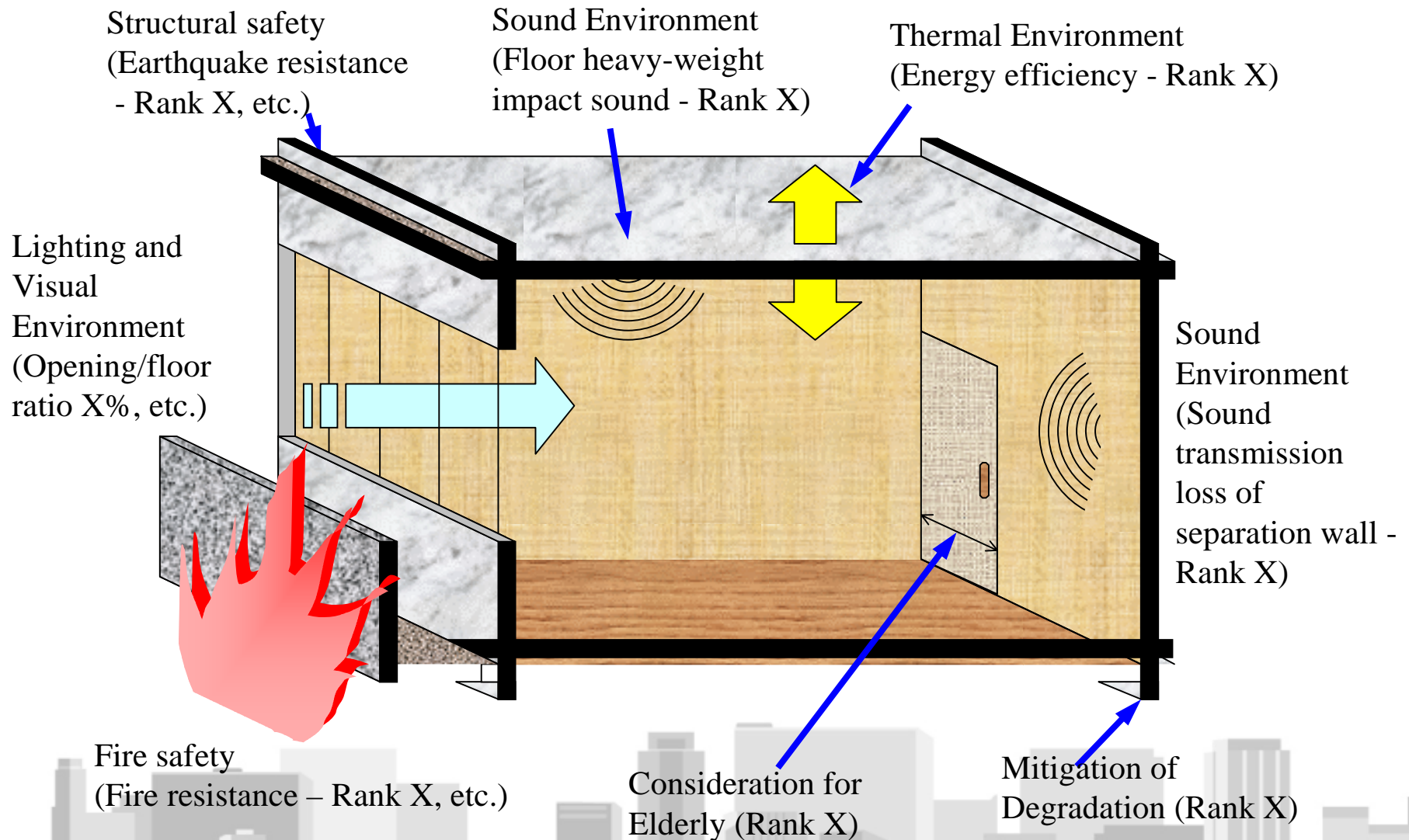




Housing Performance Indication System is chosen by consumer/supplier

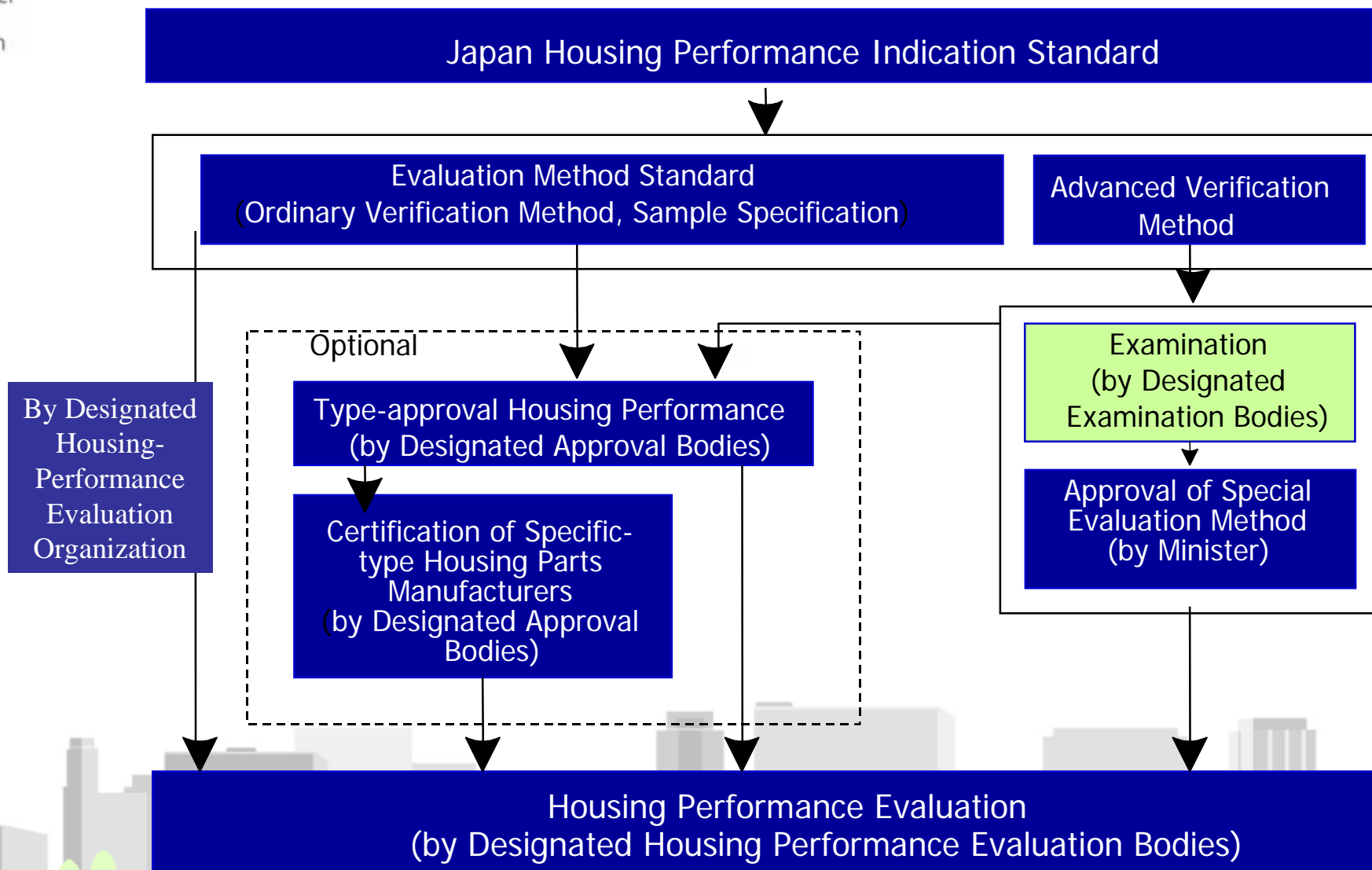


Housing Performance Indication System Specifics





Flow of Housing Performance Indication System under the HQAA



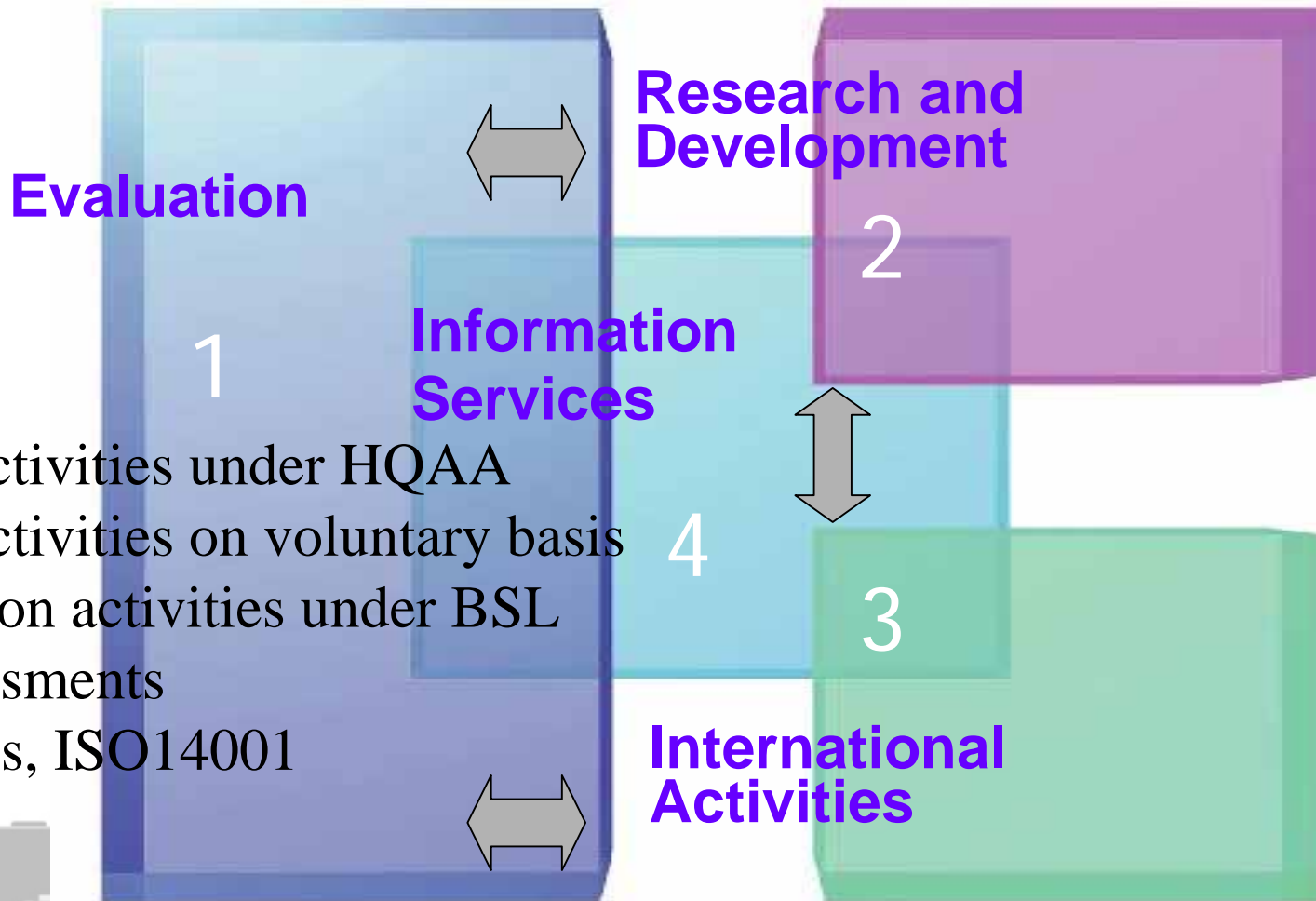
Other Building-related Laws and Regulations

- The Act Concerning the Rational Use of Energy
- The Act on Buildings Accessible and Usable for Elderly and Physically Disabled
- The Scenery Act
(The Scenery Act is a new law enacted just this year)



Recent Activities by BCJ

(the Building Center of Japan)



- Evaluation activities under HQAA
- Evaluation activities on voluntary basis
- ISO Evaluation activities under BSL
- System assessments
ISO9000s, ISO14001



The Building Center of Japan

Evaluation Activities of BCJ

- Evaluation Activities under BSL
- Evaluation Activities under HQAA
- Autonomous Technical Assessment Services
- Assessments and Registration Services under ISO 9001 and ISO 14001 Standards

Under BSL

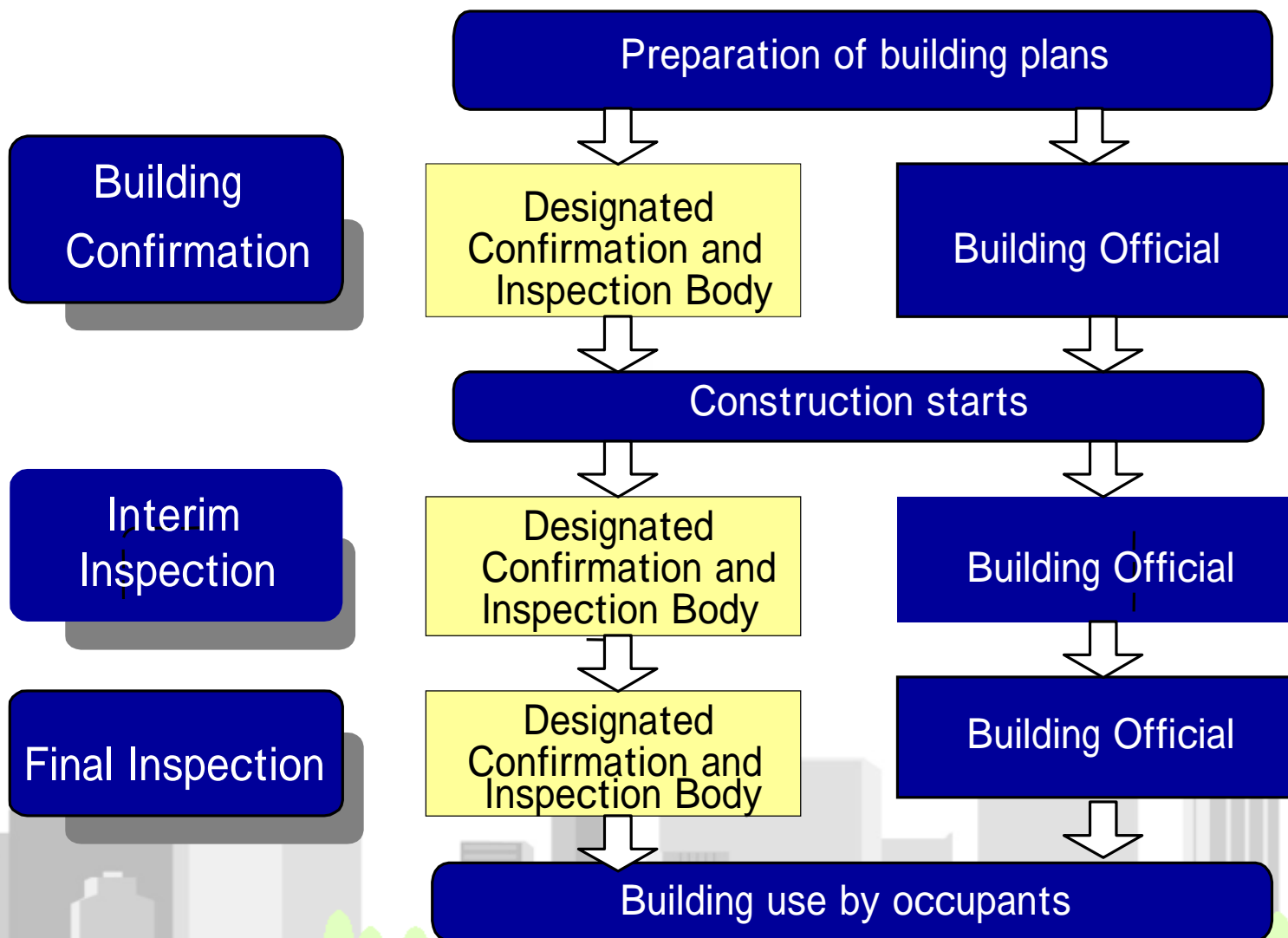
BCJ is

- The Designated Confirmation and Inspection Body
- The Designated Evaluation Body
- The Designated Approval Body



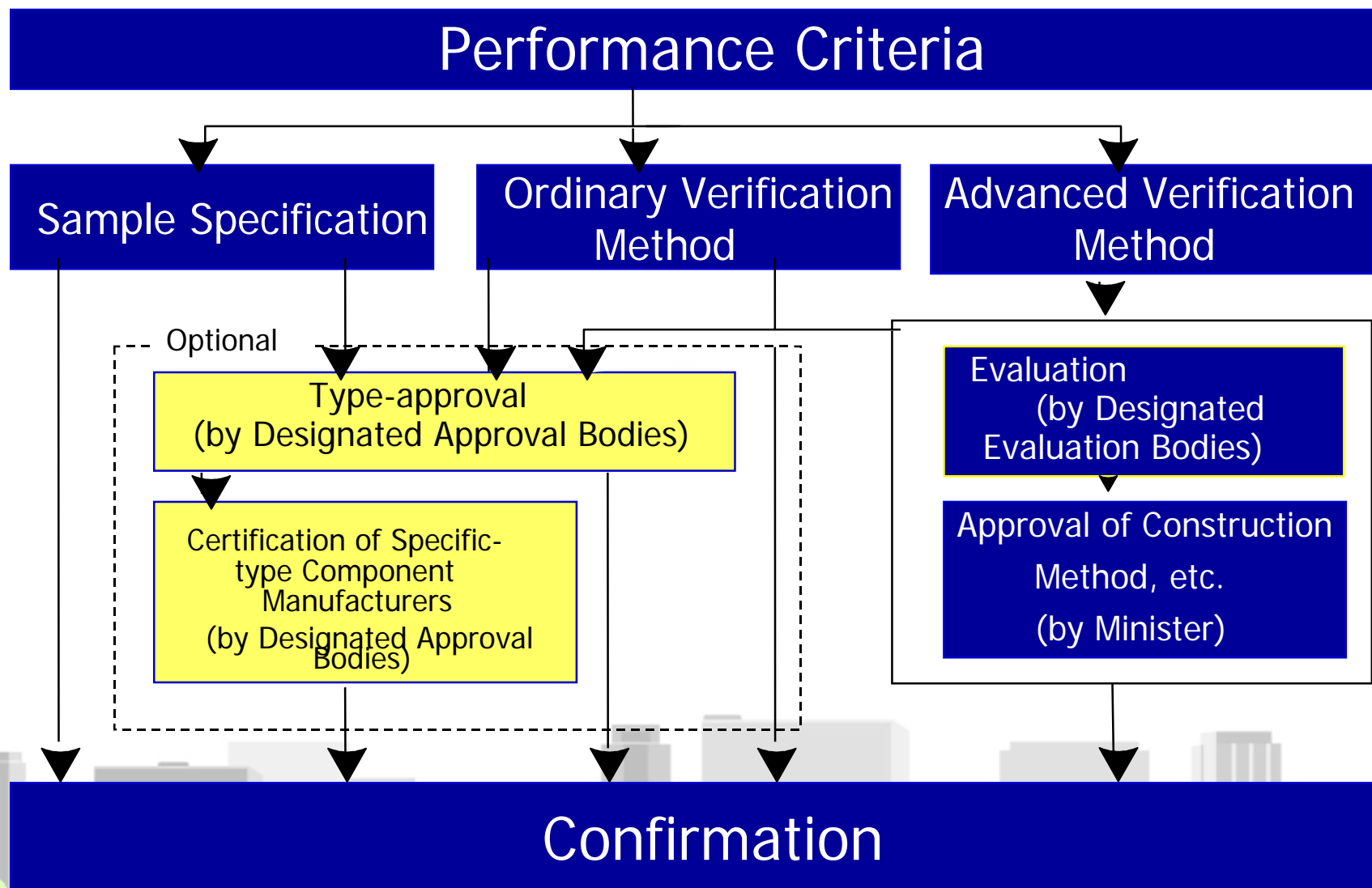


Flow of Building Confirmation and Inspection Procedures





Flow of Performance-based Building Confirmation under BSL



In FY2003

- Confirmation Inspections

Building Confirmations : 1,102

- Performance Evaluation

Applications filed : 669

- Type Approval

Applications filed : 2,190

- Certification of Specific-type Component

Manufacturers

Applications filed : 1,753



Under HQAA

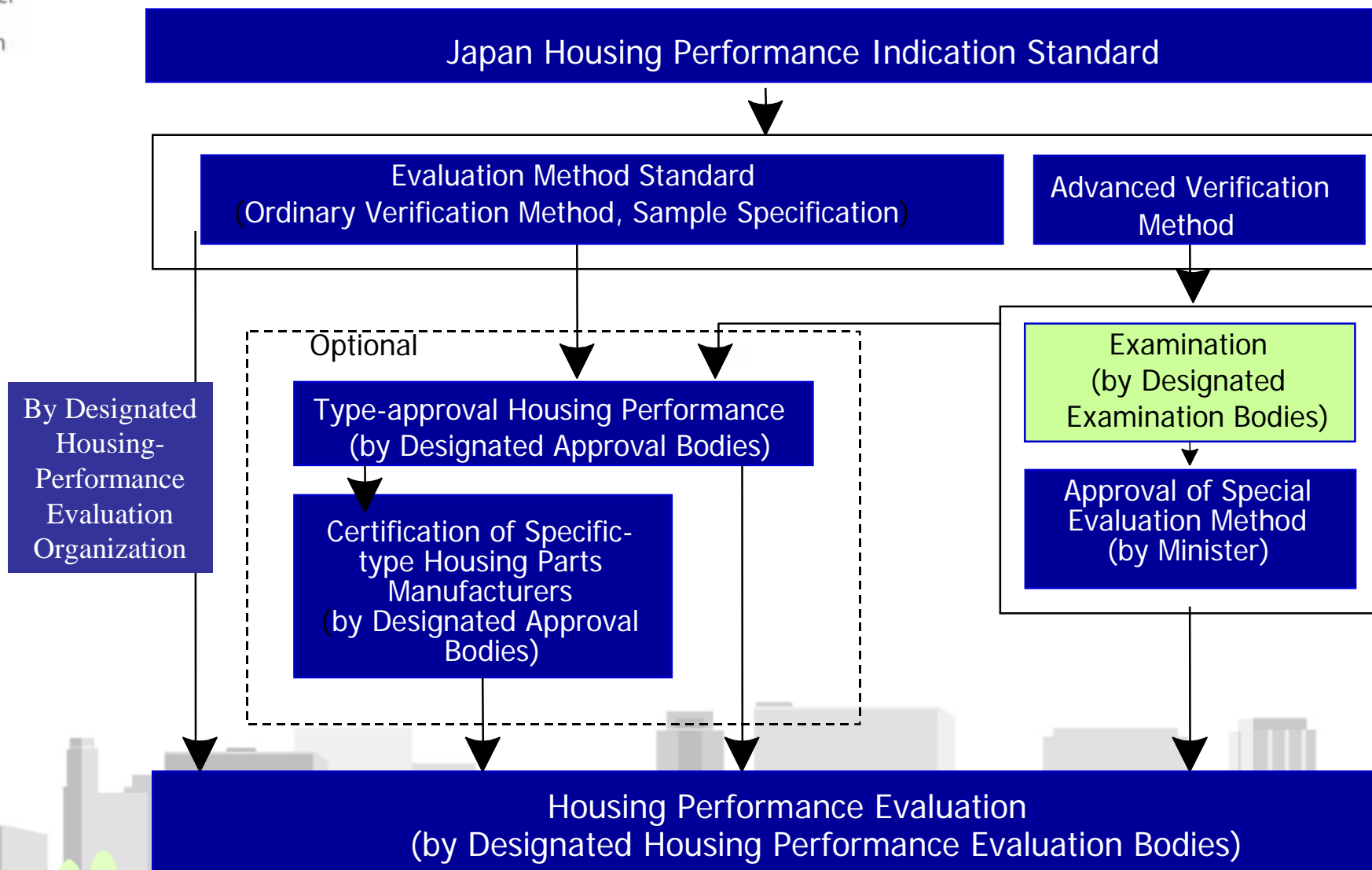
BCJ is

- The Designated Housing Evaluation Body
- The Designated Housing Performance Type-approval Body
- The Designated Testing Body





Flow of Housing Performance Indication System under the HQAA



In FY2003

-Housing Performance Evaluations

Design Evaluations : 41 (4,605 units)

Construction Stage Evaluations : 33 (3,110 units)

-Housing Performance Type Approval

Applications filed :2,759

-Certification of Specific-type Housing Parts
manufactures

Applications filed : 2,028

-Testing for Special Evaluation Method Approval

Applications filed : 50

Autonomous Technical Assessment Service

Approval of Innovative Building Technology

(BCJ Agrément Services)

- Responding to market needs BCJ is committed to evaluating various innovative building technologies

Technical Appraisals

- BCJ evaluates construction technologies for legal and other technical criteria compliance

Review and Certification of Construction Technology

- BCJ reviews and certifies newly developed technologies
- It helps to disseminate and promote newly developed technologies for construction projects



Thank you



財団法人日本建築センター

The Building Center of Japan

