

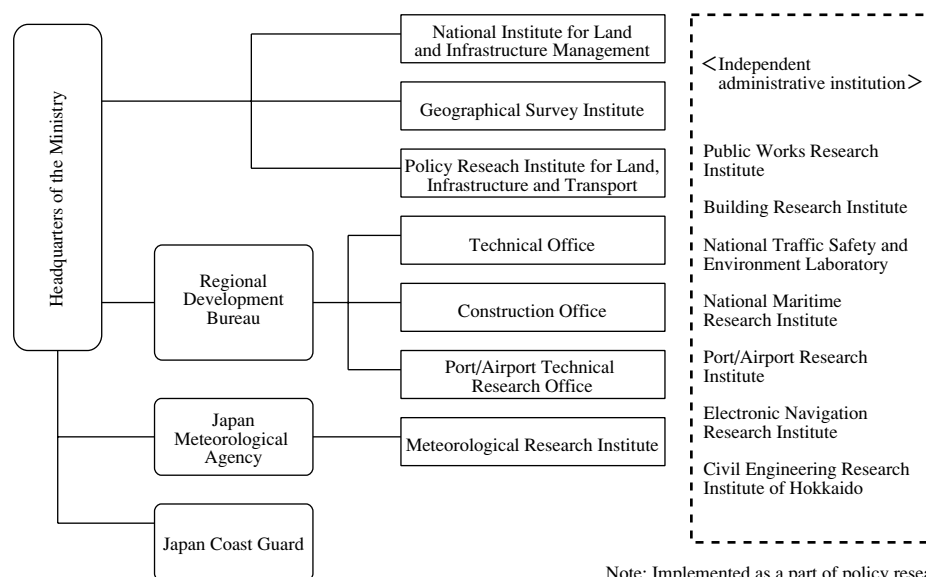
## Chapter 12. Technological Research & Development Supporting the 21st Century

### [Technological research & development]

#### ○ Technological research & development system

Under a new system following the birth of the MLIT, measures are being taken to reflect the result of cross-sectoral/comprehensive technological research and development on public works, construction and transport industries, along with the promotion of strategic and efficient R&D in a more competitive environment. Also, the MLIT has been drawing its technology basic plan based on the “2nd Science and Technology Basic Plan” determined by the cabinet meeting on March 2001.

#### 128. (Technological Research and Development System in the MLIT)



#### ○ Promotion of technological research and development in each institute, etc.

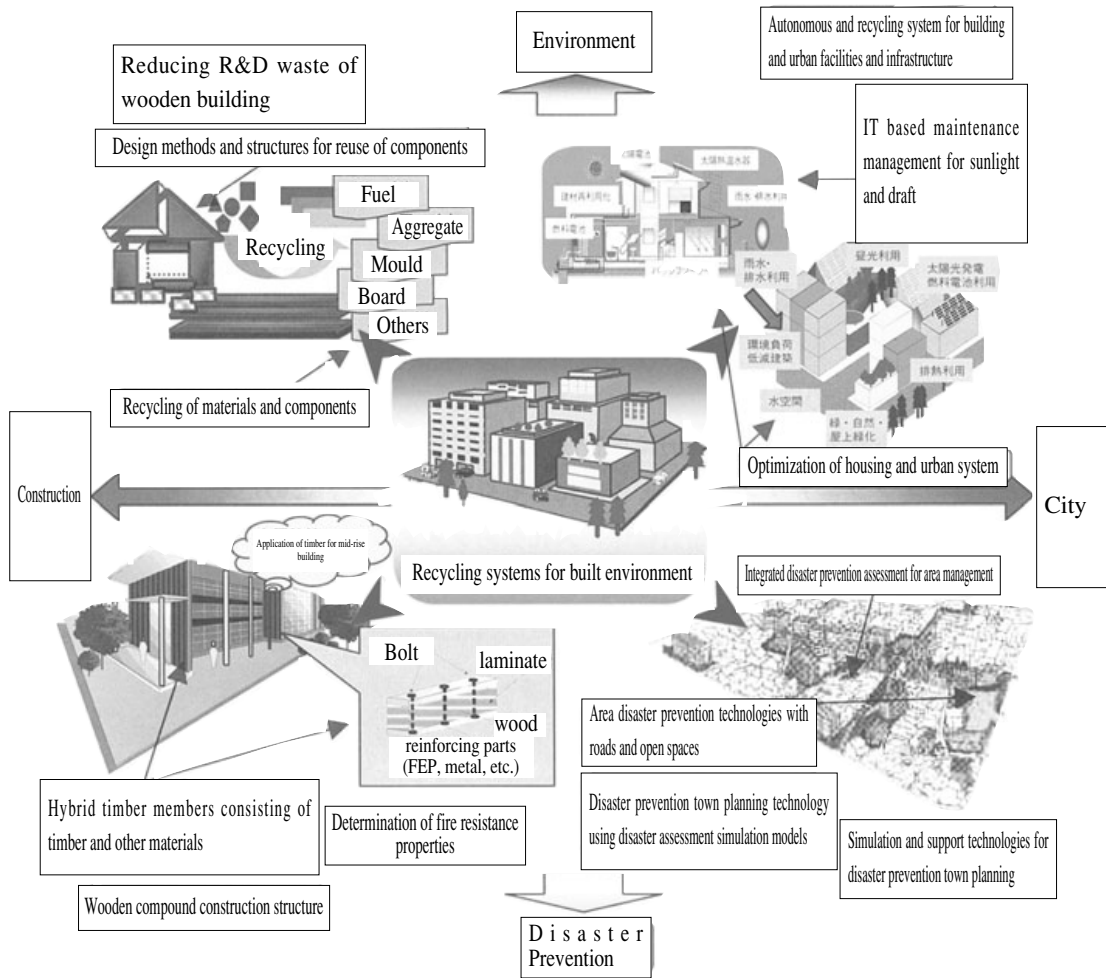
The departments related to the technology policies of the Public Works Research Institute, the Building Research Institute and the Port and Harbor Research Institute were unified and reorganized, giving place to the establishment of the National Institute for Land and Infrastructure Management on April 1, 2001. In order to raise the degree of satisfaction of every citizen, who is the end user of housing and social capital, useful research is being conducted for the planning of technological policies.

Other institutions such as the Geographical Survey Institute, Technical Office and Port/Airport Technical Research Office of the Regional Development Bureau, Japan Meteorological Agency, Meteorological Research Institute, Japan Coast Guard, and independent administrative institutions have also been promoting technological research and development. Additionally, in January 6, 2001 the Policy Research Center for Construction and the Transport Training Center became a parent body and the Policy Research Institute for Land, Infrastructure and Transport was established as an institute for basic investigation and research related to policies, promoting investigation and research.

○ System for promoting technological research and development

In cases where R&D has leading role and contributes to improvements in technical levels, and when there is urgent necessity, and the target sector is large, etc., the administration office becomes the nucleus of its promotion, and comprehensive technological research and development is conducted in cooperation with industry, academia and administration.

**129. (Construction and city improvement technology for formation of a recycling society and safe environment (general technology development project))**

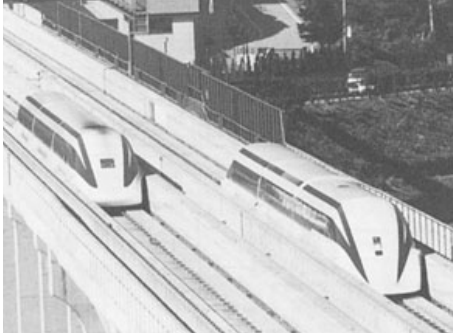


○ Various technical research and development

New technologies are being developed, such as a linear motorcar, Techno Super Liner, countermeasure technology against “sick houses”, CAD standard technology for increasing the level of IT in construction, etc.

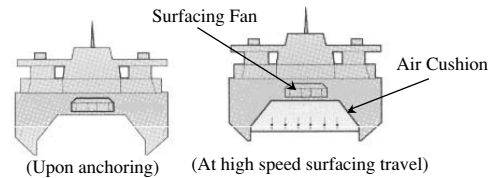
### 130. (Example of Development)

[Linear Motor Car]



#### Techno Super Liner (TSL)

New type of high-speed ship that can travel safely even in rough seas at more than twice the speed of ordinary ships and also carry a large quantity of cargo and passengers.



[ Air is blown off the lower part of the hull and then is confined by the soft-type structural sealing in the hull and front and aft parts, causing the hull to emerge, sharply reducing water resistance. ]

#### [Improvement in construction management technology etc.]

In order to execute construction projects rationally and efficiently, it will be necessary to systematize the entire engineering know-how in connection with construction management at work site.

To achieve this goal, measures are being taken to improve a broad range of construction management techniques, such as infrastructure development evaluation, consensus formation, cost reduction, quality assurance, improvement of bid/contract systems, etc.

Furthermore, for streamlining the entire construction process, various efforts have been made, including construction project-computerization in the use of construction machines, environmental measures, safety measures, etc.

