

# Design & Testing

## Design of policy and businesses, strategy development, and support for testing in order to resolve societal issues

**Under C: Design & Testing,** MRI Group helps the public sector design policy and systems, devise strategies, and test these with a view to resolving societal issues. We also support private sector customers in business design, strategy planning, and testing. Our business consulting makes use of the knowledge and expertise we have amassed in providing policy services to the public sector, and we feed back the knowledge and issues found in our work for private sector customers into developing new policies for the public sector.

### Case Study 1 Risk Management for 2020 Tokyo Olympic & Paralympic Games

#### Providing a safe and comfortable experience for the many visitors from Japan and abroad

##### Societal Issue

Smooth operation of Tokyo 2020 requires stable lifeline utilities, maintenance of sanitation services, and measures to deal with the heat to provide a safe, comfortable experience for visitors while minimizing the effects on the lives of residents.

##### Solution

We are providing assistance in the design of organizational, operational, and ICT infrastructure aspects of the new City Operation Center set up by Tokyo for the 2020 Olympics. We are developing procedure manuals to ensure activities are carried out safely in the last mile\* by collecting city information, trends in crowd behavior via security camera footage, and social media posts. We are also devising responses and conducting training to deal with serious incidents such as disasters, terrorist attacks, cyberattacks, and outbreaks of infectious disease to enable a seamless connection with existing crisis management systems.

\* Last mile: Route on foot from sports venue to designated nearby station

##### Value Provided

Through our support of the City Operation Center, we will ensure the success of the Games.

The lessons learned will be employed to develop safe, comfortable cities of the future starting with the 2025 Osaka-Kansai Expo.

##### Comprehensive Risk Management for Tokyo 2020 Games



### Case Study 2

#### Addressing depletion of spectrum resources through effective spectrum use



#### Resolving societal issues and creating market by transforming wireless resources into social infrastructure

##### Societal Issue

The supply of wireless spectrum, a limited resource, is increasingly tight amid burgeoning demand for wireless telecommunications systems due to factors such as the explosive spread of smartphones. One potential solution is to share spectrum dynamically to meet the constantly fluctuating demands of usage environment. The US and Europe are beginning to implement this concept.

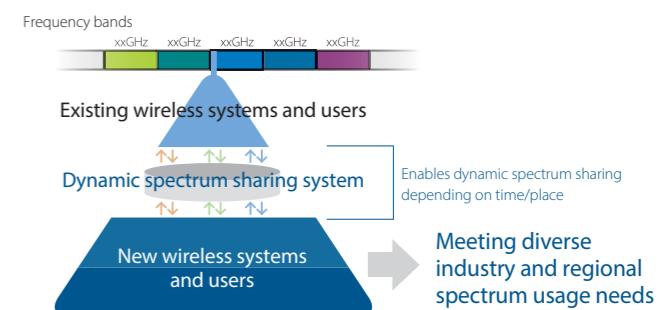
##### Solution

Dynamic spectrum sharing requires building systems that enable more users to easily and safely use frequencies and prior coordination among them. MRI is developing applications and providing consulting services to meet regional and industrial needs ahead of future dynamic spectrum sharing.

##### Value Provided

We are on the cusp of the 5G era. As we move into a world where objects and services are interconnected, optimal use of frequencies in time and space will impact various sectors and business models in addition to the communications industry itself. MRI aims to transform wireless resources into social infrastructure to help resolve societal issues and create new markets.

##### Role of Dynamic Spectrum Sharing Systems



### Case Study 3

#### Passing on Skills of Veteran Workers

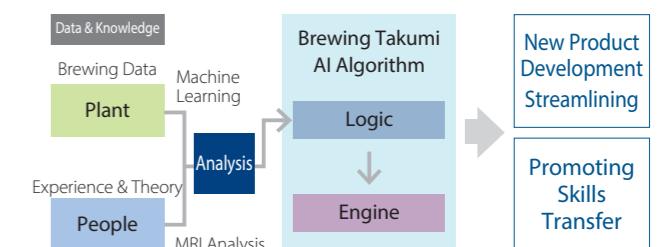


#### Introducing Takumi AI

##### Value Provided

In industries that face the retirement of veteran workers or labor shortages accompanying the aging of society, AI can do more than streamline business processes. The AI building process, making veterans' knowledge and expertise explicit, assists with the transfer of their skills to new practitioners and thereby contributes to resolving societal issues.

##### Brewing Takumi AI\* Initiative



\* Case study of using Takumi AI in beer product design