



# Structured data can be processed, but unstructured data cannot

Although there are a number of big data solutions, big data often cannot be interpreted as by a person



Various kinds of data cannot be used unrestrictedly in the field of business at will



#### **Social Media Data**







Data posted to social media by paricipants

#### **Customer Data**

Marketing data including DM and membership card data managed in CRM systems

#### Office Data



Office documents emails created on office PCs

#### **Multimedia Data**





Audio and video data provided at distribution sites on the Web

# Big D



### **Log Data**

Access logs and error logs automatically generated on Web servers

#### **Website Data**



Purchase history and blog entries accumulated on EC sites and blogs



#### **Sensor Data**



Boarding history, temperature, and acceleration detected by GPS, IC cards, and RFIDs

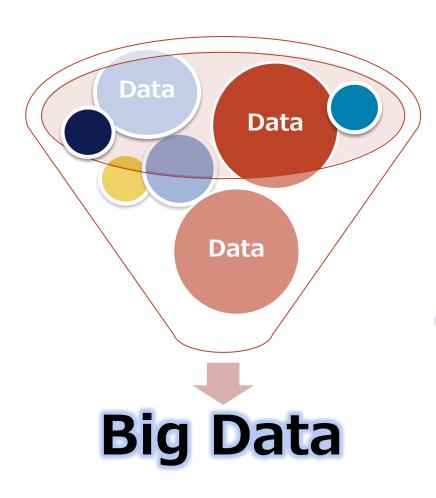
### **Operation Dat**

POS data and transaction data generated on sales management operations systems

Source: Created by NTT DATA based on public materials from the Ministry of Internal Affairs and Communications

## Variety —Making the most of diversity—





#### **Business Side**

We can often find out the meaning when collectively processing data that is large not only in amount but, more importantly, in variety.

Hard to realize owing to the high hurdle

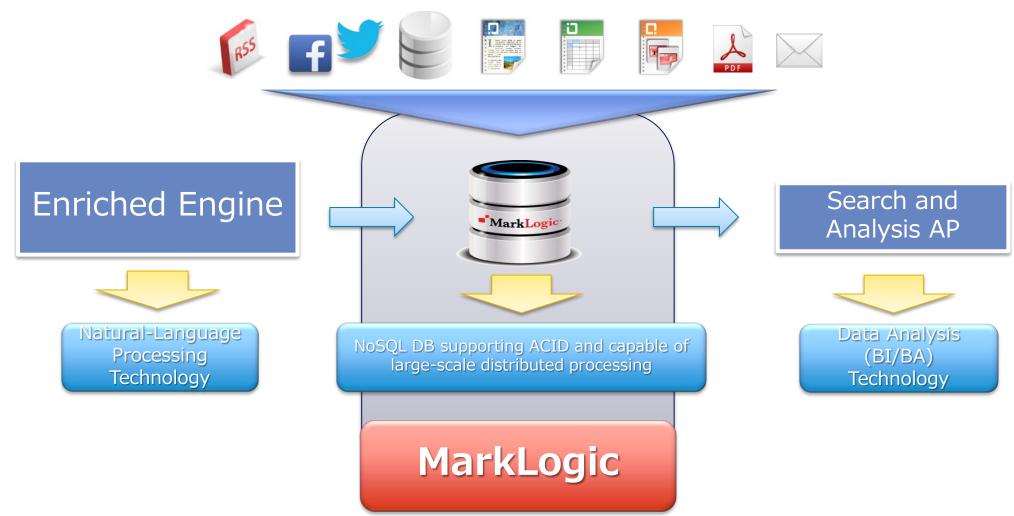
#### **Technology Side**

Restrictions in databases and immature peripheral technology to process data itself hinder the processing of various data

# Use of MarkLogic Server as the infrastructure to realize services that can use a wide variety of data



As the core element of a flexible and scalable data management infrastructure that is capable of context-aware search and of controlling complicated relationships between data, the MarkLogic Server can be used to manage not only fixed-format data managed by conventional RDBs but also unexpected data structures, changes in data structures, and unfixed-format data such as text documents in real time as the infrastructure for using unstructured data.



## Concrete example of the use of MarkLogic Server —Solution for member stores examination—



Semantic interpretation is applied to all the information about the examined store that is collected from EC sites and bulletin boards on the Internet for tagging. A wide variety of data is stored on the MarkLogic Server in a usable form to increase the sophistication of customer examination operations.

